



Australian Government

**Rural Industries Research and
Development Corporation**

Export Markets for Skins and Leather

for Australia's camel, crocodile, emu and goat industries

A report for the Rural Industries Research and Development Corporation

by Brendan Goulding, Elysa Riedel, Andrea Bevan, Bronwyn Warfield

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Commercial Development of Export Markets for Emerging Skin Industries

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Foreword

The financial viability of the crocodile, camel, emu and goat industries is based on their ability to sell the whole animal, including meat, skins, feathers and oil. Traditionally these industries have focused on one product; for crocodile it has been the skin, for camel and goat the meat, and for emu the oil. However, there has been increasing recognition of the importance of using secondary products such as skins and leather to improve the commercial viability of these industries.

This report provides trade data, gives market feedback from visits to Italy and the US and describes the commercial outcomes achieved for goat, emu, crocodile and camel skins. It also provides a case study on assessing the economic viability of exporting camel hides. Communication and promotional strategies for exporting, and recommendations arising from the research are provided.

The research found interest in crocodile and camel skins, hides and leather in the United States and Italian markets. Export success will be dependent on the Australian industry's ability to build supply-chain relationships with export customers and develop products to meet their needs. Of equal importance will be the Australian industry's ability to collaborate to increase supply numbers.

This project was funded by the Queensland Government through the Department of Primary Industries and Fisheries and by the Rural Industries Research and Development Corporation (RIRDC) Core Funds, which are provided by the Australian Government.

This report, a new addition to RIRDC's diverse range of over 1600 research publications. It forms part of its New Animal Products R&D program, which aims to accelerate the development of viable new animal industries.

Most RIRDC publications are available for viewing, downloading or purchasing online through its website:

- downloads at www.rirdc.gov.au/reports/Index.htm
- purchases at www.rirdc.gov.au/eshop

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The authors thank the project's Advisory Committee for its guidance and assistance. The committee members included crocodile specialists John and Lillian Lever of Koorana Crocodile Farm, camel specialist Peter Seidel of Ship of the Desert, goat specialist Barry Ryan of Ausleather and emu specialist Bruce Makin of Makin Emus. Each member contributed significant expertise and energy, which greatly enhanced the project's success. Their contribution included relevant and practical information on animal husbandry, exporting and marketing. They also provided invaluable comments on this final report. The contributions made by each member have helped to achieve one of the project's primary objectives, which was to enhance the profitability and sustainability of the emerging animal skin and leather industry. The information in this report, of which a significant proportion was obtained through overseas visits conducted with the committee members, will allow current and potential exporters to carry out highly relevant and practical market analysis and make better-informed business decisions.

Thanks to Peter McInnes from the RIRDC for his untiring faith, support and guidance during both of the skins projects. We also appreciate the efforts of Austrade—in particular Deborah Ponzio and Tim Gauci from the Milan post in Italy and Fareeda Chand from the Toronto post in Canada—for contributing valuable market research information on the Italian and US markets for skins and leather and for helping to develop itineraries for the market visits. A special thanks also goes to Alex Favali from Punto Italia, who played a significant part in developing the itinerary for the Italian trip and ensuring that the meetings, travel arrangements and translations all went according to plan. Thanks also to all of the businesses involved in the leather industries in Italy and the US who gave their time to meet the project team and provide the information that made the findings of this research possible. A final thanks goes to RM Williams Pty Ltd for their openness and for participating in the meetings of the project's Advisory Committee.

Abbreviations

A\$	Australian dollars
ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
CACIA	Central Australian Camel Industry Association Inc.
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
cm	centimetre
DBIRD	Department of Business, Industry and Resource Development
DPI&F	Department of Primary Industries and Fisheries (Qld)
€	euros
ITC	International Trade Commission (US)
RIRDC	Rural Industries Research and Development Corporation
SWOT	strengths/weaknesses/opportunities/threats
US	United States
US\$	US dollars

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Executive Summary

The report – its reason and purpose

The purpose of this report is to facilitate the development of trade in skins from camel, crocodile, emu and goat.

Target

The targets include camel, crocodile, emu and goat producers, processors, exporters, importers and value added enterprises particularly in Italy and US.

Background

Currently the skins and leather of crocodiles, camels, goats and emus are traded in the global market at a level which could be termed niche. Skins or hides from species other than crocodiles are traded as a by-product. Traditionally, their production has been largely unresponsive to demand for skins and leather and more dependent on forces driving the market for the primary products (that is, oil or meat) derived from each species—with price fluctuations arising from imbalances between supply and demand.

The aims of the research project

The aim of the current project is to identify new export opportunities for skins, hides and leather products from crocodiles, camels, goats and emus so that they can be commercialised through supply-chain relationships between producers, exporters and buyers. It also further investigates market segments identified by the previous skins project as having potential for skin and leather products from each species. The report presents an economic analysis to assist in assessing the economics associated with exporting and also outlines business-specific communication and promotional strategies.

Method

Two international markets were targeted in this project—Italy and the US. They were chosen based on the findings of the preceding Rural Industries Research and Development Corporation project ‘Identification of market opportunities for skin products of emerging animal industries’, as well as direction from the project’s industry Advisory Committee. Research included liaison with most parts of the supply chain, both domestically and internationally, and culminated in members of the Advisory Committee and researchers participating in market visits. This research identified links in the supply chain that should be targeted or further researched for potential trade with Italy and the US.

The complex global market for skins, hides and leather is fiercely competitive. Export success will be dependent on the time and energy expended on networking and relationship-building in target markets and ensuring that the Australian industry develops the capability to meet export customers’ supply requirements through effective export supply chains. Key findings for each skin or hide type are summarised below.

Results

Camel

Between 2002 and 2005 world camel stocks have remained relatively stable, at around 19 million. In 2005, the largest stocks existed in the African nations of Sudan, Mauritania, Chad and Kenya and the subcontinent countries of Pakistan and India. Although data for the production of camel hides is unavailable, slaughter figures for the past four years suggest that the countries with the greatest volumes of camel hides available are Sudan, Saudi Arabia, Egypt, Mauritania, the United Arab Emirates and China, which collectively accounted for almost 53% of world camel slaughters in 2005. In Australia there are now about 500,000 feral camels, with the majority in the arid inland areas. Although the camel industry is only a fledgling one, it has developed well over the past few years and is now supplying export markets with live camels and camel meat.

Camel hide's high tensile strength and the perception held (particularly in Italy) that Australian camel hide has less scarring than camel hide supplied from other countries may present some opportunities in the lucrative Italian and US leather industries.

Despite limited consumer awareness and no promotional campaign (Chand 2005a), camel hide and leather have made some promising inroads into the US market in recent years. In general, the US leather supply chain believes that Australian camel is best suited to the Western-style boot market, but the participants in the supply chain believe that an extensive promotional campaign is needed for success in this market.

Italy shows more promise for the fledgeling camel leather industry than the US. The Italian industry believes the hides are best suited to accessories, belts, jackets, shoes and upholstery. The industry also indicated that natural scarring is not detrimental to quality, because it makes each hide unique.

Currently at A\$40 per hide, camel is priced competitively in the Italian market. However, it should be noted that the market sees bovine hide as a direct competitor and exporters are therefore encouraged to monitor the price of bovine.

Crocodile

The leather from Australia's saltwater crocodile (*Crocodylus porosus*) has a reputation as one of the best skins in the world for high-quality fashion goods. However, research conducted during this project found that retail personnel do not distinguish between this species and its competitors, particularly alligator and caiman. This highlights the importance of promoting *Crocodylus porosus* leather as a high-quality skin and thus justifying the premium price it commands in the market.

In 2002, *Crocodylus porosus* accounted for only 2.2% of the total world trade in crocodylia skin. Australia and Papua New Guinea accounted for 81% of world trade in *Crocodylus porosus*—a powerful position, considering the high demand by European fashion houses.

Crocodiles are harvested throughout northern Australia. Crocodile operations in Western Australia and the Northern Territory involve ranching (that is, captive breeding supplemented with wild harvesting). In Queensland, however, it is illegal to capture wild crocodiles unless, in special circumstances. The trade in products derived from *Crocodylus porosus* is controlled by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Permits are issued by the Commonwealth Department of Environment and Heritage.

The market potential for crocodile skin and products in both the US and Italy appears positive, with opportunities evident for first-grade skins in Italy and second-grade skins in the US. The Australian industry is facing two challenges on which the success of the industry could hinge. They are, first, the need for the industry to create the capacity to supply quality first-grade skin to satisfy export demand and, second, the need to successfully promote *Crocodylus porosus* skin as the world's leading exotic skin to export markets in a way that will stimulate product demand and justify its price premium.

Emu

In Australia, emu skin and leather are a by-product of oil and meat production and account for approximately 13% of total production revenue. It is estimated that one emu can produce 0.75 square metre of body skin. Only about one-third of emu skins are used from all birds slaughtered, which means that significantly more supply is available if markets can be identified and developed.

Australian emu skin and leather are largely unknown in the US and Italian markets. These markets showed some interest in emu skin for use in garments, in footwear and as a lining in leather goods. However, it is the lack of profile in these markets that is possibly the greatest impediment to the development of export business.

Goat

Australian goat skins and leather have limited opportunities in the US and very little potential in Italy. Although goat leather is not unknown in the Italian market, research conducted as part of this project found that Australian goat is not in demand. It is likely that the lack of interest from the leather supply chains in Italy is a result of obtaining cheaper and better-quality goat skins and leather from other countries such as China, India and Pakistan.

In the US, goat leather is perceived as a common species—putting it at a disadvantage compared with other species investigated as part of this study. In Australia, goat skins and leather are costly to produce and market, but affluent consumers in the US are unwilling to purchase them as exotic products. There is a small amount of US interest in goat skin as suede, but it is likely that the potential for goat is limited to niche segments such as the Western boot market and/or the garment market.

Implications for relevant stakeholders

There is potential demand in Italy for leather accessories manufactured from combinations of Australian exotic leathers. The Australian industry may have the opportunity to build a unique competitive position in this market niche with a product mix which could be difficult for competitors to emulate. It is suggested that Australian exotic skin producers could collaborate with each other and with market partners in the Italian leather industry, such as tanneries and/or manufacturers, to further investigate the production of multi-species leather products and determine their technical and commercial feasibility.

It is also recommended that suppliers of exotic skins and leathers from the species covered in this report consider partnering with global fashion supply chains to penetrate export markets. In many cases, high-value luxury fashion markets are dominated by international fashion houses with global supply chains. To penetrate the US market beyond supplying it directly with skins and/or leather, the Australian industry could consider trying to form a partnership with an international fashion house (such as an Italian fashion house) that holds a strong competitive position in the US as another strategy for entry into this market.

Recommendations

To further develop the Italian and US markets for camel skins, the industry should consider the following recommendations:

- Further explore the market demand for camel leather and Australia's ability to meet the demand. Based on the interest expressed in camel during the in-market visits, significant volumes may be required to meet potential demand in the US and Italy.
- Undertake marketing activities. Because of the lack of awareness of camel leather in the US and Italian markets, it is suggested that the industry devises a marketing campaign that focuses on the product's strengths and creates a unique 'product story'. This should be developed in consultation with the export buyers.
- Identify suitable product applications for camel. Potential uses could be explored with companies in the Italian and US leather supply chains to determine if camel leather lends itself more readily to some product uses over others. For instance, the high tensile strength of camel may make it more appropriate for use in Western boots than in garments. This may influence the marketing strategy.

To meet these challenges and to further develop the Italian and US markets for *Crocodylus porosus* skin, the industry should consider the following recommendations:

- Explore the introduction of a wild egg harvesting program in Queensland. The establishment of a trial research program for crocodile egg harvesting in an environmentally responsible manner should be considered and explored by all industry stakeholders as a means of increasing the supply of crocodile eggs and thus the number of crocodiles farmed in Australia to meet the apparent export demand.
- Develop greater collaboration among the operators in the Australian crocodile industry. A producer alliance or a similar process whereby Australian crocodile industry participants promote

the entire industry collectively under one brand, and combine the marketing efforts of all or many farms, instead of acting individually, could increase product awareness and market demand. As well, collaboration between farms to jointly supply export markets could allow consolidated shipments and the sharing of production-related information, resulting in improved efficiencies in logistics and in the production of skins to meet export customers' requirements.

To successfully establish emu leather, the industry should consider the following recommendations:

- Clearly identify uses for the leather in order to determine appropriate market segments to target.
- Establish a market entry promotion strategy which creates awareness of emu's product characteristics and educates the targeted distribution channels and consumers about these characteristics.
- Introduce an internationally recognised skin grading system to ensure clear communication in trade negotiations and to aid consistency in pricing.

In the US and Italian markets, the Australian industry could consider exploring the potential for goat to be used as a secondary material (for example, as lining) in leather product manufacturing.

1 Introduction

1.1 Background of last project

In 2001 a project funded by the Rural Industries Research and Development Corporation (RIRDC)—‘Identification of market opportunities for skin products of emerging animal industries’—was undertaken to identify market opportunities for skin products of emerging animal industries. The purpose of this project was to provide producers and tanneries with a clear understanding of the opportunities and market characteristics for skin and leather products from goat, emu, ostrich, crocodile and camel. The objectives of the project were:

- to understand the market opportunities for skin products of emerging animal industries
- to identify the Australian industries’ supply capabilities and product characteristics for raw and semi-finished skins
- to understand the requirements of specific markets and market segments for these products
- to support producers, processors and tanneries in developing skin products which meet the market requirements
- to support producers, processors and tanneries in developing markets for skin products.

The final report, published in January 2003, set out the findings of the first detailed industry study to explore export market opportunities for skins and leathers from all five species. The project findings gave insights into the export potential for each of the species, identified market drivers for each selected market and stipulated areas where action was needed to increase industry viability.

Ultimately this project led to the identification and initial development of new export markets for skins and leather from the species covered in the current research study.

1.2 Purpose of this project

The purpose of this project, ‘Commercial development of export markets for emerging skin industries’, is to facilitate the development of sustainable trade for new animal industries, specifically camel, crocodile, emu and goat, through developing new supply-chain linkages and/or strengthening those established in the previous project. Ostrich was excluded from this project because the industry partner from the first skins project withdrew to pursue its own commercial interests.

Italy and the US were two of the markets identified in the previous research that offered possible export opportunities for the emerging animal industries. These prior findings, along with further consultation with project partners from the emerging animal industries, resulted in Italy and the US being selected as the markets that would be focused on in this project to further pursue export opportunities.

The objective of this project is to build on previous collaborative efforts between the funding body, RIRDC, and the research organisation, the Queensland Department of Primary Industries and Fisheries (DPI&F), to facilitate the development of sustainable export markets for the camel, crocodile, emu and goat industries by:

- further investigating market segments identified as having potential for skin and leather products from each species
- developing new export opportunities for skins and leather products by pursuing supply and value chain alliances between producers, exporters and buyers of new animal products
- conducting economic analysis to determine the viability of supplying skins and leather products to particular export markets
- developing a communication and promotion strategy for identified export markets for emerging skin industries.

It is expected that the supply-chain linkages and market intelligence obtained through this project will help emerging animal industries to generate additional income streams by increasing trade opportunities for skin and leather products. Furthermore, as many industry members are located in

rural communities, these new income streams have the potential to provide an additional source of economic stimulus in rural communities.

1.3 Methodology

This project was directed by the industry through an Advisory Committee composed of industry partners who provided input and feedback to the project team. A number of the industry partners took part in in-market visits with the project team over the life of the project. The stages of the project are outlined below:

Stage 1

Industry representatives were selected to form an Advisory Committee to provide direction for the research and feedback. Partners were selected on the basis of their level of commitment to the project in terms of export capability, willingness to participate in market visits and provide samples, and synergies that might be achieved with other potential project partners.

Stage 2

Desktop research was undertaken to update the secondary market research information that was obtained during the previous project. Sources used for the collation of information for the secondary research included the internet, industry publications, government agencies, and discussions with industry members. Information that was updated included:

- Australian production and trade of each species
- global production and trade of each species.

Stage 3

Research was conducted in preparation for the in-market visits to Italy and the US. This included making use of Austrade to obtain contacts and information for the market visits.

Before the market visit to the US, a research study was undertaken to clarify potential target segments and supply-chain partners for the species of focus in this project. Austrade was commissioned to conduct research on the US market, and gathered statistics and undertook both primary and secondary market research with a range of skin and leather supply-chain members, including importers, tanners and manufacturers. Local industry experts, including university and government representatives, were also consulted during this research phase to obtain additional information and insights into the market for skins and leather from each species.

Stage 4

Visits were undertaken to Italy and the US with the aim of establishing supply-chain links and conducting further primary market research in these markets. Project partners from the crocodile and camel industries travelled to both countries with the project's principal investigator from the DPI&F.

A selection of product samples, including tanned leather and a variety of manufactured products from each of the four species, were taken to each market and presented to prospective buyers. Promotional material was also presented to prospective buyers for each species.

During the visit to Italy the project team visited the October 2005 edition of the Lineapelle leather trade fair in Bologna. This is one of the world's premier leather fairs. At the previous fair in April 2005, the exhibitors included close to 600 tanneries and over 600 suppliers of fashion goods components (for example, handbag buckles and frames) from almost 50 countries around the world (Lineapelle 2005).

During the three days of the trade fair the project team held pre-arranged meetings with exhibitors, including tanneries and importers, distributors and manufacturers of leather goods. These exhibitors were identified before the exhibition as having an interest in at least one of the species offered by the project team. Numerous informal meetings were also undertaken by members of the project team during the three days of the fair. Further insights into product availability and characteristics, pricing and fashion trends were gathered from the exhibitors at the fair.

After the Lineapelle trade fair, further meetings were held with manufacturers, tanneries and an agent involved in the Italian leather industry who expressed interest in the species offered by the project team. Additionally, four of the exhibitors that the project team initially met at the Lineapelle trade fair met again with the team for further business discussions, in most cases on-site at their business facilities.

Some primary research was undertaken in the retail sector in Italy to gain insights into the market demand for leather goods made using leather from each of the four species. This research consisted of visits to fashion retail precincts in Milan and Modena and focused on product availability and characteristics, retail price data and retailers' knowledge about leather used from each of the species.

The visit to the US immediately followed the visit to Italy. Meetings were arranged before the visit with importers, distributors, manufacturers and fashion industry companies that were identified as having an interest in at least one of the species offered by the project team. All meetings were conducted on the premises of these businesses. Table 1.1 gives the number of leather industry companies met during the visits to Italy and the US.

As in Italy, limited primary research was undertaken in the US retail sector. Information was gathered from fashion retailers in New York, El Paso and Los Angeles.

Table 1.1: Market survey (sample size), 2005

Category	Italy	US
Tanneries	9	0
Manufacturers	9	3
Importers/distributors	3	4
Leather brokers/traders	1	1
Designers	0	1
Tanning associations	1	0
Design consultants	1	1
Fashion/retail outlets	10	11
Wholesalers	1	2
Total	35	23

Stage 5

There were follow-up activities for each of the project partners after they returned from the market visit. A debriefing session was held to disseminate requests received from prospective buyers in each market for further information and/or samples for each of the species. There was also discussion of how the project partners could best follow up and capitalise on these enquiries. Further communications between project partners and prospective buyers were also facilitated in the months after the trip.

Stage 6

Economic analysis of an export scenario was conducted with supplying camel hides to the US using economic modelling software (Export Calculator) developed by the DPI&F. The Export Calculator uses a number of key variables associated with exporting to determine the viability of Australian suppliers undertaking business with any overseas buyer.

Stage 7

A report was prepared documenting the findings of the market research and the commercial outcomes achieved in the course of the research. In particular, it identified export opportunities, supply-chain linkages and communication strategies.

1.4 Limitations

Although every effort has been made to prepare a clear, accurate and detailed report, there were several limitations that affected its preparation.

Every effort was made to secure Australian and global production and trade data, but there were cases where specific data was not available for inclusion in this research study. For example, many avenues were explored to obtain statistics for camel and emu global trade from secondary and primary sources. However, these data are unavailable or could not be sourced at the level of detail which was available for the other species. Additionally, it was also found during the course of the research that the statistics sourced from the reporting agencies for various reporting periods were known to change without warning. Although every effort was made to include the correct statistics as was reported by the reporting agencies it can not be guaranteed that these agencies have not since made changes to these data for the various time periods outlined in this report. In addition data have been sourced from a range of sources and is often conflicting. For example Australian crocodile skin production and trade figures from Caldwell (2004), RIRDC, FAO and Camargo (2005) do not align with one another.

The in-market research conducted in Italy and the US was not a comprehensive study of the entire leather supply chains in these markets. Therefore the information and insights obtained from these markets are somewhat limited in scope. Further research may be warranted to supplement the findings presented in this report and achieve a more complete analysis of the market for exotic skins and leathers in Italy and the US.

The retail market research could not be as detailed as desired, because most of the stores visited did not allow photographs to be taken inside their premises. The photographs that appear in this report were limited to products that were displayed in shopfront windows. Thus the products seen inside each store which were relevant to the research could only be described in limited detail, without the further insight that could have been gained from visual representations.

During the market visits, commercial negotiations were limited for emu and goat because the project partners for these species could not participate in the market visits and undertake direct negotiations with potential buyers. However, where possible, the project team presented samples to buyers, and on their return they passed on business contacts to the emu and goat project partners.

In the US, opportunities in the state of California could not be fully explored because trade in crocodile and alligator, among other exotic animal species, is illegal in this market. However, camel, emu and goat were all deemed legal to trade in California and the research study focused on these species only in that state. It is, however, interesting to note that there were alligator products on sale in some Los Angeles retail stores.

This project was primarily focused on pursuing export market opportunities for skin and leather from each of the four species to be used as primary inputs into the manufacture of consumer products. There may be other export opportunities for skin and leather from these species to be used as secondary inputs into consumer products (for example, linings), but these were not fully explored through this project as they were beyond its intended scope.

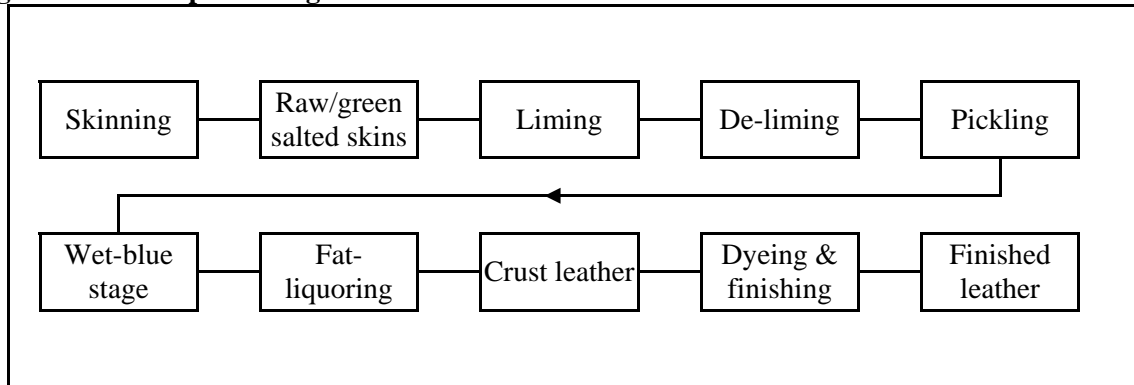
This research project revealed that competition for goat, camel, emu and crocodile skins and leather was not limited to suppliers of these species from other countries but also included traditional leathers, such as bovine leather, and synthetic materials. Competition from these other materials was not explored to the extent of the directly competing skins and leathers from Italy and the US as it was beyond the scope of this project. Further research may be needed to fully explore the impact of competition from these other materials on the markets for the species covered in this research.

1.5 Terminology

Tanning

The preparation of hides and skins and the process of converting raw skins into leather involve a complex array of production technologies. To help explain some of the tanning terminology used in this report, Figure 1.1 provides a basic overview of the key stages involved in the preparation of skins and leather from the initial skinning stage to the final output stage of finished leather.

Figure 1.1: Basic processing flowchart



Source: MacNamara et al. (2003).

Crocodylia species

A number of crocodylia species have been identified in this report using both their scientific name and their common name. Throughout this report the term ‘crocodylia’ will be used to generally encompass alligator, crocodile and caiman species.

The most common crocodylia species involved in the trade of skins and leather are outlined below. Further information on species and their distribution is provided in Appendix A.

Saltwater crocodile

The scientific name of the saltwater crocodile is *Crocodylus porosus*. Saltwater crocodiles are mainly found in the Asia-Pacific region, where there is an estimated wild population of 200,000–300,000 (Britton 1995–2005).

Caiman

The scientific name for the caiman is *Caiman crocodilus*. Caimans are distributed predominantly throughout Central and South America and are also scattered through other regions of the Americas. The wild population of the caiman is estimated at more than 1 million (Britton 1995–2005).

American alligator

The scientific name of the American alligator is *Alligator mississippiensis*. Alligators are distributed within the south-east US and wild population numbers are estimated at more than 1 million (Britton 1995–2005).

Nile crocodile

The scientific name of the Nile crocodile is *Crocodylus niloticus*. The estimated wild population of the Nile crocodile is 250,000–500,000. Nile crocodiles are mainly found in Africa and Madagascar (Britton 1995–2005).

Australian species

Unless otherwise noted, all instances where camel, crocodile, emu and goat skin and leather appear in this report are specifically in the context of those species being supplied from Australia. Additionally, unless otherwise noted, all references to emu skin and leather relate to emu body leather only.

2 Camel

2.1 World supply of skins and leather

Between 2002 and 2005, world camel numbers have remained relatively stable, at around 19 million. In 2005, the largest herds existed in the African nations of Sudan, Mauritania, Kenya and Chad and the subcontinent countries of Pakistan and India.

Table 2.1: World camel herds

Country	2002	2003	2004	2005
Sudan	3,342,000	3,300,000	3,300,000	3,300,000
Mauritania	1,297,000	1,300,000	1,300,000	1,300,000
Kenya	830,000	830,000	830,000	830,000
Pakistan	758,000	751,000	800,000	800,000
Chad	725,000	730,000	735,000	740,000
India	682,000	635,000	635,000	635,000
Other	11,590,445	11,611,706	11,423,669	11,418,607
World total	19,224,445	19,157,706	19,023,669	19,023,607

Source: FAOSTAT (2005).

Although data for the production of camel hides is unavailable, slaughter figures for the past four years suggest that the countries with the greatest volumes of camel hides available are Sudan, Saudi Arabia, Egypt, Mauritania, the United Arab Emirates and China, which collectively accounted for almost 53% of world camel slaughters in 2005 (refer to Table 2.2).

Table 2.2: World camel slaughter figures

Country	2002	2003	2004	2005
Sudan	185,000	183,000	183,000	183,000
Saudi Arabia	182,000	186,000	186,000	186,000
Egypt	150,000	126,000	130,000	130,000
Mauritania	114,000	115,000	115,000	115,000
United Arab Emirates	81,210	85,480	85,500	85,500
China	69,000	65,000	63,000	65,000
Other	656,481	669,172	682,802	678,381
World total	1,437,691	1,429,652	1,445,302	1,442,881

Source: FAOSTAT (2005).

Although tanning of camel hides is quite common (particularly in Italy, where many of the large tanneries import skins and hides from the Middle East), data on production of camel leather is difficult to obtain and hence has not been included in this report.

2.2 World trade

Data on the world production of camel hides and leather are extremely limited.

The Arab nations of Egypt, Saudi Arabia, Qatar, the United Arab Emirates and Oman were the world's largest importers of live camels in 2004, accounting for approximately 98% of total world imports (refer to Table 2.3).

Table 2.3: World live camel imports

Country	2001	2002	2003	2004
Egypt	99,651	77,284	48,867	39,711
Saudi Arabia	6,175	–	–	10,160
Qatar	10,331	4,568	541	8,281
United Arab Emirates	–	170	–	6,388
Oman	–	5,327	8,114	5,072
Other	3,147	8	1,284	1,469
World total	119,304	87,357	58,806	71,081

Source: FAOSTAT (2005).

Between 2001 and 2004, imports of camels decreased by just over 40%. The drop in imports was most significant between 2001 and 2003, with imports falling from 119,304 head in 2001 to 58,806 head in 2003. This decline was followed by an increase of almost 21% in 2004, when world live camel exports rose to 71,081 head (refer to Table 2.3).

As shown in Table 2.4, Mauritania was the world's largest live camel exporter between 2001 and 2004. In this period the country's live camel exports remained consistent at 36,000 head each year, accounting for about 38% of total world live camel exports in 2004. Other key exporting nations in 2004 were Sudan, Qatar, Oman and Saudi Arabia. The live camel exports from these five nations constituted around 97% of total world exports in 2004.

Table 2.4: World live camel exports, 2001–04

Country	2001	2002	2003	2004
Mauritania	36,000	36,000	36,000	36,000
Sudan	–	–	30,088	35,662
Qatar	1,223	–	–	12,441
Oman	–	436	4,166	5,007
Saudi Arabia	2,859	–	5	4,059
Other	8,447	25,127	22,165	2,520
World total	48,529	61,563	92,424	95,689

Source: FAOSTAT (2005).

Total camel exports have increased significantly since 2001, rising from 48,529 head in 2001 to 95,689 head in 2004, an increase of approximately 97%.

2.3 The Australian camel industry

Camels were first introduced to Australia to provide transport through the inland areas. Thousands of camels were imported between 1840 and 1907, and in the 1920s there were an estimated 20,000 domesticated camels in Australia. However, by 1930, with the arrival of rail and motor transport, camels were no longer needed and many were abandoned. Superbly suited to the Australian deserts, the feral camel population prospered, spreading across the arid and semi-arid areas of the Northern Territory, Western Australia and South Australia, and into parts of Queensland (Department of Environment and Heritage 2004).

There are now about 500,000 feral camels in Australia, with the majority in the arid areas. Their distribution is estimated as:

- 50% Western Australia
 - 25% Northern Territory
 - 25% western Queensland and northern South Australia (see Figure 2.1).
- (RIRDC 2005; Department of Environment and Heritage 2004)

The Central Australian Camel Industry Association Inc. (CACIA) has developed markets for trade in live camels and camel meat (Camels Australia Export 2001). The Australian camel industry, now an

emerging industry, relies on the harvesting of feral camels for live exports and, to a lesser extent, on farmed camels for tourism and milking (Department of Agriculture, Fisheries and Forestry 2005).

2.4 Australian trade

The Australian camel industry slaughtered about 400 head per year from 2001 to 2005, providing a supply of 400 skins a year. Live camel exports have fluctuated as outlined below:

Table 2.5: Live Camel exports from Australia, 2001-2005

Year	Head
2001	500
2002	1000
2003	300
2004	100
2005	100

The majority (90%) of both slaughtered and live camels were exported to south-east Asia and 10% were exported to the Middle East. There are no trade figures available for camel skins or manufactured products.

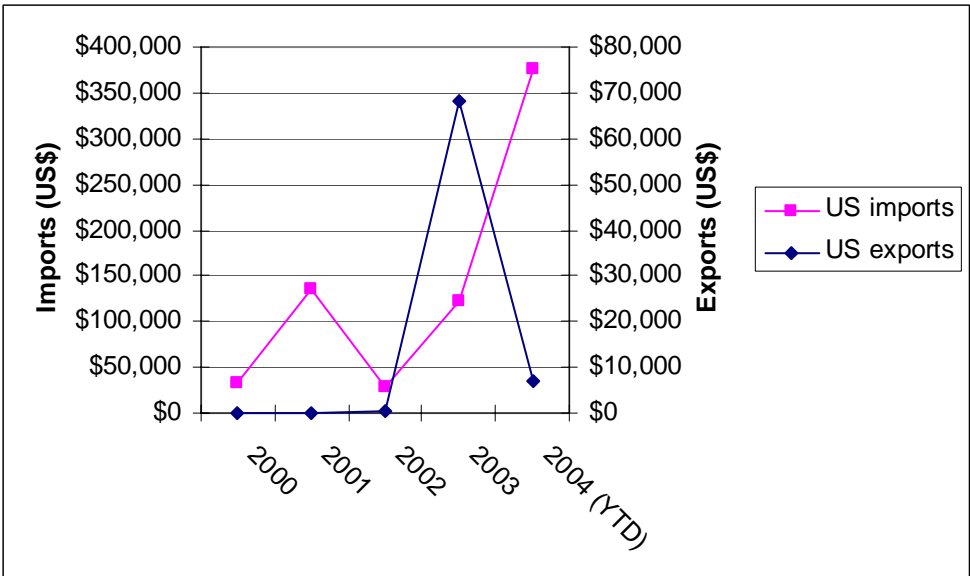
2.5 US

Market potential

The US has the potential to emerge as an attractive niche market for camel. US imports, though small, have grown fairly rapidly since 2000, as can be seen in Figure 2.1. In 2002 there was a dip in imports, but they increased dramatically in 2003, and again in 2004. US imports of camel hides and manufactured products will be a key area to watch in future years.

Figure 2.1 and Table 2.6 provide an overview of US imports and exports of camel hides and manufactured products from 2000 to 2004.

Figure 2.1: US imports and exports of camel hides and manufactured products, 2000–04



Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Table 2.6: US imports and exports of camel hides and manufactured products, 2000–04 (value US\$)

Year	US imports of camel hides and manufactured products	US exports of camel hides and manufactured products
2000	\$32,976	–
2001	\$135,305	–
2002	\$28,438	\$375
2003	\$122,054	\$68,025
2004 (year to date)	\$375,451	\$7,176

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

As Figure 2.1 and Table 2.6 show, there has been an overall increase of camel imports into the US. Camel has recently made promising inroads into the US market from a small base. This has been achieved despite the fact that there has been no market promotion (Chand 2005a).

However, during the market visit to the US, camel was not seen at any level within the US leather supply chain. Camel products were not found in the leather products manufacturing, distribution or retail sectors and there was a limited level of awareness in the market. Although four of the companies interviewed in the US leather supply chain showed interest in camel, only one of them indicated that it had used camel in the past and that it was accepted by the Western-style boot market. The only other company interviewed during the visit that had previous dealings with camel indicated that it saw camel as a rough, low-quality and damaged leather and stated that it was ‘all worn out trying to do something with it’.

Comments from members of the US Western boot sector indicate that an appropriate marketing campaign could be a key factor in successfully introducing Australian camel leather to this market. One wholesaling and manufacturing company that had previously used camel leather indicated that it was critical to reintroduce this leather into this market as ‘new’ leather.

Another wholesaler and distributor servicing this sector described the Western boot market as following fashion trends rather than creating trends. It suggested that the marketing strategy should focus on creating a fashionable image for camel skin and leather.

Further comments from one of the leading Western boot manufacturers could be helpful in shaping an appropriate marketing strategy for Australian camel in the Western boot market. This manufacturer believed that, for Australian camel to be successful, it would need to promote its unique properties to consumers. The manufacturer suggested that this could be achieved by building a marketing campaign around a story about Australian camel and conveying it to consumers.

The views expressed by the above industry participants gave some ideas about elements that could be incorporated in a marketing campaign by the Australian camel industry to successfully enter this market.

Market segments

As Table 2.7 demonstrates, there has been an overall increase in camel skin and manufactured product imports into the US. None of these imports were raw skins. They were all manufactured goods, including garments, large and small manufactured goods, and shoes or boots.

Table 2.7: US imports of camel hides and manufactured products, 2000–04 (value US\$)

Item	2000	2001	2002	2003	2004
Garments ¹	\$26,180	\$135,305	\$17,688	\$79,019	\$286,414
Large manufactured leather products ²	–	–	\$7,218	\$41,019	\$75,000
Small manufactured leather products ³	–	–	–	\$2,016	\$288
Shoes or boots	–	–	\$3,532	–	\$13,749
Skins	–	–	–	–	–
Trim (shoe trim, garment trim or decorative trim)	\$6,796	–	–	–	–
Total all	\$32,976	\$135,305	\$28,438	\$122,054	\$375,451

1. Garments include items such as pants, jackets and dresses.

2. Large products include suitcases, briefcases, handbags and furniture.

3. Small products include purses, watch straps, gloves, belts, notebooks and wallets.

Source: Chand (2005a), US Fish and Wildlife Service.

Although camel products were not seen during the US visit, additional in-market research carried out by Austrade reported that, where camel was found in the market, it was used in a variety of leather goods, reflecting the versatile nature of the leather. Market segments using camel leather included garments, large and small leather goods, shoes and boots, upholstery, handbags and furniture. Table 2.8 gives an overview of items produced from camel hide and leather that are available in the US.

Table 2.8: US end uses of camel leather

Garments	Leather products (large)	Leather products (small)	Shoes or boots	Trim for:
Coats	Suitcases	Handbags/wallets	Boots	Handbags/wallets
Skirts	Briefcases	Watchbands	Ladies' shoes	Notebooks
Vests	Furniture	Notebooks	Men's shoes	Money clips
	Upholstery	Money clips		Belts
	Attaché cases	Belts		Key chains
		Gloves		
		Key chains		

Source: Chand (2005b).

The garments segment made up the largest share of US imports over the five-year period from 2000 to 2004. Italy is the largest and most consistent exporter into this segment, as well as a major contributor to US imports of shoes and manufactured products, which comprise the second- and third-largest shares of US camel imports. For detailed US camel import statistics, refer to Appendix B, Tables B.1–B.6.

Note that, despite Australia's large camel population, estimated at between 500,000 and 1,000,000 animals, Australia exported no camel hides or camel hide products to the US (Chand 2005a).

Product characteristics and price

Information on the product characteristics of camel hide and how it is perceived in the US market was gathered during interviews with a variety of operators in the US skin and leather industry.

One leather broker believed that camel leather was very impressive and thought it was well suited to use in floor and wall tiles because of its thickness and strength. The broker also suggested the possibility of camel being used in the commercial airline industry for upholstery, once again because of its strength. The broker did, however, point out that camel was not suitable for domestic upholstery because of the odd shape of the hide and also because of evident scarring.

A US leather wholesaler said the grain of the camel leather was unique and interesting. They also added that the hide was quite thick and that the scarring on the hide was accepted by the market. As well, a Western boot manufacturing and wholesaling company believed there was potential for camel to be used in Western-style boots.

Finally, comments were also received from an agent for belt and handbag manufacturers and designers. She said that camel may be suitable for use in jackets but not for handbags

Competitors

Competition from camel hide produced within the US appears very limited. There is currently no data available on the number of camels produced in the US (Chand 2005a).

Some Americans own camels as pets and some camels are kept on tourist farms and in zoos. However, the camel has generally been used as a beast of burden. Thus the development of a camel hide market and industry has always been extremely limited in the US (Chand 2005a).

US consumers are beginning to show interest in camel hide products from abroad. Sales are small but have displayed great overall growth since 2004. Italy and France were the two dominant suppliers of manufactured goods and camel leather into the US (refer to Appendix B, Tables B2–B6; Chand 2005a).

There was also some evidence from comments made by two Western boot market operators that camel may face competition from bovine leather in this market. A Western boot manufacturer stated that a sample of Australian camel leather appeared too similar to bovine leather. Additionally, a leather importer and distributor also servicing this sector stated that finished bovine leather could be sourced from India and that camel would need to compete against this.

2.6 Italy

Market potential

Market research undertaken in Italy found that the market for camel hide and leather products was promising. At least 10 companies in the Italian leather supply chain, including tanneries, manufacturers and leather traders, expressed interest in working with Australian camel. In-market research revealed that a number of tanneries were already using camel for various end uses.

The leather goods manufacturers who were interviewed were found to be using camel to a lesser extent. Interestingly, one of the manufacturers used camel leather in small quantities for its own branded products. However, large quantities were not required as the fashion houses that this manufacturer was supplying did not demand that camel leather be used in their products. This manufacturer was willing to discuss with its customers the possibility of using Australian camel in high-end leather products.

Furthermore, it is worth noting that, although there was evidence that camel was used in the Italian tanning and leather goods manufacturing sectors, camel leather products were not seen in the retail sector in Italy. This suggests that there may be low consumer awareness of camel in Italy.

Market segments

Camel hide and leather products manufactured by companies interviewed in Italy included:

- small and large accessories such as wallets, briefcases and key ring holders
- belts
- jackets
- shoes
- upholstery.

Figure 2.2: Camel leather shoe with swing tag seen at the Lineapelle trade show



One of the tanneries interviewed during the market visit to Italy stated that the camel leather it used was mostly made into handbags and wallets. In the past, the leather has also been used to produce football boots and shoe soles. Another tannery stated that it had used camel leather in footwear, belts, shoe uppers, bags, jackets and upholstery. A leather goods manufacturer said that it used camel in manufacturing a variety of small leather goods, including briefcases, diaries, wallets and key ring holders.

Figure 2.3: Camel leather briefcase with swing tag seen at an Italian leather products manufacturer



Product characteristics and price

In Italy, the tanneries and leather goods manufacturers that were using camel reported it to be versatile, resilient, strong and visually attractive.

Feedback on Australian camel hide and leather was predominantly positive. Many of the companies interviewed were intrigued by the interesting grain, clean skin and high quality of the Australian camel product samples. One tannery said that the scarring and damage on camel hide was actually sought after as the patterns were unique and hide imperfections were emphasised. The same tannery said that it had sourced five or six containers of raw camel hides from Australia in 2002, but found the lack of scarring and imperfections in the hides to be unsuitable for its market.

An interview conducted with another Italian tannery found that it bought camel hides from Saudi Arabia which were from both young and fully grown animals. This tannery said that it purchased both sides of the camel body hide and the hide from the neck. The tannery also expressed interest in buying pickled camel hide from Australia that would then be tanned in its facility.

Prices of camel hides are very important in Italy because camel leather competes directly with bovine leather. One of the tanneries interviewed said that it could source camel hides from the Middle East and Africa for US\$4 per hide and would not purchase camel hides if the price rose above US\$4.50 per hide. The company was also able to source finished camel leather for US\$10 per whole skin delivered to the tannery. However, during a number of meetings with three members of the leather supply chain, including one tannery and two importers and distributors, it was found that the pricing of Australian camel was competitive at A\$40 per hide (US\$30). Given that these Italian companies were interested in sourcing Australian camel at this price suggests that A\$40 (US\$30) is a more accurate representation of a competitive price point for Australian camel hide in the Italian market.

Competitors

Several Italian leather supply chain members were not aware that camel hides were available from Australia. In fact, a number expressed surprise that camel hides were available. The tanneries that were using camel were sourcing camel hides from the Middle East and Africa.

As mentioned previously, camel hides and leather face direct competition from bovine leather. One tannery and wholesaling organisation was concerned that camel is too similar to bovine, and another tannery said that the price of camel hide is very important, as bovine leather supplied from South America is very competitive. A solution to this could be to differentiate between the two products. Stamping other characteristics onto the leather was suggested by one wholesaler as a means of differentiating camel from bovine. Promotional tools for camel leather were also seen, with two tanneries using swing tags to identify the leather as camel. This approach could be used to differentiate camel leather supplied from Australia.

Figure 2.4: Camel leather seen at the Lineapelle trade show



3 Crocodile

3.1 World supply

Between 2001 and 2004, world crocodylia stocks remained relatively constant, increasing by 5% during the period. In 2004, Colombia and the US accounted for 71% of the world crocodylia stocks (Refer to Table 3.1.)

Table 3.1: World crocodylia stocks, 2001–04 (number)

Country	2001	2002	2003	2004
Colombia	704,413	540,669	555,849	612,071
USA	265,470	325,291	355,789	368,409
Cambodia	36,000	50,850	78,008	74,820
Zimbabwe	76,157	79,932	73,707	60,185
Venezuela	19,215	20,349	33,942	55,841
Bolivia	28,170	31,018	43,528	36,299
Australia	11,849	10,425	15,509	16,014
Other	169,478	195,837	166,236	154,952*
World total	1,310,752	1,254,371	1,322,568	1,378,591

* Includes some estimated data or data calculated on the basis of certain assumptions.

Source: FAOSTAT (2005).

3.2 World trade

Trade in saltwater crocodile (*Crocodylus porosus*) products is controlled by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Skin is the primary product produced from crocodiles, with meat becoming an increasingly valuable co-product. World trade in crocodylia skins is summarised in Table 3.2. As shown in the table, the majority of skins are derived from caiman. This is primarily because caiman offers a reptilian-looking skin similar to crocodile at a fraction of the price, hence appealing to a larger market (RIRDC 2005).

Table 3.2: World trade in crocodylia skins, 2005

Species	Volume* (’000)	Main exporters	Main importers
Caiman	1515	Colombia (53%), Singapore (21%), USA (6%), Bolivia (3%), Paraguay (3%), Venezuela (3%)	Singapore (21%), Mexico (17%), USA (15%), Thailand (9%), Spain (7%)
Alligators	464	USA (68%), Singapore (5%), Switzerland (6%), France (5%), Italy (5%)	France (35%), Italy (14%), Singapore (14%), Mexico (7%), USA (6%)
<i>Crocodylus niloticus</i>	267	Zimbabwe (43%), Singapore (18%), South Africa (13%), Zambia (9%)	Singapore (25%), France (16%), Thailand (15%), USA (11%), Japan (8%), Italy (5%)
<i>Crocodylus porosus</i>	30	Australia (37%), Papua New Guinea (32%), Singapore (11%), Indonesia (6%)	Japan (34%), France (30%), Australia (15%), Singapore (8%), Italy (6%)
Other <i>Crocodylus</i>	34	Papua New Guinea (38%), Indonesia (20%), Thailand (18%), Singapore (10%), Japan (8%)	Japan (65%), Singapore (7%), Thailand (7%), Korea Rep. (6%)

* Includes re-exports.

Source: Foster et al.. (2005), compiled from CITES (2005).

The volume of world trade in crocodylia skins from 1999 to 2002 is outlined in Table 3.3. It is important to note that these data are incomplete because of the lack of annual report data from several of the key trading nations (Caldwell 2004).

As mentioned above, caiman accounts for the largest percentage of the skin trade. In 2002, 627,360 caiman skins were traded, constituting almost 58% of total world trade.

Table 3.3 reveals that in 2002 *Crocodylus porosus* skin was the sixth-largest traded skin. In 2002, *porosus* skin accounted for just 2.2% of the total world trade of crocodylia skin.

Table 3.3: Reported trade in crocodylia skins, 1999–2002

Species	1999	2000	2001	2002
<i>Alligator mississippiensis</i>	239,944	249,155	343,116	237,840
<i>Crocodylus acutus</i>	–	–	100	–
<i>C. johnstoni</i>	45	10	–	2
<i>C. moreletii</i>	2	1228	3643	1588
<i>C. niloticus</i>	133,339	147,240	150,757	159,798
<i>C. novaeguineae</i>	22,191	23,233	30,634	30,749
<i>C. porosus</i>	15,971	25,801	28,164	24,278
<i>C. rhombifer</i>	–	–	–	–
<i>C. siamensis</i>	5,459	2,417	4,422	3,580
Subtotal	416,951	449,084	560,836	457,835
<i>Caiman crocodilus crocodilus</i>	32,571	38,155	25,510*	17,220*
<i>Caiman crocodilus fuscus</i>	777,791	840,993	710,113	564,611*
<i>Caiman latirostris</i>	–	–	88	90
<i>Caiman yacare</i>	615	15,629	32,940	45,439*
Subtotal	810,977	894,777	768,651	627,360
Grand total	1,227,928	1,343,861	1,329,487	1,085,195

* = data deficient.

Source: Caldwell (2004).

Total *Crocodylus porosus* exports increased from 18,554 skins in 1997 to 24,278 in 2002, an increase of approximately 31% (refer to Table 3.4).

Table 3.4: Reported trade in *Crocodylus porosus* skin, 1997–2002

Country	1997	1998	1999	2000	2001	2002
Australia	8,777	9,896	5,048	13,296	11,849	10,423
Papua New Guinea	8,771	10,255	9,396	8,336	10,676	9,332
Indonesia	150	3,141	1,087	3,172	3,397	3,277
Malaysia*	120	320	320	559	675	662
Singapore	296	211	60	438	762	584
Thailand	440	300	60	0	805	0
Total	18,554	24,123	15,971	25,801	28,164	24,278

* Figure derived from import data.

Source: Caldwell (2004).

Australia and Papua New Guinea were the world's largest exporters of *Crocodylus porosus* skin in 2002, accounting for almost 81% of the total trade.

3.3 The Australian crocodile industry

Industry overview

Australian crocodile farming began in Queensland in the 1960s and later expanded into the Northern Territory and Western Australia. The Australian crocodile industry is characterised by a few major participants and a number of smaller ones (Camargo 2005).

Crocodiles are harvested throughout northern Australia. Crocodile operations in Western Australia and the Northern Territory involve ranching (captive breeding supplemented with wild harvesting). In Queensland, however, it is illegal to capture wild crocodiles unless (in special circumstances) a licence has been granted. The trade in crocodile products (skins, skin products and meat) is controlled by CITES. Permits are issued by the Commonwealth Department of Environment and Heritage.

Australian production

Commercial production of crocodiles in Australia began in the 1980s. Farms have been established in Western Australia, the Northern Territory and Queensland. Farming of crocodiles is capital intensive and is undertaken primarily for the purpose of exporting the skins (Camargo 2005).

In 2002, there were only 11 farms identified in Australia as supplying crocodiles for skins and/or meat and a further two farms producing small crocodiles which were on-sold to other farms for growing out. There were an estimated 68,148 crocodiles on these 13 farms (see Table 3.5). However, it is worth noting that this is significantly higher than the 2002 figure (10,425) reported by the Food and Agriculture Organization of the United Nations in Table 3.1.

Table 3.5: Number/location of crocodile producers, 2002

State	Number of producers	Farming stock
Western Australia	2	7,220
Northern Territory	5	39,000
Queensland	6	21,928
Total	13	68,148

Source: Camargo (2005).

Taking into account the breeding and non-breeding stock, the total farming stock throughout Australia was estimated to be 68,148 crocodiles in 2002 (Bodger & Goulding 2003).

3.4 Australian trade

In 2004 the total value of Australian skin and leather exports were approximately \$4.8 million (see Table 3.6). France and Japan were the two largest importers, accounting for 70% and 17% of total Australian exports respectively (RIRDC 2005).

Table 3.6: Crocodile skin and leather exports, Australia, 2001–04

EXPORTS:	2001	2002	2003	2004
Raw hides and tanned skins, saltwater crocodiles				
—number	na	13,233	21,480	18,244
—value (A\$'000)	na	2,919	5,015	4,801
—unit value (A\$/skin)	na	220.6	233.46	263.16
Leather				
—number	na	2540	350	3924
—value (A\$'000)	na	1028	2	41
—unit value (A\$/skin)	na	404.76	5.71	10.57

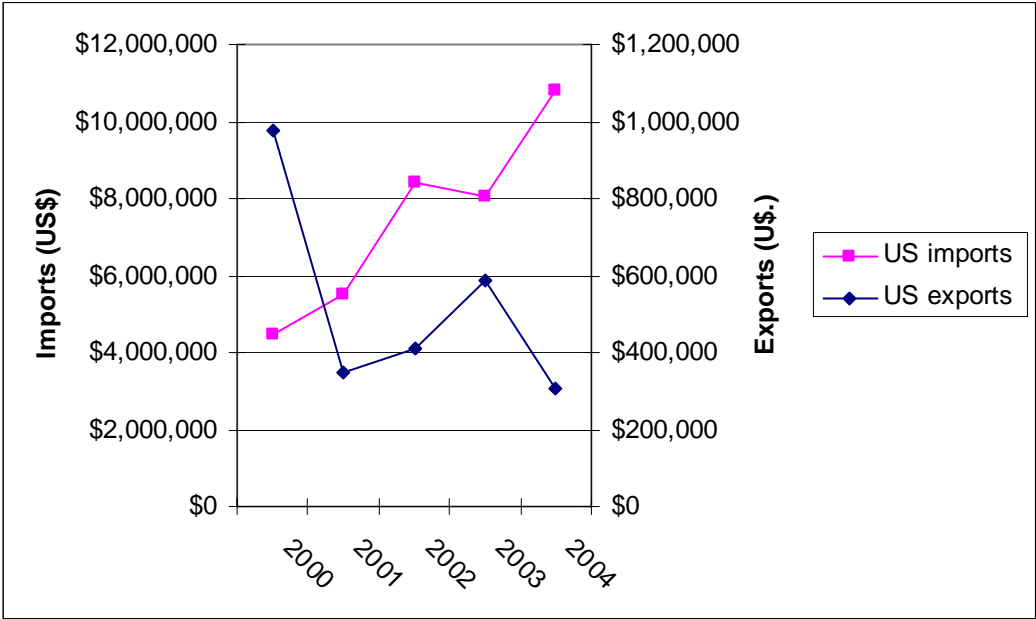
Source: Foster et al.(2005). Data compiled from a range of sources: ABS (2005); DBIRD (2003b); Adam Lourey, Department of Business, Industry and Development, Northern Territory, personal communication, 1 March 2005; Peter Peucker, Department of Primary Industries and Fisheries, Queensland, personal communication, 9 May 2005; ABARE.

3.5 US

Market potential

Crocodile skin and manufactured product imports to the US have shown an increasing trend since 2000, but US exports have been somewhat erratic over the period (refer to Figure 3.1 and Table 3.7). As shown in Table 3.7, in 2004 crocodile skin and manufactured product imports were valued at US\$10.8 million.

Figure 3.1: US imports and exports of crocodile skins and manufactured products, 2000–04



Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Table 3.7: US imports and exports of crocodile skins and manufactured products, 2000–04 (US\$)

Year	US imports of crocodile skins and products	US exports of crocodile skins and products
2000	\$4,445,471	\$977,086
2001	\$5,526,506	\$349,118
2002	\$8,416,196	\$409,798
2003	\$8,076,109	\$586,351
2004	\$10,823,165	\$304,655

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Crocodile skins are currently being exported to the US from many parts of the world, including Asia, Africa and Australia, while manufactured products come mainly from Europe and Mexico (refer to Appendix C, Tables C2–C6). The market potential is limited by a range of factors such as fashion trends, competition from other exotic skins, concern that crocodiles are endangered, high prices and lack of consumer awareness.

The US market for crocodile skins is relatively volatile. This is partly because fashion styles using reptile skins are mainly driven by Italy and France. Also, the price for niche market products such as crocodile skins is very vulnerable to oversupply of other exotic skin types and broader economic fluctuations (Chand 2005a).

In the US, many people believe that all species of crocodile are endangered (like, for instance, the Nile and Siamese crocodiles). They are not aware that some species are now in abundant supply, and they are therefore cautious about buying any crocodile products. Animal rights activists amplify these concerns (Chand 2005a).

Furthermore, many Americans know little about caring for crocodile skin products, its colour availability or its possible uses, and they often confuse caiman and alligator skins with crocodile skins. This is another example of a lack of consumer awareness acting as a barrier to crocodile trading (Chand 2005a).

Another reason for consumer hesitation in purchasing crocodile products is price. Crocodile skin goods are up-scale luxury items that many Americans cannot afford. This has positioned crocodile skin goods in niche markets limited to high-income earners (Chand 2005a).

Anecdotal evidence, particularly from the Western-style boot market, was that the high price of *Crocodylus porosus* leather was thought to limit its use in this market. The high price was also given as the reason a New York manufacturer of high-value handbags, briefcases and small leather goods did not use *Crocodylus porosus* in its product range.

Additionally, a Western boot manufacturer and another leather distributor servicing this market indicated that *Crocodylus porosus* leather was too expensive for use in boots, with consumers in this market only willing to bear a maximum price point of US\$1500 to US\$2000. Two other distributors servicing this market and another boot manufacturer and wholesaling company expressed interest in sourcing only second- or third-grade *Crocodylus porosus* leather. Again, this suggests that the price of first-grade leather is beyond what this market segment is willing to pay and limits the use of first-grade leather to niche, high-value items.

There may be greater market acceptance for lower grades of *Crocodylus porosus* in the Western boot market because of their lower prices. However, it is also worth noting that, in the meetings with the above Western boot market operators, two of them indicated that the market is familiar with the scale pattern of those species currently used in Western boots (such as caiman and Nile crocodile) and is more accepting of these species than of *Crocodylus porosus*.

Figure 3.2: A range of Western boots at a manufacturing facility in the US



Market segments

Saltwater crocodile is used in a wide range of products, as outlined in Table 3.8.

Table 3.8: End uses of crocodile leather

Garments	Leather products (large)	Leather products (small)	Shoes or boots	Trim for:
Coats	Suitcases	Handbags/wallets	Cowboy boots	Handbags/wallets
Skirts	Briefcases	Watchbands	Ladies' shoes	Notebooks
Vests	Furniture	Notebooks	Men's shoes	Money clips
	Upholstery	Money clips		Belts
	Attaché cases	Belts		Key chains
		Firearm accessories		Gun accessories
		Key chains		

Source: Chand (2005b).

US imports of crocodile skins and skin products have increased significantly between 2000 and 2004 (refer to Figure 3.1 and Table 3.7). Of these imports the top product categories during the period (cumulative value) in US\$ were:

- large manufactured leather products \$11,980,956
- shoes and boots \$9,271,070
- skins \$7,569,395
- small manufactured leather products \$7,499,171.

From Table 3.9 it is clear that the large manufactured leather goods segment experienced a steady upward trend and accounted for the greatest value of US crocodile imports between 2000 and 2004.

Table 3.9: US imports of crocodile skins and manufactured products, 2000–04 (US\$)

Item	2000	2001	2002	2003	2004
Garments ¹	3,250	91,821	36,690	105,783	164,392
Large manufactured leather products ²	500,325	1,843,557	2,752,540	2,816,638	4,067,896
Small manufactured leather products ³	612,830	652,817	1,384,821	1,647,227	3,201,476
Shoes or boots	1,746,029	1,537,597	2,003,820	1,982,723	2,000,901
Skins	1,580,617	1,399,867	2,168,421	1,142,531	1,277,959
Trim (shoe trim, garment trim or decorative trim)	2,420	847	69,904	381,207	110,541
Total all	4,445,471	5,526,506	8,416,196	8,076,109	10,823,165

1. Garments include items such as pants, jackets and dresses.

2. Large products include suitcases, briefcases, handbags and furniture.

3. Small products include purses, watch straps, gloves, belts, notebooks and wallets.

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Australia is actively exporting crocodile manufactured products to the US. In the period 2000–04, Australia exported a total of US\$64,548 worth of large manufactured leather products made from crocodile skin to the US, representing only 1.9% of the total US imports of US\$11,980,956.

Australia's exports of small manufactured leather products were US\$399,565 over the five-year period, and this is the segment in which Australia performed best. Australia's exports in this category have been steadily growing, albeit gradually. Australia's main competitors in small manufactured leather products were Switzerland, Italy, Singapore, France and South Africa. Australia was not a player in the other category of shoes and boots, and was a very insignificant player in trims and garments (Chand 2005a).

In relation to US imports of crocodile skins, Australia supplied US\$160,347 out of the five-year total of US\$7,509,395 and it is believed that Australia is in a good position to capture more market share in this category.

Refer to Appendix C, Tables C1–C.6, for a detailed breakdown by crocodile product category and top exporting countries to the US.

Based on the US import data for crocodile, the major competitors supplying crocodile skins and leather were Singapore for skins and France, Italy, Switzerland and South Africa for manufactured goods (garments and large and small manufactured products). Spain, Mexico and Italy were key suppliers of shoes or boots in 2004 (refer to Appendix C, Tables C2–C.6).

Other competitors for crocodile in the US were crocodile-scale-printed leathers, such as bovine leather, and synthetic materials featuring reptilian prints.

Product characteristics and price

Australian saltwater or estuarine crocodile, *Crocodylus porosus*, is recognised as one of the best skins in the world for high-quality fashion goods (Bomford & Caughley 1996). However, in the US the research found that some leather industry participants are divided in their opinions about the relative merits of crocodile skin and alligator skin.

One manufacturer indicated that it preferred alligator skin as it was believed to be more durable than crocodile skin. This manufacturer went on to report that it often receives worn-out crocodile skin products with requests to repair them in alligator skin. In another instance, a staff member of a US tannery claimed that alligator was easier to tan than crocodile. Conversely, a representative from another tannery said that saltwater crocodile was superior because its follicles are difficult to imitate (Chand 2005b).

Market research undertaken in the US by Austrade revealed some indicative prices for crocodile and alligator skins from US tanneries. These prices are outlined in Table 3.10.

Table 3.10: US alligator and crocodile skin prices, 2005

Species	First-grade skin price in US\$ per cm	Second-grade skin price in US\$ per cm	Third-grade skin price in US\$ per cm
Alligator	\$11.85*	\$9.60	\$7.50
Crocodile	\$22.00*	>\$15.00*	>\$15.00

* Denotes belly skin.
Source: Chand (2005b).

Research undertaken by Austrade revealed that similarities between crocodile and alligator skins led US consumers to often mistake crocodile for alligator. Furthermore, store visits in the US found that retailers selling exotic leather goods may also be contributing to consumer confusion between *Crocodylus porosus* and other crocodylia species. In visits to department stores and fashion boutiques with the crocodile project partner, it was found on four occasions that *Crocodylus porosus* leather goods were identified by sales assistants as coming from other crocodylia species.

As was the case with Italy, limited retail research was undertaken, with visits to various stores in New York, El Paso in Texas and Los Angeles. The New York and Los Angeles research focused on visiting up-market department stores and fashion boutiques. In El Paso, the research was limited to visiting a Western boot manufacturer’s factory outlet. Crocodylia leather goods were found at many retail outlets visited. Stores where such goods were found in the US and their prices are outlined in Table 3.11.

Table 3.11: US retail prices for products made of leather from crocodylia species

US CITY & STORE	PRODUCT	SPECIES	PRICE IN US\$	COMMENTS
New York				
<i>Lana Marks</i>	Women's belt	Alligator	\$700	
	Women's wallet	Alligator	\$735	
	Handbag (small)	Alligator	\$4,600	
	Handbag (medium)	Alligator	\$6,000	
	Handbag (large)	Alligator	\$10,000	
	Palm pilot case	<i>Crocodylus porosus</i>	\$1,800	Identified by sales assistant as an alligator product. Same product using ostrich leather priced at US\$1,700.
<i>Bergdorf Goodman</i>	Evening clutch bag	Alligator	\$2,700	
	Small handbag	Alligator	\$1,700	
	Large handbag	<i>Crocodylus porosus</i>	\$8,900	Identified by sales assistant as another species of crocodile.
	Large handbag—a different style from the handbag mentioned above	<i>Crocodylus porosus</i>	\$9,000	This handbag appeared to be manufactured from third-grade skin. Identified by sales assistant as another species of crocodile.
<i>Tod's</i>	Men's shoes	Caiman	\$1,100	
El Paso				
<i>Justin boot factory outlet</i>	Women's Western boots—tan colour	Alligator	\$1,700	
	Women's Western boots	Nile crocodile	\$450	
	Men's Western boots	Nile crocodile	\$350	
	Men's Western boots	Caiman	\$250	
Los Angeles				
<i>Lana Marks</i>	Women's handbag	<i>Crocodylus porosus</i>	\$12,000	This handbag appeared to be manufactured from third-grade skin. Identified by sales assistant as an alligator product. Same product using ostrich leather priced at US\$3,600 and bovine leather priced at US\$1,600.
<i>Celine</i>	Women's handbag	Nile crocodile	\$13,600	
<i>Coach</i>	Men's wallet	Alligator	\$700	
	Business card holder	Alligator	\$250	

It is important to note that, at the time the retail market research was undertaken in the US, according to Californian state law (Penal Code 653) it was illegal in California to sell products derived from a range of exotic species, including crocodile and alligator (Findlaw 2006). Technically this prevents the sale of these species in California, but as evidenced in Table 3.11 leather items made from these species were readily available for sale in Los Angeles.

Competitors

Regardless of which crocodylia species is thought to have superior skin, one of the major competitors for Australian saltwater crocodile is the American alligator (*Alligator mississippiensis*). It is harvested from the wild and farmed throughout the southern US, with more than 150 farms in operation (Chand 2005b).

It is difficult to know how many alligators there are in America, given the size of their habitat. According to state authorities, there are at least 1 million in Florida and another 1 million in Louisiana. These two states account for approximately 90% of the US alligator population, with the total population reported to be 2.1 million (Chand 2005b). In 2003 an estimated 307,793 skins were produced from wild and farmed sources, with Louisiana accounting for 79% (see Appendix C, Table C.7).

The competitive strengths of alligator skin include:

- **Rapid population growth and reliable supply.** Farming of alligators is undertaken in Louisiana and the farmers are required to transfer a proportion of their farmed eggs to the wild, ensuring that there is a sustainable population of alligators in the wild. As well, there is natural growth in the number of wild alligators, which is also contributing to supply.
- **Cheap, trouble-free shipping.** Domestically produced alligator skins can be shipped to American markets more cheaply and are not burdened with extra costs associated with importing crocodile skins, such as shipping and insurance costs, including customs and excise fees.
- **Research and education.** Research in the US is focusing on testing the properties of the skin, developing new product lines, and improving processing facilities and farm design. As well, consumer education is integrated into product marketing.
- **Similarity to crocodile and lower price.** As mentioned previously, the similarity between crocodile and alligator skin often confuses consumers. Invariably the price-conscious consumer would purchase alligator skin because of the significant premium charged for crocodile skin, as shown in Table 3. 10.
- **Patriotism.** Buying alligator means buying American and this is reinforced by some American alligator marketing campaigns.

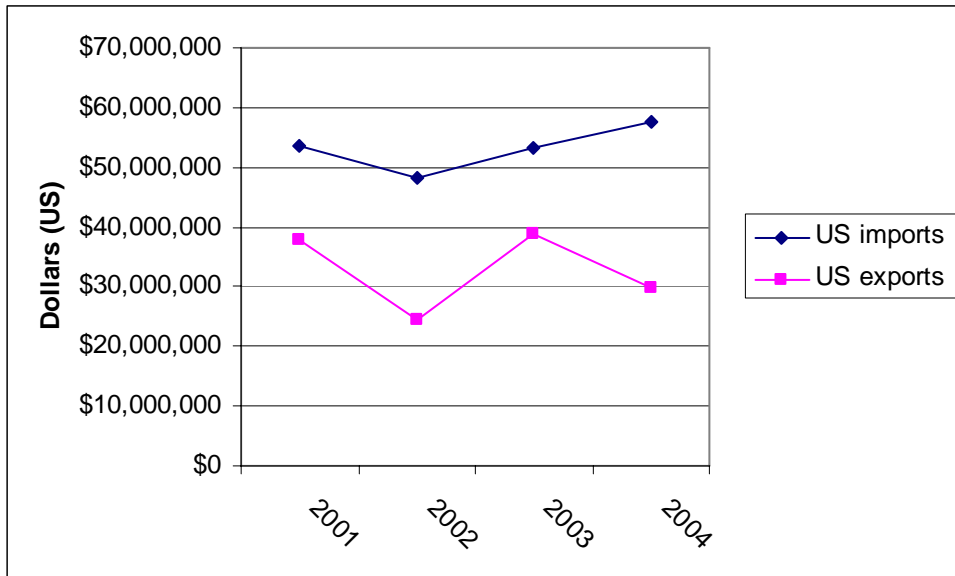
(Chand 2005b)

Figure 3.3 and Table 3.12 show the value of US imports and exports of alligator skins and manufactured products from 2001 to 2004. Imports of alligator skin remained fairly stable during the period and the top product segments were:

- Small manufactured leather products US\$127,420,699
- Shoes or boots US\$44,820,448
- Large manufactured leather products US\$26,606,674
- Skins US\$10,675,844 (see Appendix C, Table C.8).

By comparison, alligator exports were inconsistent, rising and falling between US\$24.5 million and US\$38.8 million per year during the period. (See Appendix C, Table C.9.)

Figure 3.3: US imports and exports of alligator skins and manufactured products, 2001–04 (US\$)



Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Table 3.12: US imports and exports of alligator skins and manufactured products, 2001–04 (US\$)

Year	US imports of alligator skins and manufactured products (US\$)	US exports of alligator skins and manufactured products (US\$)
2001	\$53,467,016	\$38,013,920
2002	\$48,161,333	\$24,520,169
2003	\$53,267,056	\$38,758,058
2004	\$57,631,886	\$29,910,305

Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Figure 3.4: Men’s alligator shoes at a Western boot manufacturing facility in the US



Caiman is another competitor of crocodile in the US market but does not compete with *Crocodylus porosus* to the extent of alligator. Caiman skin is considered inferior to both *Crocodylus porosus* and alligator skin as it is less supple, making it prone to cracking when bent. Furthermore, the belly skin

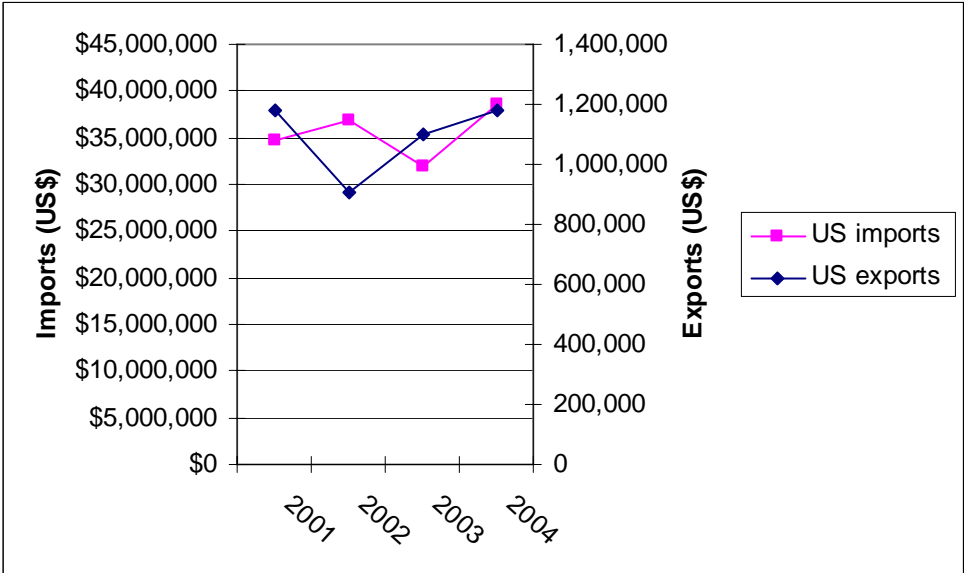
cannot be dyed as evenly, giving caiman skin products a discolouration not found in crocodile skin. Additionally, caiman are typically smaller, making them less suitable for use in garments and large leather goods (Chand 2005b).

However, caiman skin remains a competitor as caiman skins and skin products have a similar reptilian appearance to crocodile but at a significantly lower price, therefore appealing to a larger consumer group. Caiman skin is also often sold in the market as authentic crocodile or of equal quality to crocodile. It is also worth noting that caiman is a significant competitor to alligator, and efforts are being made by the alligator skin industry to educate retailers and consumers about the difference between alligator and caiman skin (Chand 2005b).

As outlined in Figure 3.5 and Table 3.13, caiman exports have remained relatively stable at around \$1 million over the period 2001–04 (See Appendix C, Table C.11), but imports have fluctuated, with a significant decline in 2003 followed by an increase in 2004. The cumulative values of imports of each of the major product categories for all years between 2001 and 2004 were:

- Shoes or boots US\$82,578,117
- Skins US\$24,554,699
- Small manufactured leather products US\$19,845,754
- Large manufactured leather products US\$10,889,629 (see Appendix C, Table C.10).

Figure 3.5: US imports and exports of caiman skins and manufactured products, 2001–04



Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Table 3.13: US imports and exports of caiman skins and manufactured products, 2001–04 (US\$)

Year	US imports of caiman skins and products	US exports of caiman skins and products
2001	\$34,738,939	\$1,178,090
2002	\$36,880,266	\$908,818
2003	\$31,858,196	\$1,101,777
2004	\$38,567,305	\$1,181,179

Source: Chand (2005b), compiled from US Fish and Wildlife Service.

3.6 Italy

Market potential

The most prominent exotic leather that was seen during the in-market visit to Italy was reptile leather. In-market research revealed that reptile leather is well accepted in this market. Unlike camel and emu, reptile was seen extensively in Italy in the retail outlets of global fashion brands and in smaller fashion outlets.

Crocodylia species were prominent at all levels of the Italian leather supply chain. Crocodylia species that were found in this market included alligator, caiman, Nile crocodile and *Crocodylus porosus*. The supply chain was well developed for crocodylia skins and leather, as evidenced by the presence of a number of tanneries specialising in tanning reptile species, including crocodylia species.

Based on the research conducted during the in-market visit, there is demand in Italy for crocodylia skin and leather for use in high-end leather products. This is evident from the well-established supply chain and the acceptance of crocodylia species by consumers, reflected in the wide availability of crocodylia leather products in the retail sector.

The market visit determined that alligator, caiman and Nile crocodylia species have penetrated the Italian reptile skin market at all levels of the supply chain. *Crocodylus porosus* appeared to have limited penetration in this market, which can be largely attributed to the premium price of this skin compared with that of competing crocodylia species.

Despite the limited penetration of *Crocodylus porosus* in Italy and the price premium commanded by this species in comparison with competing crocodylia species, the in-market research found that potential exists to increase supply to the Italian market. Meetings undertaken in Italy with two leather supply chain members—a tannery and a leather goods manufacturer—found that they would be interested in using *Crocodylus porosus* in their leathers and leather product lines. Demand was also evident during a visit to the Lineapelle leather fair, where an Australian *Crocodylus porosus* supplier received an order for 300 first-grade skins from an Italian tannery. This tannery also expressed interest in sourcing further shipments of skin into the foreseeable future.

Meetings conducted with representatives of one of Italy's leading fashion groups provided further insights into the market potential for *Crocodylus porosus*. The interviews revealed that this fashion group was experiencing strong growth in sales of luxury goods in the Italian market and expected this trend to continue. This fashion group, which was aiming to introduce *Crocodylus porosus* into its product lines for up-market goods, anticipated that demand for first-grade *Crocodylus porosus* skins would be in the order of 'thousands' per year.

Interviews with an additional five leather goods manufacturers indicated that there may also be potential for leather products made from a combination of exotic leathers. Suggestions that leather products could be manufactured from a combination of exotic species, including crocodile, caught the interest of the manufacturers interviewed, who believed that this concept may be accepted by the Italian market. Visits to retail stores in Milan appeared to support this view with at least one store featuring women's boots manufactured from what appeared to be ostrich and crocodylia leathers.

Figure 3.6: Ostrich and crocodylia women's boot seen at a Milan fashion store



Market segments

Crocodylia species were found to be used in a number of product categories in the manufacturing and retail sectors in Italy. These product categories included:

- small leather goods, including wallets, purses and key ring holders
- handbags
- suitcases
- footwear—both men's and women's
- garments—specifically a men's jacket
- cigarette lighters
- homewares—specifically lamp bases and a book cover.

It was found that small leather goods, handbags and footwear were the most common product categories using crocodylia species in the manufacturing and retail sectors in Italy.

Figure 3.7: Men's crocodylia species shoes seen at a Milan fashion store



Figure 3.8: Crocodylia species small leather goods seen at a Milan fashion store



Generally, in the Italian market, leather from crocodylia species was found to be used in high-value luxury items. The in-market research revealed that four of the manufacturers interviewed during the visit had used or were currently using crocodylia species in the production of leather goods. These manufacturers were also supplying many leading luxury brands, with two of them confirming that they were supplying brands such as Dolce & Gabbana, Ferrari and Tod's. However, in most of the interviews specific details were not revealed regarding which customers these manufacturers supplied with crocodylia leather goods. Given that the manufacturers had business dealings with leading luxury brands, it is reasonable to assume that crocodylia leather products were in the past supplied, or currently are supplied to the luxury brands, and in one instance this was confirmed by the manufacturer.

Research undertaken in the Italian retail sector (specifically in Milan and, to a lesser extent, Modena) also found that the majority of leather goods produced from crocodylia species were competing in the high-value, luxury segment of the market. Numerous global fashion brands' retail outlets and local fashion boutiques sold crocodylia leather goods. The majority of the price points for the crocodylia leather goods sighted at these outlets in Milan were in thousands of euros. The most expensive crocodylia leather item offered for sale was a Hermes *Crocodylus porosus* evening bag with a diamond feature. The retail price of this item was €120,000 (as of November 1 2005, A\$1 = €0.62). However, it was not in stock at the time of the visit.

Figure 3.9: Women's crocodylia species handbag seen at a Milan fashion store



Although crocodylia species leather goods were available in global fashion-brand retail outlets and local fashion boutiques, the availability of *Crocodylus porosus* leather goods was highly limited. Only two *Crocodylus porosus* items were seen offered for sale at the time of the visits to the retail outlets. Both items were Hermes ladies' fashion accessories (the abovementioned small evening bag and a women's wallet) and featured diamonds.

The research conducted for this project cannot be considered a complete account of the availability of *Crocodylus porosus* leather goods in the Italian retail sector. Nevertheless, anecdotal evidence (from both the manufacturing sector and the retail sector) is that there may be scope for further penetration of the high-value, luxury segment of the market for *Crocodylus porosus*.

Product characteristics and price

Some important insights into the latest and most popular tanning techniques for crocodylia species were obtained during the visit to the October 2005 Lineapelle leather fair held in Bologna. One of the key features of this fair was the range of colours and finishes available in leather for the European winter fashion season of 2006–07. Alligator, caiman and Nile crocodile featured most prominently among the crocodylia species at this fair.

Figure 3.10: Crocodylia leathers seen at the Lineapelle trade fair



One of the most popular leather finishes that was seen among all the leathers available at the fair, including crocodylia species, was a metallic finish. This finish was available in a range of colours, of which the most prominent were gold, silver, bronze and burnt orange.

Like the metallic finish, a 'jungle' finish was used across a range of species at the fair, including the crocodylia species. Other descriptions used for the jungle tanning process included 'stressed' or 'vintage' tanning. This finish had what may be best described as a 'used' or 'beaten-up' appearance. A tannery that was interviewed and that used this finish with crocodylia species indicated that its 'jungle' tanned leather was used in the manufacture of bedroom accessories and handbags.

Another popular finish was described as a 'pull-up' finish, the leather changing colour when pressure was applied to the surface. The abovementioned tannery indicated that this finish was mostly used in the manufacture of handbags.

The same tannery also said that it had developed a new glaze finish for crocodylia species. This finish differed from traditional glaze finishes in that it was softer and more pliable. The tannery indicated that this finish was used for handbags and belts. Another tannery interviewed at the fair had developed a similar finish, describing it as extremely soft and likening it to silk. This finish was developed for crocodylia leathers to be used specifically in the manufacture of garments. The tanning cost using this process was €1.50/cm to process the skin from raw form to finished leather.

A leather manufacturer said that, in general, manufacturers in Italy do not like to work with *Crocodylus porosus*. He said this is because *Crocodylus porosus* is short and round, which makes it difficult to cut the pieces needed to manufacturer leather goods. Nevertheless, the manufacturer said that the appeal of *Crocodylus porosus* lies in its scale pattern. It should be noted that these comments were not made by any other Italian leather industry member.

Figure 3.11: Crocodylia belts seen at a manufacturing facility in Italy



Figure 3.12: Crocodylia key ring and cufflinks seen at a manufacturing facility in Italy



Opinions were divided on the price competitiveness of crocodile. One small specialist exotic skin tannery advised that, at the price of US\$10/cm, *Crocodylus porosus* was very competitive. Another large specialist exotic tannery supplying a range of global luxury fashion brands indicated that sourcing premium-quality skins was the most important concern and it was willing to pay a premium price to obtain quality skins. As well, a manufacturer of leather accessories indicated that *Crocodylus porosus* may have more potential in Italy than in the past because the price of alligator had recently increased by about 20%. Conversely, a leather wholesaler, an importer and distributor and two manufacturers indicated that, at US\$10/cm, *Crocodylus porosus* was too expensive.

The majority of the retail research in Italy was carried out at up-market fashion outlets in the Italian city of Milan with the crocodile project partner. Some ad hoc research was also undertaken in the city of Modena. Crocodylia species were found at many retail outlets visited. As in the US, there were a number of instances where sales assistants identified leather products as alligator when in fact they were from other crocodylia species.

Prices and brands of a selection of crocodylia leather goods found in Milan at the outlets visited are outlined in Table 3.14.

Table 3.14: Milan retail prices for crocodylia leather products

Brand	Product	Species	Price in euros
Giorgio Armani	Men's bag—matt finish	Alligator	€3,380
Hermes	Book cover	Alligator	€1,200
Hermes	Women's purse with diamonds	<i>Crocodylus porosus</i>	€8,500
Hermes	Women's purse	Alligator	€2,010
Hermes	Women's evening bag with diamonds	<i>Crocodylus porosus</i>	€120,000
Gucci	Men's ankle-high boot	Alligator	€5,300
Gucci	Large travel/storage bag	Alligator	€19,500

Competitors

Alligator and caiman are the two major competitors to crocodile in Italy. Alligator was extensively used in a wide range of fashion items. Alligator and caiman are the favoured skins because of the abundant supply and their lower price compared with *Crocodylus porosus*. As well as the alligator and caiman species, Nile crocodile was used in some leather goods in Italy.

A key problem for *Crocodylus porosus* in the Italian market is the consumer's inability to differentiate between crocodylia species. As noted earlier, in a number of cases sales assistants were observed stating that finished products were made from alligator when this was not the case. This is a problem, because *Crocodylus porosus* skins are generally regarded as superior skins to those of other crocodylia species and thus command a higher retail price. If salespeople are not aware of the differences between the species, and fail to inform consumers of those differences, there is a chance that consumers will favour other species products and ultimately may be unwilling to pay a premium price for *Crocodylus porosus* products.

Competition for crocodile was also encountered from crocodile-scale-printed leathers, such as bovine leather, and synthetic materials used in the manufacture of leather products.

4 Emu

4.1 World supply

There is limited information or statistical data on either global stock levels or skin production for emus and hence no data could be obtained for this report.

4.2 World trade

As with world emu supply, despite the best efforts of the research organisation, very limited information relating to world trade in emu skins and leather was available from the Australian emu industry, government agencies and secondary sources. Hence no data could be reported.

4.3 The Australian emu industry

Industry overview

The emu is the world's second-largest living bird and is native to Australia. Emus are farmed for their meat and oil, with skins being a by-product of meat and oil production (Foster et al. 2005). Feathers have also been known to be sold for use in the fashion industry.

In Australia, emu skin and leather are a by-product of emu meat and oil production and account for approximately 13% of total production revenue (leg skin 3%, hides 8% and trim 2%). Emu meat and oil account for 42% and 45% of the remaining production revenue respectively. It is estimated that one emu can produce approximately 0.75 square metre of body skin and two leg skins (Foster et al. 2005).

Commercial emu farming began in Western Australia in 1987 and quickly spread throughout Australia and later across the world. In 2001, there were about 145 commercial emu farms in Australia. By 2004, this number had dropped dramatically to approximately 50, with the value of emu production thought to be around \$1 million (Foster et al. 2005). This drop can be attributed to drought, which caused production numbers to decrease considerably between 2002 and 2003 (refer to Table 4.1).

Table 4.1: Emu production and exports, Australia, 2001–04 (A\$)

	Unit	2001	2002	2003	2004
Production					
Slaughterings	no.	7031	4000	3714	6258
Gross value	\$'000	1112	635	459	1033
Meat production¹	tonnes	84.4	48.0	44.6	75.1
Oil production²	kL	42.2	24.0	22.3	37.5
Exports					
Meat and edible offal					
—volume	tonnes	na	9.6	38.8	17.5
—value	\$'000	na	68	148	134
—unit value	\$/kg	na	7.06	3.82	7.63
Oil					
—volume	tonnes	33.7	19.2	17.8	30.0
—value	\$'000	817	465	431	727
—unit value	\$/kg	24.20	24.20	24.20	24.20
Skins and leather					
—volume	no.	1160	660	613	1033
—value	\$'000	77	44	40	68
—unit value	\$/kg	66.00	66.00	66.00	66.00

1. Assumes a dressed weight of 12 kg per bird.

2. Assumes oil production of 6 litres per bird slaughtered.

Source: Foster et al. (2005), compiled from ABS (2005); Levies Revenue Service; ABARE.

4.4 Australian trade

At present there is only limited international demand for emu leather and it is estimated that just one-third of emu skins from slaughtered birds are used. The domestic price for emu skin (in a raw salted state) is approximately A\$60 per skin. It is estimated that around 50% of all emu skins produced are exported in this raw salted form (Foster et al. 2005).

Exports of emu skins decreased in 2002, falling from 1160 skins in 2001 to just 660 in 2002, a decrease of approximately 43%. This can be attributed to reduced production levels during the drought. Exports then remained steady at 613 skins in 2003, with an increase of almost 69% in 2004, when skin exports increased to 1033 (refer to Table 4.1).

Statistical data provided by the Department of Environment and Heritage indicates that between 2002 and 2005 the six largest importers of Australian emu skin (assorted) and manufactured emu products were Hong Kong, New Zealand, the United Kingdom, the US, Japan and China (refer to Appendix D). These countries accounted for just over 1% of total exports across all product categories reported (see Table 4.2). This low percentage is primarily due to the fact that 2,465,120 products were exported but the destination information was not documented. It must also be noted that these data includes several ambiguous product classifications and therefore may not accurately represent the total emu skin and leather product exports.

Table 4.2: Emu product exports from Australia, 2002–05

Country	Quantity (number)
Hong Kong	13,000
New Zealand	3,917
United Kingdom	3,785
US	2,645
Japan	1,362
China	1,258
Destination unknown	2,465,120
Other	3,208
Total	2,494,295

Source: Department of Environment and Heritage (2006).

4.5 US

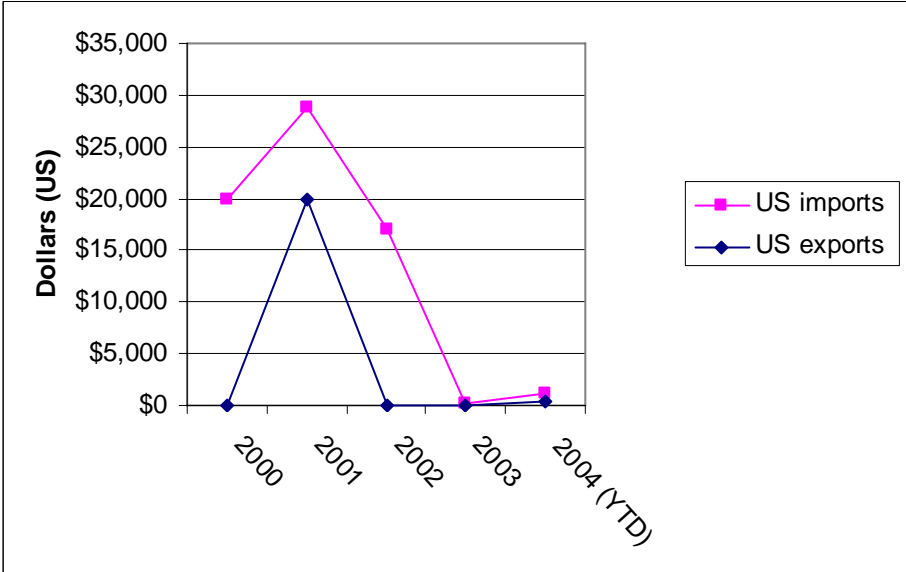
Market potential

American ranchers were quick to follow the modern commercial emu farming that began in Western Australia in the late 1980s. This was largely an extension of the growing popularity of ostrich products. Although the industry was initially successful, overproduction of emu skins halted expansion in the mid 1990s. A lack of avian research, market research and promotion resulted in an oversupply, with few outlets for emu skins (Chand 2005a).

Although not as successful as emu meat and oil, emu leather is used to a limited extent in the US. Emu meat is gaining popularity among an increasingly health-conscious population. In addition, emu oil is gaining a good reputation for use in cosmetics, pharmaceuticals and skin treatment applications. The success of emu meat and oil encourages farmers to seek markets for the skins so that they become a profitable by-product (Chand 2005a).

US imports and exports of emu skin and skin products have waned. The industry appears to be in a state of flux, with opportunistic farmers grappling for higher prices for live emus and thus limiting the industry's full potential (Chand 2005a). Figure 4.1 and Table 4.3 show the import and export trends from 2000 to 2004. As shown in Figure 4.1, US imports of emu skin and products have slumped in recent years.

Figure 4.1: US imports and exports of emu skins and manufactured products (US\$)



Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table 4.3: US imports and exports of emu skins and manufactured products

Year	US imports of emu skins and manufactured products (US\$)	US exports of emu skins and manufactured products (US\$)
2000	\$19,969	–
2001	\$28,798	\$20,000
2002	\$17,079	–
2003	\$107	–

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Market research conducted during the visit to the US revealed that the level of interest in emu is similar to that for camel. Four companies from the leather industry indicated that they would be interested in sourcing emu, including two wholesalers and distributors, a Western boot manufacturer and leather distributor, and a designer of up-market leather garments and accessories.

It was found that at the time of the visit none of the companies met were involved in manufacturing or wholesaling or distributing emu leather. Only two companies met during the market visit—a Western boot manufacturer and a leather distributor servicing the Western boot market—had used emu in the past. Research undertaken at retail stores also found that only one retailer in New York had emu products available and these were belts made from leg skins. No products manufactured from emu body leather were found for sale during the US retail research phase of this project.

Given that at the time of the visit there was limited emu leather for sale, this may indicate that market acceptance is low and that it is likely to be only available in niche market segments.

Market segments

As outlined in Table 4.4 the top segments for emu skins and manufactured products imported by the US between 2000 and 2004 (cumulative value) in US\$ were:

- Small manufactured leather products US\$27,206
- Garments US\$18,982
- Trim (shoe trim, garment trim or decorative trim) US\$10,575
- Large manufactured leather products US\$5,123.

For further details of value and volume per product category, and by country, refer to Appendix E, Tables E.1–E.6.

Table 4.4: US imports of emu skins and manufactured products, 2000–04 (\$US)

	2000	2001	2002	2003	2004
Garments ¹	0	2,313	16,669	0	0
Large manufactured leather products ²	2,626	1,497	410	0	590
Small manufactured leather products ³	17,343	9,613	0	107	143
Shoes or boots	0	4,800	0	0	501
Skins	0	0	0	0	0
Trim (shoe trim, garment trim or decorative trim)	0	10,575	0	0	0
Total all	19,969	28,798	17,079	107	1,234

1. Garments include items such as pants, jackets and dresses.

2. Large products include suitcases, briefcases, handbags and furniture.

3. Small products include purses, watch straps, gloves, belts, notebooks and wallets.

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Small manufactured leather products made up the main share during this period, but, as Table 4.4 shows, most of the US\$27,206 was traded in 2000 and 2001. Of the five-year US total of \$27,206, Australia accounted for only US\$586 of small manufactured leather goods imports into the US.

In the large leather goods category Australia's exports accounted for just US\$410 of the five-year total of US\$5,123.

Table 4.5 outlines products made from emu leathers.

Table 4.5: End uses of emu leather

Garments	Leather products (large)	Leather products (small)	Shoes or boots	Trim for:
Coats	Suitcases	Handbags/wallets	Cowboy boots	Handbags/wallets
Skirts	Briefcases	Watchbands	Ladies' shoes	Notebooks
Vests	Furniture	Notebooks	Men's shoes	Money clips
	Upholstery	Money clips		Belts
	Attaché cases	Belts		Key chains
		Gloves		
		Key chains		

Source: Chand (2005b)

Comments made during meetings with leather industry participants provided further evidence and insights about segments of the market that might best suit emu. A leather distributor, a fashion industry agent and a fashion designer all suggested that emu would be suitable for use in garments and accessories, with the distributor and designer both expressing interest in sourcing emu.

Feedback provided by Western boot market operators also suggested that there might be potential for emu to be used in the manufacture of boots. A distributor of leather servicing the Western boot market and another leather distributor and manufacturer of Western boots advised that they had an interest in sourcing emu leather and requested further specifications.

A third company, also a leather distributor, when presented with a sample of emu leather provided favourable feedback and indicated that a leading Western boot manufacturer might have an interest in purchasing the leather. However, this Western boot manufacturer had been earlier presented with the same leather sample and expressed no interest in it or in using any emu leather in its boot range.

Product characteristics and price

Emu can be readily tanned into a supple leather, which enables it to be used in the production of soft, flexible goods such as garments and gloves. Austrade research revealed that many Americans find the skin's quill pattern attractive, but its high cost limits it to a select market (Chand 2005a).

Emu legs provide a reptilian-like leather often referred to as leggings. Leggings are gaining some popularity as fashion highlights in garments, boots, key chains and wallets. Austrade research revealed that emu is not considered an endangered or threatened species in the US and thus the leggings can be used as a substitute for products aiming for a reptilian look (Chand 2005a).

Researchers at the Louisiana State University's School of Ecology considered the key strengths of emu skin to be colour retention, stain resistance and durability. They have indicated that it would be suitable for use in upholstery and high fashion (Chand 2005a).

Several comments made by companies interviewed during the US visit provided further insights into how the characteristics of emu were perceived by various parts of the US leather industry. Conflicting opinions existed as to the strength of emu skin. A leather distributor servicing the Western boot market advised that the leather sample provided was stronger than any other emu leather that he had seen in the past. This distributor said that the quill pattern was closer together than that of the rhea species (flightless species of bird from South America) and thus created a superior pattern. As well, a fashion designer said that the sample of emu leather provided was 'good to hand' and expressed the opinion that customers would like the feel of the leather.

Conversely, a Western boot manufacturer indicated that when it had used emu leather in the past it was prone to tearing during the manufacturing process. This manufacturer also advised that at that time emu was being marketed as 'poor man's ostrich'. Furthermore, a leather broker servicing mainly the interior design market believed that the size of the emu skin was too small to use for interior design products.

During the visit, virtually no leather industry representatives made comments on the price of the leather, which may be the result of their limited experience with this species. Only one comment was made on price, by a distributor servicing the Western boot market. He had sold emu leather in the past and believed that to be competitive in the Western boot market it had to be priced at approximately US\$4 to US\$5 per square foot.

Given that there was only one comment made regarding the price of emu and that no emu products were seen in the retail sector, further market research should be undertaken to further establish the price point for emu in the US market.

Competitors

The American Emu Association estimated that in 2004 (not complete data from the full year) 11,719 emus were slaughtered, up from 5,775 in 2002 (an increase of more than 100%).

Emu meat and oil production helps to make emu farming an attractive opportunity for 'alternative farmers'. The robust nature of the emu enables it to survive in a wide range of climates and has allowed the domestic industry to spread nationally. In 2002, there were approximately 5,000 emu farms in the US. As a result of this high domestic production, Queensland exporters of emu skins and leathers to the US are likely to face significant competition. The US market appears to be well supplied by local producers and both imports and exports of emu skin have dropped dramatically (Chand 2005a).

US imports of emu leather products were highly erratic across all product categories. Australia's main competitor in both the small and large manufactured products for emu was France. Italy and France dominated the emu garments category. It is worth noting that no other countries exported emu skin

garments to the US. For further data on US imports of emu leather products from 2000 to 2004, refer to Appendix E, Tables E.1–E.6.

Emu skin and leather products also face competition from ostrich skin. The US Department of Agriculture estimates that there are 1,000 ostrich farmers raising roughly 100,000 ostriches in that country (Chand 2005b).

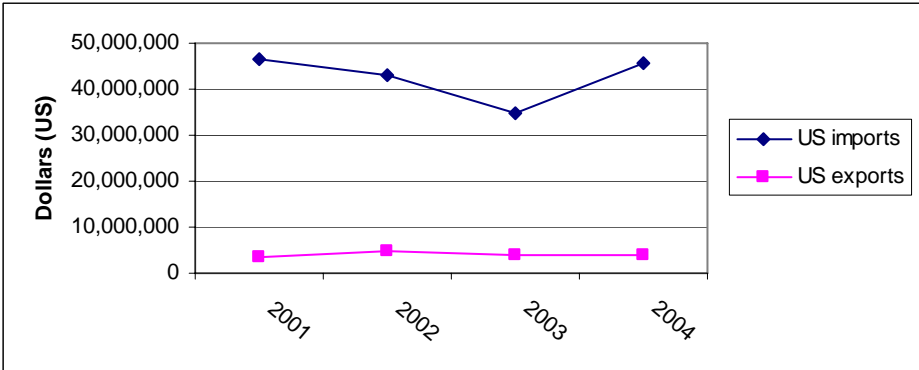
In the US, ostrich has some advantages over emu. Ostrich farming there is more developed than emu farming and trade associations are committed to further developing the industry. Like emu, ostrich skin produces supple leather, but ostrich leather is considered to also have a more attractive and prominent quill pattern (Chand 2005b).

Figure 4.2 and Table 4.6 show imports and exports of ostrich skin and manufactured products. Imports were at a high of US\$46 million in 2001 and fell to US\$34 million in 2003. US exports of ostrich have ranged from US\$3.6 million to US\$4.6 million from 2001 through to 2004. The cumulative values of each major ostrich import product category from 2001 to 2004 were:

- Skins US\$76,223,617
- Shoes or boots US\$59,649,172
- Small manufactured leather products US\$14,465,421
- Large manufactured leather products US\$10,750,395

For further details, see Appendix E, Tables E.7 and E.8.

Figure 4.2: US imports and exports of ostrich skins and manufactured products, 2001–04



Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Table 4.6: US imports and exports of ostrich skins and manufactured products, 2001–04

Year	US imports of ostrich skins and manufactured products (US\$)	US exports of ostrich skins and manufactured products (US\$)
2001	46,674,250	3,669,072
2002	43,218,235	4,691,080
2003	34,647,405	4,080,761
2004	45,487,259	4,065,246

Source: Chand (2005b), compiled from US Fish and Wildlife Service.

Ostrich was seen to be available in the distribution, manufacturing and retail sectors of the leather supply chain, mostly servicing high-value segments of the market. This observation supported the evidence from the data above that the ostrich leather supply chain is well established in the US and there is acceptance in the market.

As well as ostrich, rhea leather was reportedly used in the past by a leather distributor servicing the Western boot market. Although the research found no rhea leather currently being used in the market,

it would be prudent for further research to be undertaken to determine if it is a competitive threat to emu.

4.6 Italy

Market potential

The Italian market has some potential for emu, with interest expressed in skins and leather by the tanning and leather product manufacturing sectors. However, based on the research undertaken during the visit to Italy, it appears that the potential for emu may be less promising than for camel and crocodile.

There was very limited awareness of emu in the market, which appears to be one of the major trade impediments. Only one Italian company, a manufacturer of leather accessories, said it was aware of emu leather and had seen it used in Italy in the past. This manufacturer said that emu had disappeared from the market 15 years earlier because of competition from ostrich skin and leather.

Three companies expressed interest in sourcing emu skins and leather, two of which had encountered emu in the past—a trader of leather and skins and a tannery. The trader also had interest in sourcing emu leg skins. A third company, a tannery specialising in exotic skins, which had not used emu in the past, also expressed interest in sourcing skins after the trip from Italy was undertaken.

The visit to the Lineapelle leather trade fair in Bologna and the retail research undertaken in Italy provided further evidence that there is limited awareness and use of emu. Of the hundreds of tanneries exhibiting at the fair, the project team did not sight any which used emu as part of their leather range, and during visits to fashion outlets in Milan and Modena there were no emu leather products found for sale.

Market segments

Although there were a limited number of instances where companies were aware of and/or interested in emu, feedback from the Italian leather industry suggested that emu may be suitable for use in garments and footwear and as a lining.

Two tanneries said the leather could be used in garments, most likely in the high-fashion segment, as both tanneries serviced high-profile fashion companies.

Emu was also considered by one manufacturer as suitable for women's up-market fashion shoes.

Figure 4.3: Women's shoes for which an Italian manufacturer suggested emu could be used



Another manufacturer of men's and women's leather accessories said that emu would only be suitable for linings in its product range. However, this manufacturer did indicate that emu could be promoted as exotic and from a distant place, and that a high-value image could ultimately be built for it.

Product characteristics and price

Although few comments were made about the emu leather samples provided to companies during the visit to Italy, two of the previously mentioned tanneries stated why they believed emu was suitable for use in garments. One of the tanneries commented that the sample of emu provided had an interesting follicle pattern. The second tannery said that emu lent itself well to use in garments because of the delicate nature of the leather.

Again, there were few comments made about the price competitiveness of emu skin and leather in Italy. However, an indicative price of A\$140 per finished skin was quoted to the previously mentioned tannery and the women's shoe manufacturer. Both said the price was too expensive.

Competitors

It appeared that the closest competitor in this market was ostrich. This was because emu and ostrich have a similar skin pattern and also because they are both large flightless birds and thus there is a tendency for them to be perceived as competitors. One of the main distinguishing characteristics between the two species was that ostrich skin has greater strength than emu and therefore lends itself to a greater variety of uses in the manufacture of leather products.

Ostrich was seen extensively in Italy at all levels of the leather supply chain, including the tanning, manufacturing and retail sectors. Its acceptance in the Italian market was particularly evident in the abundant availability of ostrich leather at the Lineapelle trade fair in Bologna. Furthermore, ostrich leather was also seen in various up-market leather accessories during the retail research.

Although ostrich was widely available in the Italian leather industry, there was less evidence of it in the leather garment market. This may suggest that emu may encounter less competition from ostrich in the garment segment of the leather market in Italy, but further research, including a comprehensive study of the entire Italian leather supply chain, would be warranted to clarify this possibility.

5 Goat

5.1 World supply of skins and leather

Over the past four years, world goat stocks have steadily increased by approximately 55 million head, from 752 million in 2002 to over 800 million in 2005 (FAOSTAT 2005). In 2005 the largest stocks existed in China, India, Pakistan and Sudan (refer to Table 5.1).

Table 5.1: World goat stocks, 2002–05 (× 1000 head)

Country	2002	2003	2004	2005
China	161,477	172,921	183,363	195,759
India	120,500	120,097	120,000	120,000
Pakistan	50,917	52,763	54,700	56,700
Sudan	41,485	42,000	42,000	42,000
Bangladesh	36,900	36,900	36,900	36,900
Australia	400	420	400	400
Other	340,437	346,768	352,114	355,486
World total	752,116	771,870	789,477	807,245

Source: FAOSTAT (2005).

Global output of goat skin has grown moderately since 2002, increasing yearly by an average of about 3%. In 2005, world goat skin production increased to 985,331 metric tonnes, with output from China, India and Pakistan accounting for over 63% of the world total (refer to Table 5.2).

Table 5.2: World goat skin production, 2002–05 (metric tonnes)

Country	2002	2003	2004	2005
China	319,381	355,989	370,584	370,585
India	129,420	129,600	129,600	129,600
Pakistan	107,930	111,370	119,970	124,270
Bangladesh	41,600	41,800	41,800	41,800
Sudan	24,250	24,250	24,250	24,250
Australia	4,133	4,275	4,950	5,025
Other	276,926	281,336	287,414	289,801
World total	903,640	948,620	978,568	985,331

Source: FAOSTAT (2005).

In 2001, the largest producers of light sheep and goat leather were China, India, Italy, Turkey and Spain, which collectively accounted for approximately 64% of total world production (refer to Table 5.3).

Table 5.3: Top five producers of light leather from sheep and goats, 1998–2001 (million square feet)

Country	1998	1999	2000	2001
China	865.3	1057.6	1167.2	1219.4
India	687.8	704.4	721.5	720.3
Italy	370.3	387.5	494.1	497.0
Turkey	310.0	220.0	270.0	300.0
Spain	218.0	183.3	224.4	229.8
Australia*	15.0	15.0	14.5	14.0
World total	4117.9	4301.5	4565.2	4637.9

* Australia is not a top producer of light leather but has been included for comparison purposes.

Source: FAO (2003a).

5.2 World trade

Asia remains a key importing region in the world leather trade because of its success in processing and manufacturing and its comparatively low labour costs. A significant amount of goat skin is traded within this region, with China alone accounting for 24% of the total world imports in 2004 (refer to Table 5.4). Italy remains an important player in the world leather skin industry, with 11% of world raw goat skin imports.

Table 5.4: World raw goat skin imports, 2001–04 (metric tonnes)

Country	2001	2002	2003	2004
China	3,385	663	1,222	3,265
Turkey	2,423	3,509	4,354	2,874
India	3,106	3,127	3,258	2,058
Italy	2,565	2,285	1,118	1,502
Spain	1,600	1,859	1,279	653
Australia	–	–	–	–
Other	2,823	2,478	3,669	3,369
World total	15,902	13,921	14,900	13,721

Source: FAOSTAT (2005).

Skins

China and India were the world's largest goat skin producers in 2005, accounting for about 38% and 13% of total world production respectively (refer to Table 5.2). Significant goat skin importers were China, Turkey, India, Italy and Spain (refer to Table 5.4).

In relation to goat skin exports, the US was the world's largest exporter in 2004, accounting for almost 15% of total world exports. However, as can be seen in Table 5.5 the level of US goat skin exports over the four-year period was extremely inconsistent. This can be attributed to the US goat skin industry's boom-and-bust cycle in which prices peaked in 2002, fell the following year and then stabilised again in 2004 (Chand 2005a). Other key exporters of raw goat skin during the period included Australia, Bahrain, China (incorporating Hong Kong), Sudan and Serbia and Montenegro, which collectively accounted for over 41% of total world exports during 2004.

Table 5.5: World raw goat skin exports, 2001–04 (metric tonnes)

Country	2001	2002	2003	2004
USA	1,819	21,647	172	1,850
Australia	934	1,961	943	1,275
Bahrain	90	1,108	1,719	1,149
China, HK SAR	110	160	392	946
Sudan	5	387	259	878
Serbia & Montenegro	10	2	1,724	876
Other	7,958	8,466	7,368	5,421
World total	10,926	33,731	12,577	12,395

Source: FAOSTAT (2005).

Finished leather

The major importers in 2001 of processed sheep and goat leather (light leather) were Italy, China, Korea, Spain and Turkey (refer to Table 5.6). Korea had the highest average yearly percentage growth in imports, increasing from 85.6 million square feet in 1997 to 221.7 million square feet in 2001. The other major importers have also shown high percentage growth increases over the period, suggesting that significant levels of tanning and manufacturing are occurring in these countries.

Table 5.6: Light leather imports for sheep and goat, 1997–2001 (million square feet)

Country	1997	1998	1999	2000	Preliminary 2001
Italy	394.8	361.1	361.3	638.5	639.2
China	216.6	184.2	395.6	500.0	550.0
Korea	85.6	43.9	79.2	191.5	221.7
Spain	113.5	122.0	109.8	141.6	156.2
Turkey	95.4	49.1	60.6	106.3	82.0
Australia	5.5	2.7	3.6	4.9	4.3
Other	646.0	630.9	467.3	591.5	502.8
World total	1,557.4	1,393.9	1,477.4	2,174.3	2,156.2

Source: FAO (2003a).

The largest exporters of sheep and goat leather by value in 2001 were Italy, Korea, India, Spain, Pakistan and China - refer to Table 5.7 (FAO 2003a).

Table 5.7: Light leather exports for sheep and goat, 1997–2001 (quantity in million square feet and value in million US\$)

Country	1997		1998		1999		2000		2001 (Preliminary)	
	m. sq. ft	US\$ m.	m. sq. ft	US\$ m.	m. sq. ft	US\$ m.	m. sq. ft	US\$ m.	m. sq. ft	US\$ m.
Italy	324.1	637.1	274.6	452.4	306.6	420.3	521.3	671.1	467.5	648.5
Korea	91.2	187.9	78.9	135.9	125.4	170.4	210.3	257.1	193.9	238.2
India	143.0	162.2	145.2	154.3	160.0	100.9	180.0	172.0	228.9	232.5
Spain	62.7	176.5	46.5	134.8	55.8	137.5	75.6	168.2	106.6	183.3
Pakistan	90.0	125.0	85.0	115.0	90.0	130.0	90.0	13.00	95.0	135.0
China	31.3	36.0	33.4	34.9	54.6	193.2	185.8	160.5	131.0	113.6
Australia	9.8	15.2	2.9	3.8	0.5	2.6	1.1	1.0	0.9	2.5
Other	671.8	956.8	670	877.6	672.5	620.3	617.5	676.2	633.8	677.8
World total	1,423.9	2,296.7	1,336.5	1,908.7	1,465.4	1,775.2	1,881.6	2,236.1	1,857.6	2,231.4

Source: FAO (2003a).

Manufactured products

Goat leather is considered to be generally good all-purpose leather and is used for the following:

- linings and uppers for shoes
- nappa for garments
- suede for apparel
- gloving
- bookbinding
- luggage.

The tight and distinctive grain gives the leather durable characteristics. Goat skin fibres are also tighter than those of lamb skin, giving goat leather a hard-wearing grain (Pacific Planet 2001). The quality of goat leather, however, depends significantly on a number of factors, including the breed of the goat and the extent of damage done to the skin before, during and after slaughter (Holst 2003).

In 2001, predictions made by World Leather Market of global changes to take place by 2010 in the footwear industry indicated a continuation of the present concentration of manufacturing in developing countries. Asia will continue to play a dominant role in the global production of footwear, with China contributing 40% of total world production (World Leather Market 2000).

5.3 The Australian goat industry

Australia is the world's largest goat meat exporter (MLA 2006). Despite this high export status, the country accounts for just 0.2% of world goat meat production (Department of Agriculture, Fisheries and Forestry 2005).

In Australia feral goats have been harvested for three main uses:

- for domestication to establish farmed breeding stock
- as meat for either local consumption or export, and
- for export as live animals for slaughter at destination (Forsyth & Parkes 2004).

It is estimated that there are 300,000 domestic goats in Australia, farmed mainly on mixed grazing enterprises, and the feral goat population is estimated at 4–5 million. In recent years, because of improvements in consistency and quality, there has been increased demand for high-quality farmed goats to produce meat for domestic and export markets (Department of Agriculture, Fisheries and Forestry 2005). However, some demand still exists for the meat and hides of Australian feral goats in both local and international markets (Natural Resources, Mines and Water 2006).

The Australian goat industry has recorded significant growth over the past few years and is now recognised as an established industry. Traditionally the industry sourced the majority of its output from feral goats, but as outlined above there has recently been a move towards goat farming using introduced genetics. This includes the breeding of Boer crosses to produce a breed that is suited to Australian conditions but that also has good meat quality (Burst 2005).

Australian goats are not bred for their skins, as goat skins are simply a by-product of the slaughter of goats produced for meat. Skins recovered during the slaughter process are exported for tanning and used in the manufacture of various products (Shim-Prydon & Camacho-Baretto 2006).

5.4 Australian trade

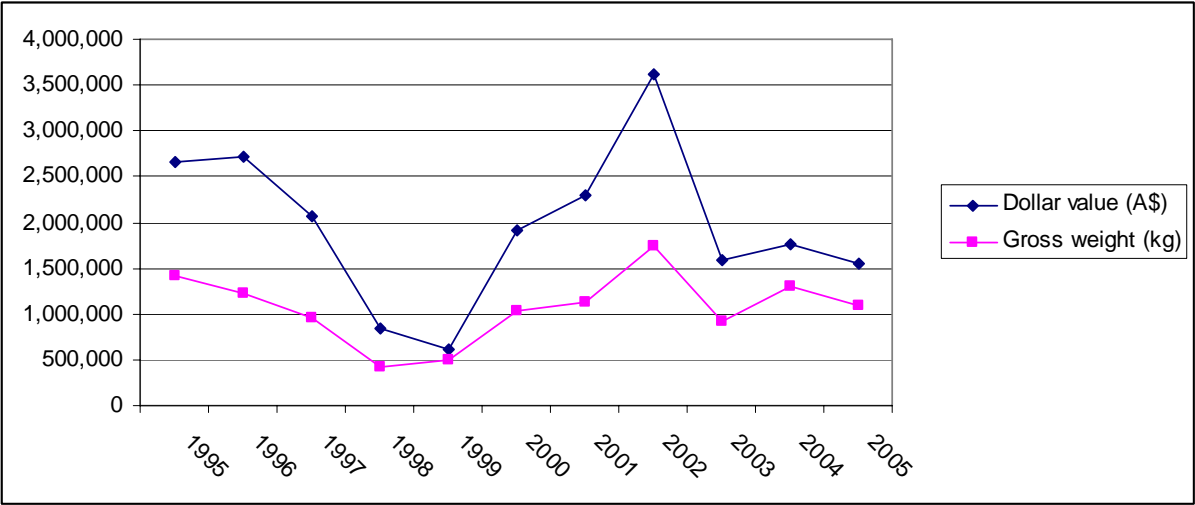
Australian exports of raw goat and kid skins have been erratic since 1995. In 1999 exports fell to an all time low of \$617,000 and then rose to a peak in 2002 at \$3.6 million. Since 2003 Australia's exports have stabilised at around 1 million kilograms of skins valued at approximately \$1.5 million (see Figure 5.1)

Over the four year period 2002 to 2005 Queensland was the main exporter of raw skins followed by New South Wales and Western Australia. During this period Queensland exported 1,350 tonnes of raw skins valued at just over \$2 million which represented 24% of Australia's exports. In 2005 Victoria (\$476,000), followed by New South Wales (\$352,000) and then Queensland (\$273,000) were the key export states.

The exports of goat and kid leather has also been erratic since 1995 (refer to Figure 5.2). There is a declining trend for Australia's exports of goat and kid leather. In 2005 the value of goat and kid leather exports dropped by 48% to \$278,000.

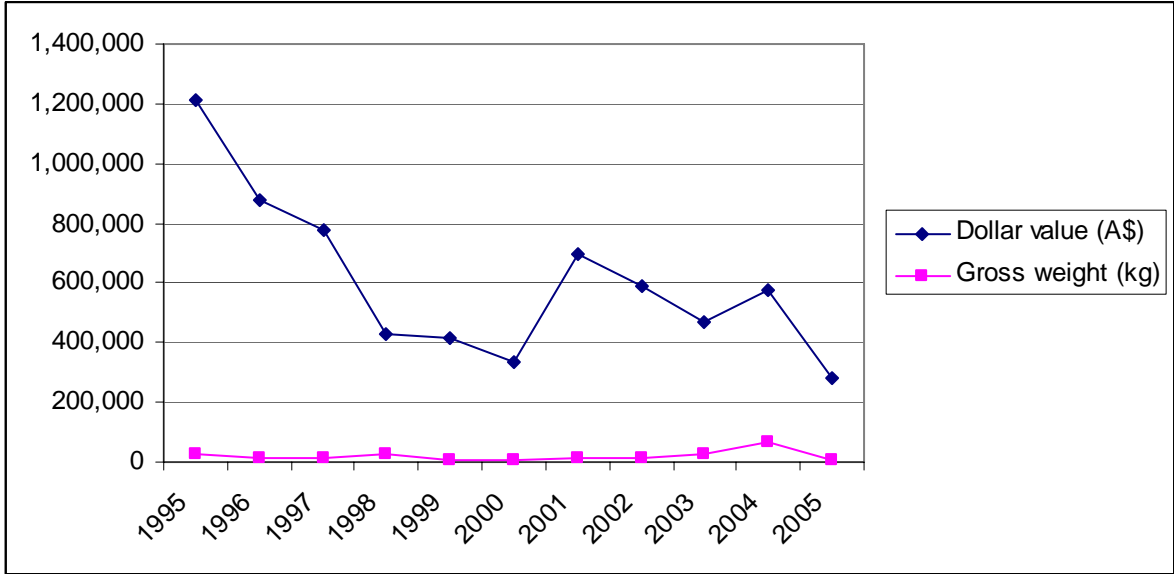
Since 1995 Victoria and New South Wales have been the dominant exporters of goat and kid leather. However in 2005 Victoria recorded no exports. Since 2003 South Australia's exports of goat and kid leather have been increasing. In 2005 South Australia recorded the highest value of goat and kid leather exports at \$111,000.

Figure 5.1: Australian exports of goat and kid skins—raw (i.e. fresh,salted, dried, limed, pickled etc., untanned) excludes Yemen, Mongolia and Tibet*



* Note: the gross weight field in the data includes the weight of the goat skins and leather, plus packing.
Source: Office of Economic and Statistical Research, Queensland Treasury (2006).

Figure 5.2: Australian exports of goat or kid skin leather without hair on tanned or retanned but not further prepared and parchment-dressed or prepared after tanning



* Note: the gross weight field in the data includes the weight of the goat skins and leather, plus packing.
Source: Office of Economic and Statistical Research, Queensland Treasury (2006).

5.5 US

Market potential

In the US goats have served as a multi-purpose animal, providing meat and milk, with goat skin being viewed as a by-product.

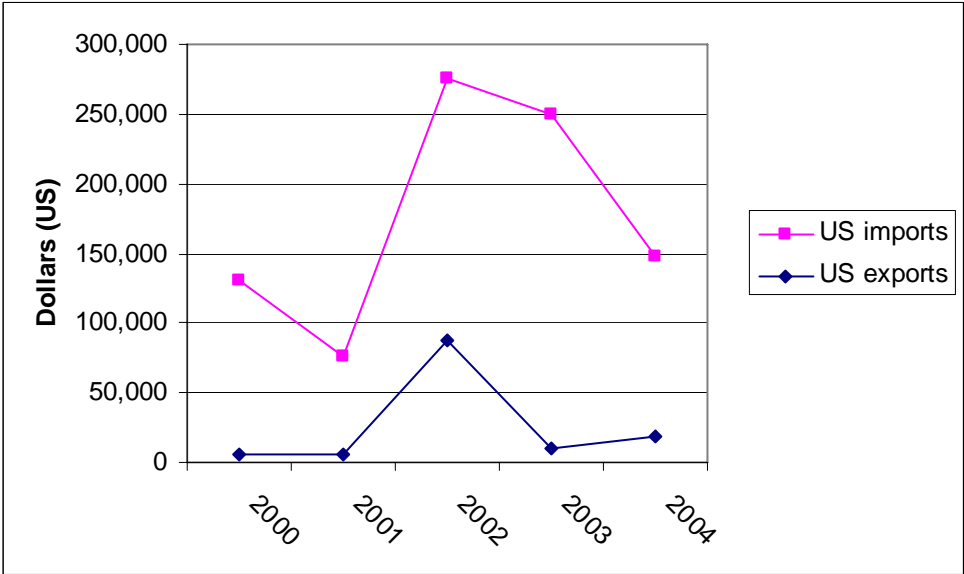
There was a degree of buoyancy in the US goat skin industry during the early 1990s. Market hype encouraged American farmers to invest in the industry, but by the time producers realised the market for goat skin was not emerging many had already lost their investment (Chand 2005a).

It should be noted that two sets of US goat import data were available and used in this report. One was compiled from the US Fish and Wildlife Service (Appendix F, Tables F.1–F.6) and the second data set

was compiled from the US Department of Commerce, the US Treasury and the US International Trade Commission (Appendix G, Tables G.1–G.2). Both data sets recorded differing annual totals for US imports of goat skin. The US Fish and Wildlife Service data provides a breakdown of imports and exports by product category and country according to its own item coding system, while the US Department of Commerce, US Treasury and US International Trade Commission data provides the imports of goat according to the Harmonized Tariff Schedule. For this reason, it is useful to give two interpretations of the goat skin industry from the two different sources. It is worth noting that, despite their differences, both trade data sets show that there was no trade between Australia and the US in goat skins or manufactured products.

Figure 5.3 and Table 5.8, both compiled from the US Fish and Wildlife Service data, demonstrate the goat skin industry’s boom-and-bust cycle; both US imports and US exports are highly erratic. Neither total imports nor total exports have been significant as imports have not exceeded US\$300,000 and exports have not exceeded US\$100,000 in any one year in this study (Chand 2005a).

Figure 5.3: US imports and exports of goat skins and manufactured products, 2000–04



Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table 5.8: Imports and exports of goat skins and manufactured products, 2000–04 (US\$)

Year	US imports of goat skins and manufactured products	US exports of goat skins and manufactured products
2000	\$130,829	\$5,791
2001	\$76,741	\$5,204
2002	\$275,705	\$87,178
2003	\$249,797	\$9,386
2004	\$148,497	\$18,983

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Austrade research in the US found there was less interest in goat skin than in the other species involved in this project. Goat is perceived as a common species. This places goat skin goods at a disadvantage to the other species included in this project, as goats are costly to produce and market, but affluent US consumers are unwilling to purchase goat skin as an exotic product (Chand 2005a).

The US industry is now hoping to increase production of goat leather products, such as garments and garment components (especially lining), bookbinding and wallets. However, the likelihood of

achieving these goals is somewhat uncertain as the US has limited capability for processing goat skins (Chand 2005a).

In terms of research and development, there appeared to be little evidence from researchers approached that goat was a focus of their research efforts. Therefore, goat skin research seems to have been mostly left, like the rest of the industry, to the developing world. Ultimately the main impediment facing the US goat skin industry is that the market must precede the industry. If enough consumers are willing to purchase goat skin products, then this could ultimately lead to the development of the necessary supply chain participants for the industry to be viable, such as farms, slaughterhouses, tanneries and manufacturers (Chand 2005a).

During the market visit to the US, some interest was expressed in goat, particularly goat suede, by leather supply chain companies. Five companies—a fashion designer, a leather broker, a leather distributor and Western boot manufacturer, and two leather distributors (one supplying the garment industry and the other supplying the Western boot market)—all expressed interest in sourcing goat. The majority of the interest from these companies was in suede. The exception to this was one of the leather distributors, which requested specifications for goat leather.

Most companies met during the visit had an awareness of goat. However, these company interviews and retail research gave little evidence that goat was used as the feature leather in their leather products. On only one occasion in meetings with companies was goat revealed as the feature leather in a particular style of Western boots. During the retail research there were no products seen available at retail outlets which were using goat leather as the feature leather.

Market segments

Garments made of goat skin represent the greatest share in terms of value of US goat imports, accounting for US\$637,361 of the imports from 2000 to 2004. Italy was the largest supplier in this category, with a value of US\$320,085 in garments. The US imports of garments are represented in Table 5.9.

Table 5.9: US imports of goat skins and manufactured products, 2000–04 (\$US)

Item	2000	2001	2002	2003	2004
Garments ¹	98,595	62,459	230,748	127,849	117,710
Large manufactured leather products ²	10,773	–	–	19,361	–
Small manufactured leather products ³	7,151	458	–	183	446
Shoes or boots	720	10,237	18,382	13,157	–
Skins	13,590	3,449	23,627	24,091	15,444
Trim (shoe trim, garment trim or decorative trim)	–	138	2,948	65,156	14,897
Total all	130,829	76,741	275,705	249,797	148,497

1. Garments include items such as pants, jackets and dresses.

2. Large products include suitcases, briefcases, handbags and furniture.

3. Small products include purses, watch straps, gloves, belts, notebooks and wallets.

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table 5.10: US exports of goat skins and manufactured products, 2000–04 (\$US)

Item	2000	2001	2002	2003	2004
Garments ¹	5,758	5,204	65,663	8,610	3,360
Large manufactured leather products ²	–	–	–	282	85
Small manufactured leather products ³	–	–	–	–	–
Shoes or boots	–	–	–	–	445
Skins (sub. whole skins, including tanga frames)	33	–	21,492	–	3,865
Trim (shoe trim, garment trim or decorative trim)	–	–	23	494	11,228
Total all	5,791	5,204	87,178	9,386	18,983

1. Garments include items such as pants, jackets and dresses.

2. Large products include suitcases, briefcases, handbags and furniture.

3. Small products include purses, watch straps, gloves, belts, notebooks and wallets.

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table 5.11 lists products using goat skin in the US as found from Austrade research. From 2000 to 2004, the highest-value product categories for US imports of goat skin/products were as follows:

- Garments US\$637,361
- Trim US\$83,139
- Skins US\$80,201
- Shoes US\$42,496 (Chand 2005a, compiled from US Fish and Wildlife Service).

Table 5.11: End uses of goat leather

Garments	Leather products (large)	Leather products (small)	Shoes or boots	Trim for:
Coats	Suitcases	Handbags/wallets	Boots	Handbags/wallets
Skirts	Briefcases	Watchbands	Ladies' shoes	Notebooks
Vests	Furniture	Notebooks	Men's shoes	Money clips
	Upholstery	Money clips		Belts
	Attaché cases	Belts		Key chains
		Gloves		
		Key chains		

Source: Chand (2005b).

For further trade data compiled by the US Fish and Wildlife Service categorising US goat skin and manufactured product imports and exports, refer to Appendix F.

There was little evidence of goat used as the feature leather in leather products in the US. However, some companies that were met during the market visit expressed interest in sourcing goat leather and suede, which may suggest some US market segments which could be suitable for goat.

As mentioned previously, during the US visit there was only one occasion where goat was found to be used as the feature leather in a leather product. This was in the Western boot market, where a leather distributor said that it was supplying goat leather it described as 'Mad dog' leather for use in the leg shaft section of Western boots. Furthermore, two companies involved in the Western boot market—a distributor of leather and another company manufacturing Western boots and distributing leather—expressed interest in sourcing goat leather and suede respectively. Although these findings could suggest that the Western boot market may offer possibilities for goat, it should be noted that another Western boot manufacturer believed that, from the leather sample presented, the quality was not good enough for use in manufacturing its boots.

Based on interest expressed by further companies interviewed during the US visit, goat may be suited to other market segments. A fashion designer, a leather broker (servicing mainly the interior design market) and a leather distributor supplying the garment industry all expressed interest in sourcing goat suede. Another leather agent servicing handbag and belt manufacturers and designers said that goat suede may be suitable as handbag lining. Although interest was expressed by these companies, it would be prudent to undertake further research to confirm if economically viable opportunities exist in these market segments.

Product characteristics and price

Austrade research found that in the US goat skin is regarded as utilitarian, and useful for work/sports gloves and heavy boots, but has little attraction as a material for luxury garments. This is generally attributed to the fact that most goats are not raised for their skin but for other uses. Therefore, their skins are usually damaged and are generally of low quality (Chand 2005a).

During the visit, few comments were made about the characteristics or price of goat leather and suede beyond some companies expressing interest in sourcing leather or suede and requiring further samples or specifications. However, as outlined above, a Western boot manufacturer said that he would not be interested in sourcing goat skin from Australia if the sample provided was indicative of the quality that would be supplied. He said the leather was too scarred and the grain was too coarse to consider using it in the manufacture of boots.

Virtually no comments were made on the price of goat leather in the US. The only insights on price were provided by a company distributing leather and manufacturing Western boots. This company said that it could source C-grade goat leather from India for US\$0.80–0.88 per square foot. Interestingly, this company also indicated that it could source US goat leather which was of higher quality for US\$1.98 per square foot.

Competitors

In 2004 there were about 2.5 million goats in the US, up from 2.3 million in 2000 (FAOSTAT 2005). In 2002, 595,501 goats were slaughtered in the US, with the number slaughtered increasing to 646,954 in 2003 (Chand 2005a). The main producing states were Arizona, New Mexico and Texas (Chand 2005a). Although there is a significant goat population in the US, it is difficult to determine the exact level of competition which may be encountered from the local goat skin industry, given its limited development in comparison with the size of the local herd. With a lack of research and development and supporting enterprises specialising in value-adding goat skins, such as tanneries, manufacturers and design firms specialising in goat leather, competition from the local goat industry may not be significant.

Limited insights were obtained into how US goat skins are currently being used. Data from the Food and Agriculture Organization of the United Nations (Table 5.5), the US Department of Commerce, US Treasury and US International Trade Commission (Appendix G, Tables G.3 and G.4) and the US Fish and Wildlife Service (Appendix F, Tables F.7–F.12) suggests that goat skins are being exported, possibly for further processing into leather and/or leather goods. However, evidence was found during the market visit that goat leather is available from the US industry and this warrants further research to determine how goat skins are currently used in that country.

US Fish and Wildlife Service import data indicates that competition will be encountered in goat leather goods from a range of countries exporting to the US. Italy and France are prominent exporters in the garment, manufactured items and shoe categories. Specific details of the volume and value of US imports of leather products and trim from all supplying countries from 2000 to 2004 can be found in Appendix F, Tables F.2–F.6.

Tables G.1 and G.2 in Appendix G also reveal competing countries supplying goat skin and leather to the US. Canada is the most prominent supplier of goat skins in recent years, with other countries appearing to supply the US market with skins or leather on a somewhat erratic basis.

During the market visit there were few comments made by leather companies about where goat leather and products were sourced. As mentioned above, only one company indicated that it was sourcing goat leather. In this instance the leather was sourced from India and locally within the US.

5.6 Italy

Market potential

Based on the information gathered during the in-market visits, there is little potential for Australian goat skin and leather products in Italy. The leather companies met, which were mostly involved in tanning and manufacturing, expressed little interest in goat and the samples that were presented. These companies preferred to focus on the other species in the project.

This lack of interest is likely to be a result of the current levels of goat leather and skin supplied to Italy from other countries. The data in Table 5.12 shows that Italy is a significant importer of raw goat skins, accounting for almost 11% of the volume of global goat skin imports in 2004. Furthermore, the data in Table 5.6 indicates that Italy is also a significant importer of goat and sheep leather, accounting for almost 30% of global sheep and goat leather imports in 2000 and a significant amount of leather imports over the 1997 to 1999 period.

Table 5.12: Raw goat skin imports, Italy, 2001–04

	2001	2002	2003	2004
Quantity (tonnes)	2,565	2,285	1,118	1,502
World quantity (tonnes)	15,902	13,921	14,900	13,721
Value (US\$'000)	\$12,937	\$11,080	\$6,784	\$5,502
World value (US\$'000)	\$42,995	\$42,991	\$36,249	\$25,053

Source: FAOSTAT (2005).

At the October 2005 Lineapelle trade show at Bologna, the project team found that there was a significant presence of tanneries from India and Pakistan offering various grades and finishes of goat leather.

Market segments

As previously mentioned, the visits to leather industry operators in Italy provided little information on current uses for goat in Italy or their potential interest in goat.

However, at the Lineapelle leather fair, various tanneries that were exhibiting had goat as part of their leather range. A review of the India and Pakistan tanneries that were featuring goat in the Lineapelle exhibition catalogue revealed that the major use for goat was in footwear, in applications such as linings and uppers. Exhibitors also used goat leather to a lesser extent in garments, leather accessories, suede and gloves. As these exhibitors were offering goat leather for these uses at Lineapelle, it could be assumed that there may be demand from the footwear sector of the Italian market, and to a lesser extent the garment and leather accessories sectors. However, further research is warranted in Italy to confirm that this is the case.

The exhibits of two tanneries from the subcontinent region were visited at Lineapelle to identify the nature of the goat items that they were offering at the fair. It was found that one of these tanneries was supplying goat leather for use in gloves and shoe uppers and for lining. The leather for shoe uppers and lining was offered in various grades. The visit to the stand of the second tannery revealed that it offered goat leather for use in shoe uppers and lining, also in various grades.

Product characteristics and price

The two previously mentioned tanneries at the Lineapelle exhibition were selling goat in a wide range of colours and grades. The available grades were A, B and C grade leathers.

The leather samples that were viewed at the two tanneries' stands appeared to be of good quality, with limited scarring. As well, the grain of the leather was much less coarse than that of the Australian goat sample that the project team had taken to the fair. Furthermore, a leather agent who was met believed that goat leather from Australia was very coarse and thus might be best suited to use as suede. Although the above findings suggest that Australian goat is perhaps coarser and may have a higher degree of scarring than goat supplied from other competing markets, it should be noted that this evidence was limited to only a few instances and that further research needs to be undertaken for this to be confirmed.

The prices in Table 5.13 are from the two tanneries exhibiting at Lineapelle.

Table 5.13: Prices of goat leather at the October 2005 Lineapelle trade fair in Italy

Goat leather	Price
Glove grade leather	US\$2.35 for a hide ranging between 3 and 4.5 square feet
Shoe upper grade leather	US\$1.35 to US\$1.80 per square foot, depending on the grade and finish of the leather
Lining leather	US\$0.70 to US\$0.86 per square foot, depending on the grade and finish of the leather

Competitors

As stated earlier, Italy is a significant importer of goat skin and leather. Although specific import data revealing the source of these imports was not secured, it is likely that much of Italy's goat skin and leather imports are from the major exporting countries in Tables 5.5 and 5.7.

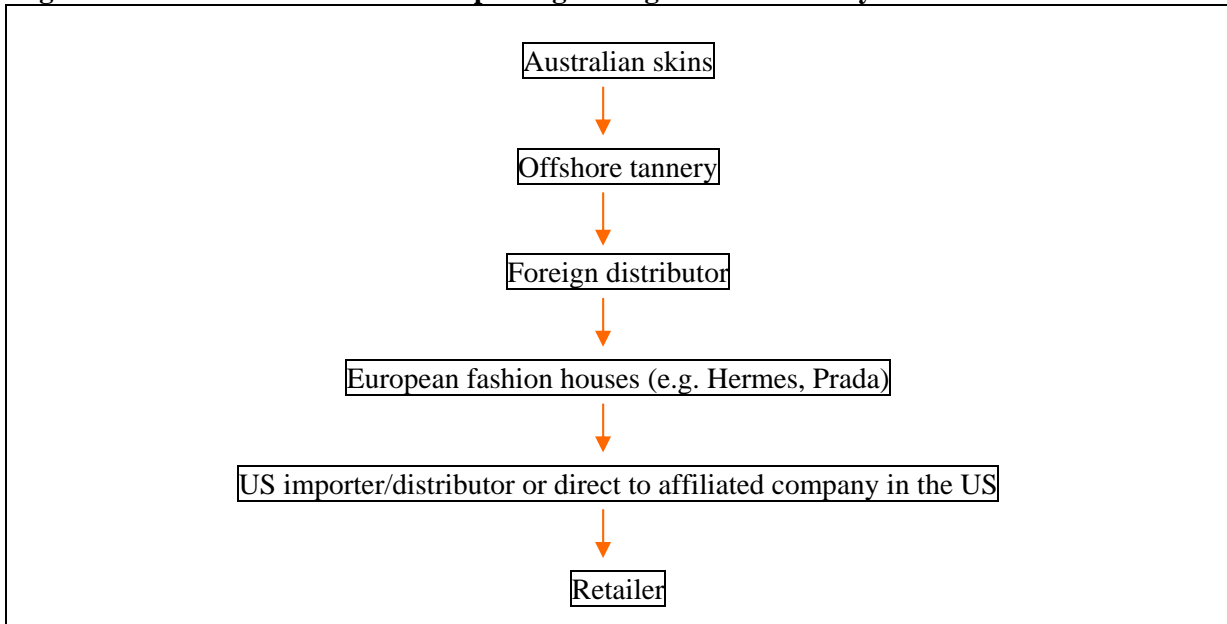
Table 5.7 shows that India and Pakistan are among the major exporters of sheep and goat leather and evidence was found at Lineapelle to support the view that some of the world's major exporters could be competing in the Italian goat leather market. As noted above, a review of the trade fair catalogue revealed that approximately 50% of the exhibiting tanneries from Pakistan and India offered goat in their leather range.

6 Distribution channels

6.1 Distribution in the US

Austrade research has identified three possible distribution models for Australian suppliers of exotic skins and leather to use when entering the US. The appropriate model depends on a range of factors, including what type of skin or leather is being exported and the type of business of the export customer that the Australian supplier is servicing (Chand 2005b). All three models are outlined in Figures 6.1–6.3.

Figure 6.1: Distribution model 1—exporting through a third country



Source: Chand (2005b).

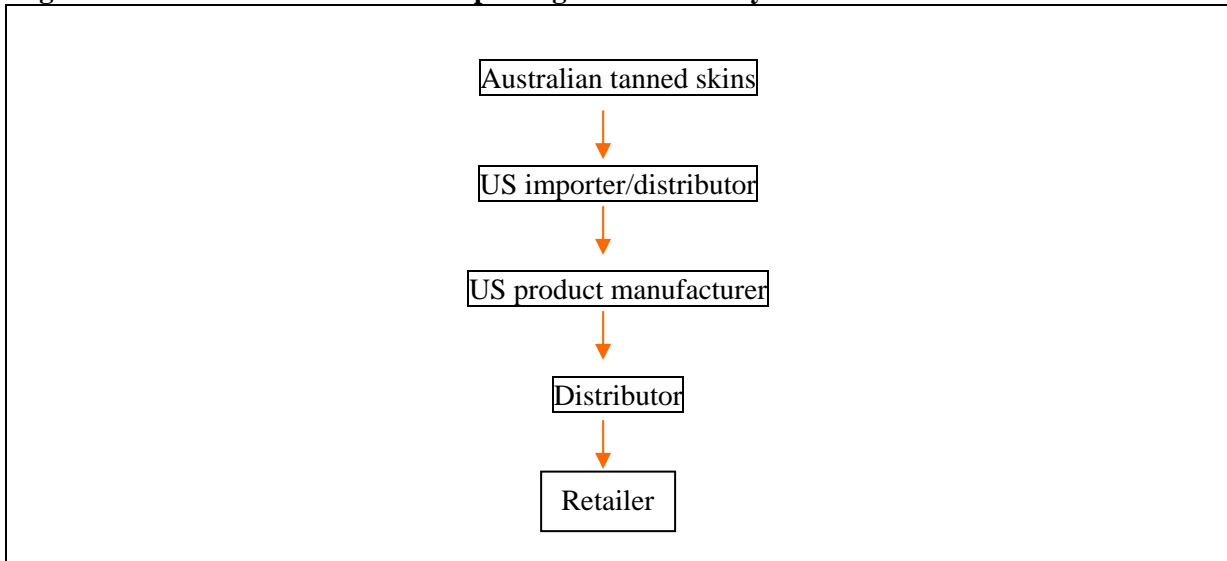
Possible advantages of distribution model 1:

- Benefit of obtaining European branding and the high retail price that goes with such products.
- Quality end-product and superior workmanship.
- Brand recognition in the US.
- Takes advantage of the existing distribution channels already built by European fashion houses.
- High-profile companies promote the skin type through product labelling, stitched into the product and/or on a swing tag.

Possible disadvantages of distribution model 1:

- This model increases the number of channel partners, thus pushing the price of products upwards.
- It limits the niche markets in which products could be sold.
- High-profile companies attract animal activists, conservationists and other possible sources of negative public relations.

Figure 6.2: Distribution model 2—exporting leather directly to the US market



Source: Chand (2005b).

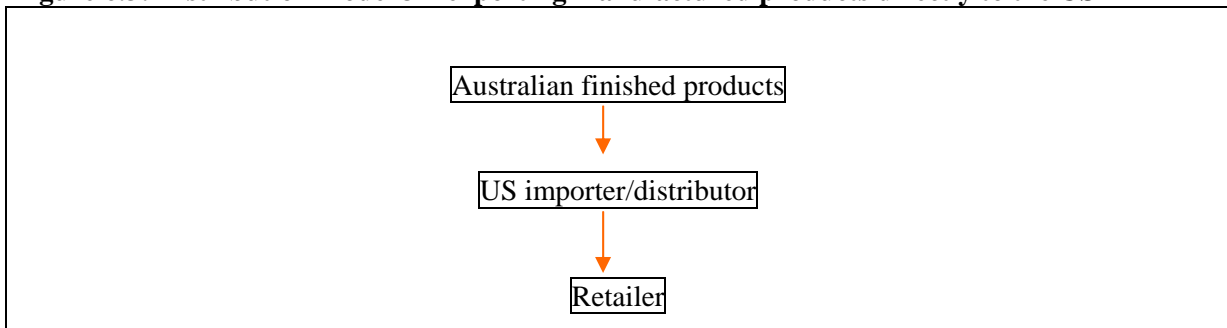
Advantages of distribution model 2:

- The number of channel partners is lower, thus making the end product more price-competitive.

Disadvantages of distribution model 2:

- Australian suppliers need to identify major US importers with the links to US fashion houses to capitalise on reputable brands.
- There are few US fashion houses and they are spread widely across the country.

Figure 6.3: Distribution model 3—exporting manufactured products directly to the US



Source: Chand (2005b).

Advantages of distribution model 3:

- The number of channel partners is minimised, allowing the product to be more price-competitive.
- Widens the niche markets in which products can be sold.

Disadvantages of distribution model 3:

- Australian suppliers do not benefit from obtaining up-scale brand names.
- May have to build a reputation of quality for Australian products.
- Trademarking and quality assurance programs may need to be instituted, or if in place they may need to be promoted to US consumers and retailers.
- High costs of promotion.

There is no universal distribution model specifically suited to all exotic skin and leather products; what is a suitable model for one Australian supplier may not be applicable for all. For instance, some

Australian suppliers will be able to secure a supply relationship with foreign fashion houses while others will not (Chand 2005b).

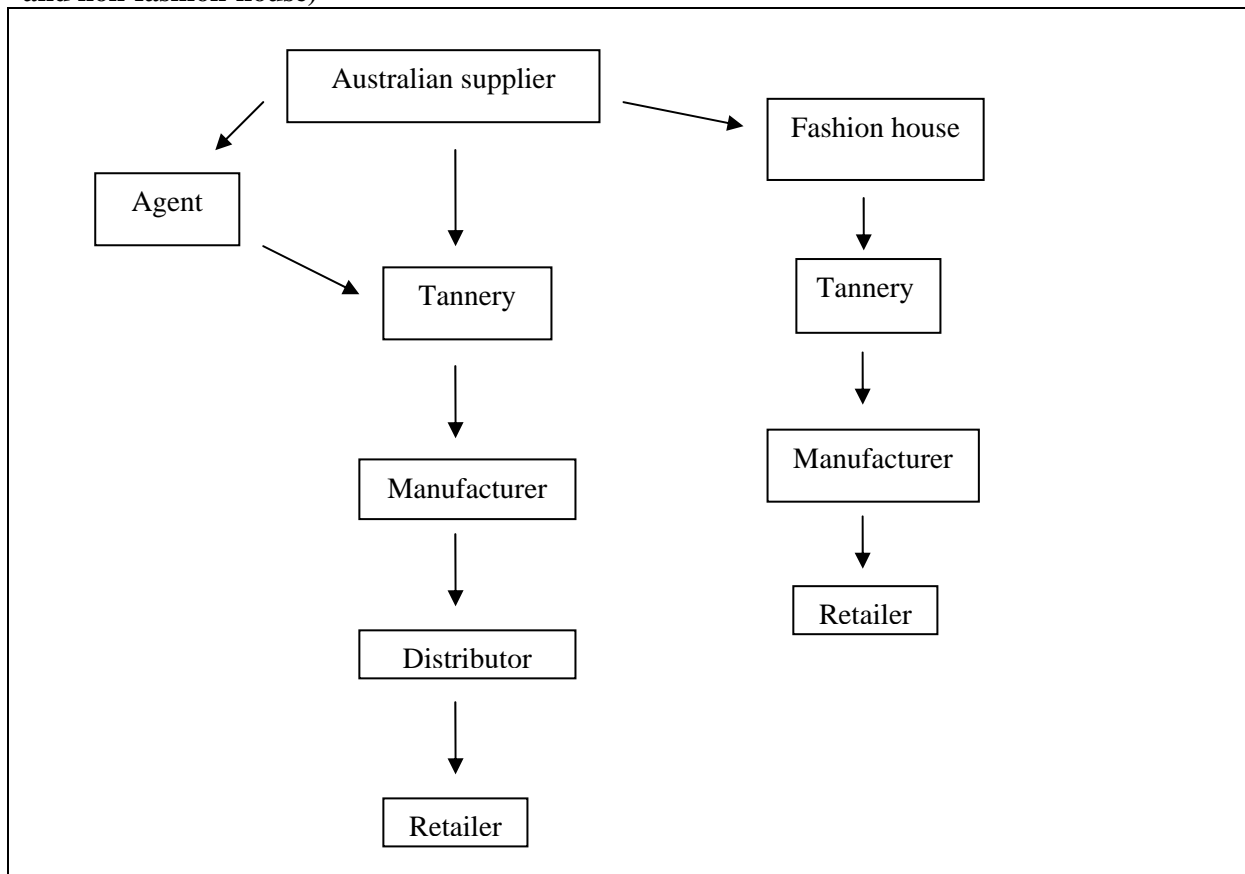
However, based on the skins exported and the research conducted in-market and by Austrade, distribution model 1 appears to be the channel of distribution typically used by US companies. They do so for a variety of reasons:

- limited capacity of the local leather industry
- consumer desire for high-end fashion labels, and the ability to command higher prices (Chand 2005b).

6.2 Distribution in Italy

Figures 6.4 and 6.5 show distribution models for exotic skins and leathers that were identified during the market visit to Italy. It should be noted these are merely a general representation of the distribution models that were identified during the visit to Italy and there may be other distribution models operating in the Italian skin and leather industry which operate differently.

Figure 6.4: Supplying the Italian market through existing distribution channels (fashion-house and non-fashion-house)



Possible advantages of supplying the Italian market through a fashion-house distribution channel:

- Benefit of brand recognition and reputation of established fashion house.
- Price premium associated with fashion-house brand.
- Access to the fashion house's retail outlets.
- Promotion of the species through the fashion house's marketing activities.

Possible disadvantages of supplying the Italian market through a fashion-house distribution channel:

- Limited control over where the products are sold to consumers.
- Meeting stringent specifications required by the fashion house.

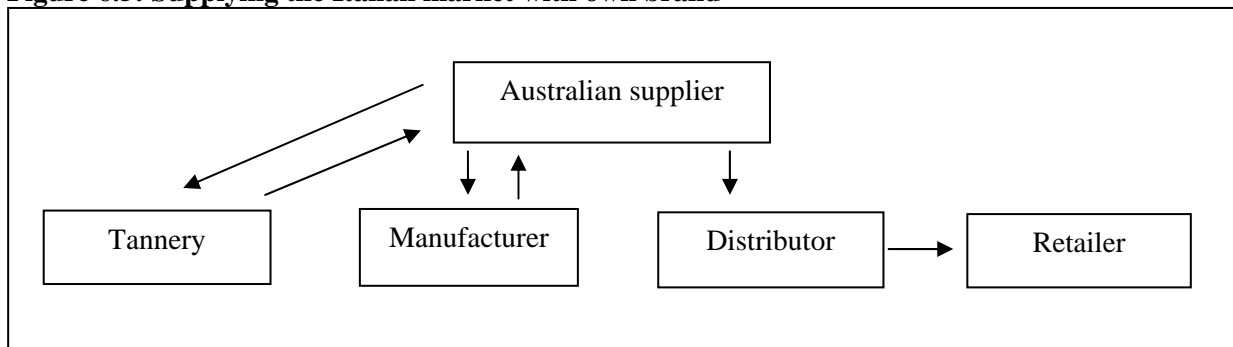
Possible advantages of supplying the Italian market directly through a non-fashion-house distribution channel:

- Access to existing distributors and retailers who have existing business relationships with tanneries.

Possible disadvantages of supplying the Italian market directly through a non-fashion-house distribution channel:

- No brand recognition within the distribution channel or with consumers.

Figure 6.5: Supplying the Italian market with own brand



Possible advantages of supplying the Italian market directly with own brand:

- Control over value-adding activities through having skins tanned under contract with specialist tannery and/or leather products manufactured under contract with specialist leather goods manufacturer.
- Potential to increase market returns by engaging directly in value-adding activities.
- Ability to build own brand recognition within the distribution channel and with consumers.
- Control over distribution and market segments serviced.

Possible disadvantages of supplying the Italian market directly with own brand:

- Additional investment in marketing to build brand awareness.
- Increased business complexities arising from dealing with multiple distribution channel intermediaries.
- Increased risk that the brand and products will not be accepted by the market.
- Longer time frames involved in obtaining a return from the markets, resulting in reduced short-term cash flows.

7 Export impediments

7.1 CITES and native wildlife export permit requirements

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement among countries around the world to ensure that international trade in certain species of wild animals and plants does not threaten their survival. CITES is an international agreement to which states (countries) adhere voluntarily. States that have agreed to be bound by the convention are known as parties. Australia is a party to CITES (CITES 2006a).

Trade in species listed in Appendix 1 of CITES is permitted only in exceptional circumstances because these species are endangered. Trade in species listed in Appendix 2 of CITES is permitted providing that the appropriate CITES permits are secured for shipments which are intended to be exported (CITES 2006b). For CITES crocodile and alligator species appendix classifications, refer to Appendix A of this report.

The only species featured in this project to which CITES export regulations and legislation apply is the saltwater crocodile (*Crocodylus porosus*). Saltwater crocodiles from Australia (as well as Papua New Guinea) fall into Appendix II of CITES, and so commercial trade is allowable but permits are required (Chand 2005a).

Apart from CITES permits, products derived from Australian native species, other than those that have been recognised as exempt by the Australian government, require export permits. Unprocessed emu skins require permits for export which are issued through the Department of Environment and Heritage (Australian Government Department of Environment & Heritage 2006).

Applying for a permit will increase the time taken for crocodile products and unprocessed emu skins to reach export customers. Processing of permit applications by the Department of Environment and Heritage typically takes 6–10 working days (Australian Government Department of Environment & Heritage 2006). This is an impediment in situations where export customers require shipments of crocodile or unprocessed emu skins to be delivered in tight time schedules.

There have also been instances reported by the project partners where, even though the necessary export permits have been secured to export exotic native species to overseas countries, there is confusion on the part of enforcing authorities in overseas markets about the legality of exotic skin shipments. This can result in significant delays in delivery or even confiscation of goods before they reach export customers.

7.2 Further impediments

US

Tariffs

Depending on the item, tariffs may impose additional costs and erode the competitiveness in export markets of the exotic skin and leather products of focus in this study. Except for goat skins, there are no specific tariff item numbers classifying each of the exotic skins reviewed in this report. The trade in these skins and leathers is so insignificant that the US International Trade Commission (ITC) does not see fit to issue Harmonized Schedule (HS) codes to these items. As a result, the exotic skins of focus in this project are placed in broad categories such as 'reptile', 'other' or 'miscellaneous' (Chand 2005a).

Table 7.1 gives an overview of the HS codes that would apply to the exotic skins outlined in this report. Saltwater crocodile falls into the categories beginning with 410320 ('of reptile'). Goat falls into

the categories beginning with 410310 ('goat'). Both emu and camel fall into the 4103902000 ('other') category (Chand 2005a).

Table 7.1: Overview of skin products and duty rates for the US

Crocodile, alligator and caiman		
Tariff item #	Description	Duty rate
4103201000	Of reptile, not pretanned	Duty free
4103202000	Of reptile, vegetable pretanned	5%
4103203000	Of reptile, other (besides vegetable pretanned)	Duty free
Emu, ostrich and camel		
Tariff item #	Description	Duty rate
4103901090	Other (other skins that are not pretanned, besides deer)	Duty free
4103902000	Other (other skins that are pretanned, including deer)	3.3%
Goat		
Tariff item #	Description	Duty rate
4103101000	Goat skin, not pretanned	Duty free
4103102000	Goat skin, vegetable pretanned	Duty free
4103103000	Goat skin, other (besides vegetable pretanned)	3.7%

Source: Chand (2005a), compiled from US International Trade Commission.

Further tariffs may apply to leather products manufactured from these species, but it would be impossible to list all items made of various exotic leathers and provide tariff rates for each. Further information is available from the ITC under chapter 42 of the Harmonized Tariff Schedule of the US, which deals specifically with leather articles. This information can be accessed from the ITC website: <http://hotdocs.usitc.gov/docs/tata/hts/bychapter/0611C42.pdf>

Non-tariff barriers

Apart from the tariffs and import permits applicable to the importation of exotic skins and leather to the US, the following barriers may also be viewed as impediments to trade:

- **Lack of awareness of Australian exotic skin species.** During the visit to the US, aside from goat, there was not a high awareness of the species of focus in this project. Furthermore there was not a high awareness of Australia as a supplier of exotic skins and leather. This lack of awareness may impede demand for Australian exotic skins, leather and leather goods in the US market.
- **Australia's distance from the US.** Freight costs and long lead times associated with shipping leather and skin products from Australia could add significant costs and reduce flexibility in supplying this market with Australian exotic skins and leather. Cost and flexibility of supply are particularly important factors when supplying the US market, given that there are significant competitors supplying it with exotic skins and leather. For example, there are local suppliers and South American suppliers of other reptile species which would directly compete with saltwater crocodile.
- **Conservation and animal activist organisations.** Campaigns by organisations opposed to the use of animal products in the fashion industry can persuade consumers to buy fashion products other than exotic skins and leather. Anecdotal evidence from the US visit was that one of New York's most famous department stores was no longer stocking exotic leather goods because animal activist groups were harassing customers visiting the store regarding exotic leather products. As well, a leather wholesaler indicated that some of its customers had expressed concerns about animal welfare issues associated with the production of leather from some exotic species.

Italy

Tariffs

Table 7.2 gives an overview of the tariff item codes that would apply to the exotic skins and leather outlined in this report. Saltwater crocodile falls into the categories of ‘reptiles’, goat falls into the categories of ‘goats and kids’, and emu and camel fall into the ‘other’ categories.

Table 7.2: Overview of skin products and duty rates for Italy

Tariff item #	Description	Duty rate
4103	Raw hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared)	
4103 20 00	Of reptiles	Free
4103 10 20	Of goats or kids, fresh	Free
4103 10 50	Of goats or kids, salted or dried	Free
4103 10 90	Of goats or kids, other	Free
4103 90 00	Of other (camel and emu)	Free
4106	Tanned or crust hides and skins	
4106 40 10	Of reptiles, vegetable pre-tanned	Free
4106 40 90	Of reptiles, other	2%
4106 21 10	Of goats or kids, in the wet state, not split	2%
4106 21 90	Of goats or kids, in the wet state, split	2%
4106 22 10	Of goats or kids, in the dry state, vegetable pre-tanned	Free
4106 22 90	Of goats or kids, other	2%
4106 91 00	Of other (camel and emu), in the wet state (including wet-blue)	2%
4106 92 00	Of other (camel and emu), in the dry state (crust)	2%
4113	Leather further prepared after tanning or crusting	
4113 30 00	Of reptiles	2%
4113 10 00	Of goats or kids	3.50%
4113 90 00	Of other	2%

Notes: Heading 4106 does not cover hides and skins which have undergone a tanning (including pre-tanning) process that is reversible (headings 4103, as the case may be).

For the purpose of heading 4106, the term ‘crust’ includes hides and skins that have been re-tanned, coloured or fat-liquored (stuffed) before drying.

Source: European Union (2006).

As in the case of the US market, it would be extremely difficult to list the tariffs that would apply to all possible leather goods manufactured from the species of focus in this project. However, further information is available from the International Customs Journal—European Union, chapter 42, which deals specifically with leather articles. This information can be accessed from the US Department of Commerce website: <http://www.ita.doc.gov/td/tic/tariff/EuropeanUnion.pdf>

Non-tariff barriers

- **Low awareness of Australian camel and emu skins and leather.** With the exception of emu, all species were seen at some point in the leather supply chain. However, in the case of camel there was very little awareness of camel supplied from Australia. Emu was not seen at all during the visit. This lack of knowledge within the industry of camel and emu skins and leather and their associated characteristics may have an impact on the ultimate demand from not only industry players but also consumers who have not been exposed to these species and lack knowledge of their benefits.
- **Strong awareness of alligator in the retail sector.** During retail research undertaken in Italy there were a number of occasions when other crocodylia leather products were confused with alligator. This lack of capacity to distinguish between crocodylia species in the retail sector and the apparent strong awareness of alligator at this level could contribute to restraining the market development for saltwater crocodile. Given that a price premium is obtained for saltwater crocodile leather products, it is particularly important for the retail sector to be aware of the characteristics of saltwater crocodile and its advantages over other species, and to educate consumers about these benefits and characteristics to justify the price premium.
- **High price of crocodile.** As mentioned above, the price premium for saltwater crocodile may limit the market to the high-value luxury goods segment.

8 Commercial outcomes

The key objective of this second skins project, ‘Commercial development of export markets for emerging skin industries’, was to build on the market research undertaken in the first skins project, ‘Identification of market opportunities for skin products of emerging animal industries’, by assisting the industry partners to develop markets for their skins and leather products. This was achieved by undertaking additional research in the US and visiting that country and Italy with the industry partners. Targeted itineraries based on the market research undertaken in the two skins projects were developed before the market visits in late 2005.

As part of the market visits to the US and Italy, primary market research was undertaken on all species with the aim of identifying new opportunities and commercialising existing opportunities for skins and leather for camel, crocodile, emu and goat. The industry partners for crocodile and camel participated in the market visits to the US and Italy, but the emu and goat partners were unable to participate. Primary market research was undertaken by providing samples and information for all species and recording feedback and comments by buyers. Commercialisation activities were facilitated by providing all industry partners with contact information for buyers who expressed interest in obtaining samples or more information on the four species investigated.

Commercialisation was also facilitated by organising an inbound mission from a leading Italian fashion house to Queensland in early 2006. This fashion house, which was met during the market visit to Italy, was seeking supplies of crocodile skins. Another key activity undertaken by the DPI&F to facilitate commercialisation was the development of supply-chain relationships between industry partners which led to domestic sales. This report documents the companies in the US and Italy that are potentially interested in buying skins and leather from Australia. Publication of this report provides an opportunity for other Australian companies in these industries to pursue these potential commercial opportunities.

A variety of companies involved in the leather supply chain were met in both markets. Table 8.1 gives an overview of the types of companies that were met who expressed interest in the various species in this project.

Table 8.1: US and Italian companies interested in species from this project

Category	Camel	Crocodile	Emu	Goat
Tanneries	5	2	1	–
Manufacturers	4	1	–	–
Importers/distributors	3	3	2	2
Leather brokers/traders	2	–	1	1
Designers/designer agents	–	–	1	1
Wholesalers	2	1	2	1
Fashion houses		1	1	
Total	16	8	8	5

8.1 Camel

US

Three US companies—a leather broker, a wholesaler and Western boot manufacturer, and an importer and distributor—expressed interest in camel. The companies interviewed commented on the unique qualities of the leather samples presented and all of these companies requested further product specifications and/or pricing. A fourth company, a Western boot manufacturer, also expressed interest in developing a finish for the leather and a marketing concept that would be accepted by consumers in the Western boot market.

Italy

In Italy, significant interest was expressed in camel. Twelve of the companies interviewed from the Italian leather supply chain requested product specifications, pricing and/or samples. They included tanneries, importers and distributors, manufacturers, a wholesaler and a leather trader.

8.2 Crocodile

US

Four companies interviewed in the US—a leather wholesaler and Western boot manufacturer and three importers and distributors—expressed their interest in working with crocodile. Requests were made for product specifications and pricing, but this was predominantly for second- and third-grade skins.

Italy

The commercial outcomes for crocodile in Italy were positive. During the market visit, orders were secured for crocodile skins at the Lineapelle trade fair and significant interest was expressed in the skins and leather by two tanneries (one of which was not based in Italy) and a manufacturer.

After the return from the in-market visits, a major Italian fashion house expressed significant interest in crocodile skin and an order was placed. This fashion house also travelled to Australia to gain further insights into the Australian crocodile industry and to source a further supply of skins. During this visit, further orders for crocodile skins were placed.

8.3 Emu

US

In the US, five of the companies interviewed—a wholesaler, a boutique fashion designer, two importers and distributors and a company which wholesales leather and manufactures Western boots—expressed an interest in emu. Further information and/or pricing was requested for emu body leather by four of these companies, with the remaining company—a leather distributor—expressing some interest in sourcing emu leg skins.

Italy

Two companies interviewed in Italy—a tannery and a leather trader—showed an interest in emu skin. Prices and specifications were requested and, in the case of the tannery, samples were also requested. The leather trader also requested information on emu leg skins.

A leading Italian fashion house has expressed interest in sourcing emu from Australia and has engaged in further communication with a project partner after the in-market visits.

8.4 Goat

A key commercial outcome for the goat project partner involved in this research study was the establishment of a supply chain link between the project partner and one of Australia's leading leather goods manufacturers. As a result of this link, orders of goat leather were secured for the project partner.

US

Five companies involved in the US leather supply chain—a leather broker, two leather importers and distributors, a wholesaler and Western boot manufacturer, and a fashion designer—requested pricing specifications, mostly for goat suede. One of the wholesalers and distributors was the exception and requested further specifications for goat leather.

Italy

In Italy there was very little interest expressed in goat leather at all levels of the supply chain.

9 Communication and promotion strategy

9.1 Strategic communication strategy

A strategic communication and marketing strategy has been outlined in order to identify each element that must be taken into account when undertaking an international communication and marketing campaign. All strategies are based on a thorough SWOT (strengths, weaknesses, opportunities, threats) analysis. A generic communication plan, outlining the most important aspects to be addressed, has been included in Appendix H. This gives potential exporters a general overview of the points that should be considered. However, it is important to note that, pending market entry, a company should establish its own unique communication strategy, specific to the business and ideally created by a communication/marketing professional.

This communication and promotion strategy section only deals with the crocodile and camel industries. This is because the project's market research indicated that it was these species that have the greatest potential to enter the US and Italian markets.

9.2 Strategic communication strategy—camel skins and leather

The camel's unique mix of hair and wool follicles creates an intriguing grain pattern with an embossed appearance. It is one of the strongest natural hides—even stronger than bovine. Because of the hump shape, camel leather is cut into two asymmetrical pieces (sides), with an average size of 12.9 square feet per side. As Australian camels are only brought in for slaughter when they are fully grown, these camel hides are 10% larger than those of supplied from other countries—giving greater creative scope for designers using the product, as they can make garments and accessories using fewer seams. It is important to note that mange and limited scarring on the leather do not necessarily detract from the product; rather, they are seen as a natural attribute.

The size and quality of the Australian hides are the attributes that require promoting to the targeted US and Italian markets to ensure product differentiation.

Effective marketing of Australian product would be achieved by undertaking internal, external and crisis communication/marketing. However, as the following plan is generic for the industry, internal communication will not be dealt with here as this would be business specific. It is recommended that businesses interested in entering international markets ensure that both internal and crisis communication strategies (in the event of disease outbreaks) are developed.

External communication implementation strategy

This external communication strategy is designed to highlight the camel leather texture and strength, and differentiate the product from competing camel hides and leathers on the basis of its large size.

The external communications have been segmented into four key target markets: manufacturers, tanneries, retailers and consumers.

Manufacturers

In the first instance, the industry requires a complete list of target market manufacturers. Once this has been completed, it is recommended that each manufacturer receive a combination of the following:

- MP3 package with footage of live animal being farmed and footage of final product which clearly shows its product advantage
- promotional brochure highlighting product attributes
- advertorial (paid advertising feature) and corresponding advertisement in target market's industry publications (this would highlight product attributes)
- media releases in target market's industry publications (this would highlight product attributes)
- media releases and photography for Australian skins in fashion at relevant fashion shows.

Tanneries

After a complete list of tanneries that work with camel has been prepared it is recommended that each receive a combination of the following:

- MP3 package with footage of live animal being farmed and footage of final product which clearly shows product advantage
- product samples
- information kit outlining product specifications
- promotional brochure highlighting product attributes
- advertorial (paid advertising feature) and corresponding advertisement in target market's industry publications (this would highlight product attributes)
- media releases in target market's industry publications (this would highlight product attributes).

Retailers

The industry requires a complete list of target market retailers. Once this has been completed, it is recommended that each receive the following:

- educational kit outlining product attributes, high-profile uses (for example, a celebrity using the product), product differentiation attributes, and instructions for after-purchase care.

Consumers

The industry needs to determine the consumer segment(s) of the market it is aiming to target and devise a consumer profile for these segments. Once this has been completed, it is recommended that each target segment receives a combination of the following:

- swing tag branding on product
- advertising in the target segments's preferred media
- representation of product in desired fashion events
- media releases and advertorial stating Australian camel leather attributes and unique size
- point-of-purchase display materials
- sponsorship of product to key consumer influencers for the target segment at targeted gala events.

Key messages for external markets

- Australian camel leather is a new experience for fashion designers.
- Australian camel leather equals strength.
- Australian camel leather equals limited scarring.
- Australian camel leather is large—in fact, larger than that offered by competing countries.

Situation analysis

Before implementing a communication strategy, the business should be familiar with the product's SWOT analysis. This will ensure proactive and not reactive communication.

Strength	Weakness	Opportunity	Threat
Leather is extremely strong.	Currently low supply numbers.	Currently there is a limited awareness of camel leather attributes in terms of designers and also consumers.	Camel skins/leather is available from the Middle East and Africa
Leather has limited scarring.		Scarring could be used as a feature in the tanning process.	The majority of camel skin is exported on the live animal and could be exported from third countries which receive the live camels .
Price of leather is competitive when compared with competing camel leather and other species.		Leather applicability is versatile.	
Australian camel leather is larger than that of competing countries.			

Generic communication plan

The generic communication plan in Appendix H will aid the initial communication planning process. However, it is strongly recommended that a communication professional tailor a strategy specific to your business and the market you wish to enter. Both the SWOT analysis and communication tools vary distinctly between products and markets.

9.3 Strategic communication strategy—crocodile skins and leather

Australia’s crocodile industry is a leader in creating leather of supreme quality. Compared with other crocodile and alligator species, the Australian saltwater crocodile is superior as it has extra rows of scales which create a more intricate scale pattern, much desired by the fashion industry. Crocodile skins can be ordered with an average width of 32–45 cm.

It is the superiority of the Australian skins which needs to be promoted to the targeted US and Italian markets to ensure a price premium and product differentiation.

Effective marketing of Australian product would be achieved by addressing internal, external and crisis communication/marketing. However, as the following plan is generic for the industry, internal communication will not be dealt with here as this would be business specific. It is recommended that businesses interested in entering international markets ensure that both internal and crisis communication strategies (in the event of disease outbreaks) are developed.

External communication implementation strategy

This external communication strategy is designed to highlight the superiority of the *Crocodylus porosus* species and differentiate the product from other crocodile and alligator species.

External communication target markets and tools

The external communications have been segmented into four key target markets: manufacturers, tanneries, retailers and consumers.

Manufacturers

In the first instance, industry requires a complete list of target market manufacturers. Once this has been completed, it is recommended that each manufacturer receive a combination of the following:

- MP3 package with footage of the live animal being farmed and footage of the final product which clearly shows its product advantage
- promotional brochure highlighting product attributes
- advertorial (paid advertising feature) and corresponding advertisement in target market's industry publications (this would highlight product attributes)
- media releases in target market's industry publications (this would highlight product attributes)
- media releases and photography for Australian crocodile skins in fashion at relevant fashion shows.

Tanneries

After a complete list of tanneries that work with crocodile has been prepared, it is recommended that each receive a combination of the following:

- MP3 package with footage of live animal being farmed and footage of final product which clearly shows its product advantage
- information kit outlining product specifications and highlighting the percentage breakdown of gradings
- product samples
- promotional brochure highlighting product attributes
- advertorial (paid advertising feature) and corresponding advertisement in target market's industry publications (this would highlight product attributes)
- media releases in target market's industry publications (this would highlight product attributes).

Retailers

The industry requires a complete list of target market retailers. Once this has been completed, it is recommended that each receive the following:

- educational kit outlining product attributes, high-profile uses (for example, a celebrity using the product), product differentiation attributes, and instructions for after-purchase care.

Consumers

The industry needs to determine the consumer segment(s) of the market it is aiming to target and devise a consumer profile for these segments. Once this has been completed, it is recommended that each target segment receives a combination of the following:

- swing tag branding on product
- advertising in the target segment's preferred media
- representation of product in desired fashion events
- media releases and advertorial stating the difference between saltwater crocodile and its competitors
- point-of-purchase display materials
- sponsorship of product to key consumer influencers for the target segment at targeted gala events.

Key messages for external markets

- Australian saltwater crocodile equals timeless style.
- Australian saltwater crocodile leather equals superior quality.
- Australian saltwater crocodile is more exclusive than other crocodylia species such as alligator and caiman.
- Australian saltwater crocodile is not an endangered species.

Situation analysis

Before implementing a communication strategy, the business should be familiar with the product's SWOT analysis. This will ensure proactive and not reactive communication.

Strength	Weakness	Opportunity	Threat
Higher number of rows of scales, creating aesthetic appeal.	Inability to match lower cost structure in leather industries of some competing nations (particularly labour costs).	Surplus demand for first-grade <i>C. porosus</i> skins in Europe.	May be confused with other inferior crocodylia species leathers such as alligator and caiman.
Australian saltwater crocodile leather enjoys a good reputation as a premium product.	Low supply of skins.	Form supply chains with foreign manufacturers/tanners to develop Australian product.	
Recognition as an environmentally responsible industry and positive relationship with environmental groups.		Branding and promotion of saltwater crocodile at a retail level.	

Generic communication plan

The generic communication plan in Appendix H will aid the initial communication planning process. However, it is strongly recommended that a communication professional tailor a strategy specific to your business and the market you wish to enter. Both SWOT analysis and communication tools vary distinctly between products and markets.

10 Economic analysis

Before entering any export arrangement, businesses may choose to conduct an economic analysis to ensure that they have a thorough understanding of all the costs associated with export. This can be achieved using a tool such as the DPI&F's Export Calculator. By placing values on all costs associated with exporting skins/hides, it can assist the exporter to determine:

- selling costs from factory door to port
- cost of establishing trade relationship per unit sold
- expected price paid by the importer for product
- free-on-board price at exporting wharf
- expected farm gate or factory door price (based on CIF estimate)
- price paid by the buyer for your product at their front door.

Project partner Ship of the Desert supplied estimated costs for the export of skins to the US as outlined below. It should be noted that this export scenario and associated export analysis was generated specifically for Ship of the Desert. Additional economic analysis' can be generated using the Export Calculator depending on the particular export scenario and associated costs and risk variables the exporter may be facing.

Company name	Ship of the Desert	
Product to be exported	Camel hides	
Port of loading (export port)	Townsville	
Units exported each year	10,000	
Number of units	500	per container
Freight cost	\$2,500	per container
Freight cost per unit	\$5.00	per unit exported
Futures currency exchange rate quotation		
Expected mean of the exchange rate distribution	\$0.77	
Expected mean of the exchange rate distribution	\$0.73	
Selling costs—factory door to port		
Cost of establishing trade relationship per unit sold	\$9.80	
Cost of establishing trade relationship per unit sold	\$0.15	
Expected price paid by the importer for your product (A\$ CIF)		
Free-on-board (FOB) price at exporting wharf	\$40.00	
Expected farm gate or factory door price based on CIF estimate	\$34.98	
Expected farm gate or factory door price based on CIF estimate	\$30.20	
Target farm gate or factory door price		
Price paid by the buyer for your product at their front door	\$60.00	
Target CIF price paid by the buyer	\$146.16	
Target FOB price	\$69.80	
Target FOB price	\$64.77	
Minimum acceptable farm gate/factory door price		
Cost of instrument used to protect against currency risk	\$40.00	
Highest exchange rate to achieve minimum price	\$0.10	
Highest exchange rate to achieve minimum price	\$0.618	
Buyer costs—port to buyer's store		
Total cost of your product to the buyer	\$53.29	
Total cost of your product to the buyer	\$84.09	

11 Recommendations

For the species of interest in this project, the most common marketing challenges encountered in Italy and the US were lack of awareness of these exotic species and lack of awareness of Australia as a potential supplier of these species. Many of the following recommendations focus on these problems, suggesting ways in which the Australian industry could take up the challenges which are evident in both markets.

The research also revealed opportunities which could be pursued by producers of all of the species. General recommendations for taking advantage of these opportunities have therefore been offered for the Australian industry to consider.

11.1 Camel

The potential for camel in the US and Italian markets was relatively promising. There was interest from numerous supply-chain intermediaries across both markets, and Australian camel was considered a new product, with potential to be used in a variety of leather products ranging across interior design, footwear, garments and leather accessories. Nevertheless, leather industry operators in Italy and the US expressed some concerns about Australian camel's similarity to bovine leather.

There appear to be several challenges emerging for camel in the development of both the US and the Italian markets. These include the need to further explore the potential for using camel in the product applications identified through this project, the need to ensure that the Australian industry has the capacity to service the supply requirements of export customers in both markets, and the need to create awareness in each market of the characteristics and benefits of camel, to attempt to stimulate further demand.

In order to further develop the Italian and US markets for camel hides, the following recommendations are offered:

- **Determine the Australian industry's export supply capacity.** Based on the interest expressed in camel during the in-market visits, significant volumes could be required to meet the potential demand in these markets. Given that limited volumes of camel hide have been exported from Australia in the past, it is suggested that the Australian camel industry assesses its current capacity to export skins in order to determine the potential future volumes of skins that it could viably supply to export customers.
- **Undertake marketing activities to increase awareness of camel.** Australian camel was virtually unknown in Italy and the US. It is therefore suggested as part of the market entry strategy for Australian camel that marketing activities focus on creating a unique position for camel in comparison with other competing exotic species and bovine. It is suggested that these marketing activities highlight the benefits and unique qualities of the leather to the targeted leather supply chains. During the in-market visits, an Italian wholesaler stated that camel was similar in appearance to bovine and may need other characteristics embossed onto the leather. A US manufacturer agreed, stating that camel was very similar to bovine and suggesting that to be successful camel would need to convey two things to consumers—it must be unique and must also hold value for the consumer. The manufacturer went on to say that it believed this could be achieved by focusing on the marketing of the skin—building a story about it and conveying this story to consumers. It could also be achieved by developing unique finishes for the skin.
- **Determine suitable product applications for camel.** Leather industry companies that were interviewed in Italy and the US suggested a number of end uses for Australian camel. It is suggested that the Australian industry explore potential uses with market partners in Italy and the US to determine if camel lends itself more readily to some product uses over others. For instance, the high tensile strength of camel may make it more appropriate for use in Western boots than in garments. This may ultimately influence the market development strategy employed for camel in these markets into the future.

11.2 Crocodile

The potential for crocodile skin and leather products in the US and Italy appeared positive, with opportunities evident for first-grade skins in Italy and second-grade skins in the US.

The Italian market appeared to be more developed for saltwater crocodile, with anecdotal evidence suggesting that the tanning and manufacturing sectors in particular had more awareness and acceptance for this species than was the case in the US. Demand also appeared to be more significant for first-grade skins in Italy, with orders secured for skins both during and after the visit to that country. In one case, one of the key global fashion houses in Italy indicated that its demand for first-grade skins was potentially in the thousands if such a supply could be sourced.

However, from the limited retail research undertaken, a common trait of both markets was the lack of awareness of saltwater crocodile in the retail sector. This lack of awareness, and in particular the inability of retail salespeople to distinguish between leather products from different crocodylia species and the characteristics and benefits of each species, could be restricting the demand for saltwater crocodile in these markets, particularly in view of its premium price.

Given the potential for further export market development for saltwater crocodile, the abovementioned issues present two significant challenges to the Australian industry which could ultimately restrict its ability to capitalise on the export demand for saltwater crocodile skins. These two challenges are the capacity of the industry to supply the volumes of first-grade skins needed to satisfy export demand, and the ability of the industry to undertake marketing activities to increase awareness of saltwater crocodile in export markets and position this species as the world's premium exotic skin, particularly in the eyes of consumers.

To meet the above challenges and to further develop the Italian and US markets for saltwater crocodile skins, the following recommendations are offered:

- **Research the introduction of a wild egg harvesting program in Queensland.** The establishment of a trial crocodile egg harvesting program should be considered and explored by all industry stakeholders as a means of increasing the supply of crocodiles from Australia to meet the international demand for skins. Western Australia and the Northern Territory currently have programs in place which allow the harvesting of eggs from the wild. If a trial harvesting program is successful in Queensland this could lead to the introduction of a similar harvesting program to that used in WA and NT to ensure the harvesting of eggs is undertaken in an environmentally responsible and sustainable manner. The introduction of such a program in Queensland is likely to improve the Australian industry's ability to service export demand.
- **Develop greater collaboration among the Australian crocodile industry participants.** It is believed that the marketing of skins in a coordinated manner is likely to generate a more beneficial and profitable result for all those involved. A producer alliance or some other process whereby Australian crocodile industry players promote the industry collectively under one brand—combining the marketing efforts of all or many farms, instead of them acting individually—is more likely to increase product awareness and market demand. Awareness of the saltwater crocodile at the retail and consumer level was low in both the Italian and the US markets, and an industry-wide marketing effort would be most likely to improve this. Additionally, collaboration between farms to jointly supply export markets with consolidated shipments, and the sharing of production-related information, could also result in improved logistical efficiencies in the packaging and production of skins to meet export customers' requirements. If action is not taken in these areas, the industry runs the risk of losing market share in the long term to competing species such as alligator.
- **Introduction of targeted marketing activities to educate the market about the benefits of saltwater crocodile.** As it was found that consumer awareness was low in both markets, it could be beneficial for targeted marketing activities to be undertaken by the industry in existing distribution channels. These marketing activities could focus on educating operators in the supply

channel (particularly in the retail sector) about the characteristics and benefits of saltwater crocodile skin and leather products in comparison with other competing exotic leather products—particularly alligator, which has a strong market position.

11.3 Emu

It can be concluded that from the research that Italy and the US may offer specific opportunities for emu in niche markets but, as with camel, there was very limited awareness found in both markets, and this could be seen as contributing to the current limited demand for emu in these markets.

Only three companies in total across both markets indicated that they were aware of emu. On only one occasion was emu seen in a retail store, and in this case it was only emu leg skin belts. The feedback from companies in each of the markets suggests that, because of the characteristics of emu leather, it may be most suitable for use in garments, in footwear and perhaps as a lining in leather goods. Given these findings, the major challenges facing the Australian emu industry are the need to increase awareness in both markets to create a competitive market position and stimulate demand, and the need to determine the most suitable product applications for emu leather in each market.

To meet the above challenges and to further develop the Italian and US markets for emu skins, the following recommendations are offered:

- **Establish suitable uses for emu.** Garments, footwear and leather good linings were suggested as possible uses for emu by companies in the leather supply chain across both markets. It is suggested that the emu industry further explore these possibilities with leather supply-chain partners in each of these markets to determine which uses would be most suitable. Establishing the most suitable uses for emu in these markets could sharpen the industry's focus on particular market segments to penetrate in the US and Italy. It could also influence the execution of the industry's business planning and marketing activities in both markets.
- **Undertake marketing activities to create a competitive market position for emu.** Given its limited presence and low awareness in each market, emu may be perceived as a relatively new leather, particularly in Italy. Hence it may be beneficial for the emu industry to engage in marketing activities, as part of its market entry strategy for each market, to educate the leather supply chain about the characteristics and benefits that emu has to offer. It is suggested that, in the early stages of market entry, these activities be concentrated on distribution channels where emu is intended to be sold. Given that significant competition is likely to be encountered from ostrich, emu's major competitor in each of these markets, the Australian industry could be well served by creating a competitive position in market segments where it can best use the leverage of some unique strengths in comparison with competing species. For example, the softness and suppleness of emu leather could be emphasised if the Australian industry were to focus on targeting the garment market segment.
- **Introduce a skin grading system.** Because potential market partners have limited awareness of emu skin and leather, an internationally recognised grading system needs to be developed for emu. Given that universally accepted grading systems have been implemented for many other species, it is suggested that the Australian industry develop an industry-wide grading system which evaluates the quality of the skin particularly with respect to the level of scarring. Such a system could result in clearer communication, in the negotiation process with export buyers, about the quality of emu skins being offered from Australia, and could also introduce more certainty into the pricing structure.

11.4 Goat

Based on the research undertaken during the in-market visits, goat appeared to have limited opportunities in the US and very little potential in Italy. There was awareness of goat in the leather supply chain in both markets, but there was no evidence of Australian goat in either market.

In Italy no interest was shown by the operators in the supply chain. Although this was not entirely confirmed through this project, it is likely that the lack of interest from the leather supply chain in Italy

may be a result of this market already being adequately supplied with goat from other major supplying nations, such as those in Asia.

In the US there was some interest in goat, particularly for use as suede, but it is likely that the potential is limited to specific niche segments of the market such as the Western boot market and/or the garment market.

Therefore, to pursue the opportunities identified in this research and to exploit further export market development opportunities for goat, the following recommendations are offered:

- **Determine suitable uses for goat in the US.** Western boots and garments were identified as products which may be particularly suited to the use of goat suede. It is suggested that the industry further explore the suitability of these end uses for goat with US leather companies involved in these markets. As with the other species, if goat is found to be suitable for use in Western boots, garments or other end uses, it is suggested that to create a competitive position, marketing activities be undertaken in targeted distribution channels where goat will be sold.
- **Explore the potential for goat to be used as a secondary material input in the manufacture of leather products.** This research primarily focused on export market opportunities where each of the species would be the feature leather in the production of final products for consumers. However, there may be opportunities for goat to be used as a secondary input material for end products, for example as a lining in footwear or leather accessories. As this was beyond the scope of this research, it may be worthwhile for the Australian industry to explore the potential for goat to be used as a secondary material in leather product manufacturing in Italy and the US.
- **Investigate the use of goat in leather products made from multiple Australian exotic species.** As mentioned previously there may be demand in the Italian market for Australian cross-species manufactured products. The Australian goat industry may wish to explore the potential for manufacturing leather products with other operators in the Australian exotic species industry in an effort to attempt to capture any opportunities that may exist in the Italian market.

11.5 All species

The following recommendations are offered across all species covered in this project with a view to assisting to develop export markets in Italy and the US:

- **Develop leather products for the Italian market made from multiple Australian exotic species.** It was revealed that there may be demand in Italy for leather accessories manufactured from combinations of Australian exotic leathers. The Australian industry may have the opportunity to build a unique competitive position in this market niche with such products, which could be difficult for competitors to emulate. It is suggested that Australian exotic skin producers could collaborate with one another and possibly with market partners in the Italian leather industry, such as tanneries and/or manufacturers, to determine if the production of multi-leather species products is technically and commercially feasible. It is also suggested that demand for these products be further assessed before production begins.
- **Partner with global fashion supply chains to penetrate export markets.** In many cases, high-value luxury fashion markets are dominated by international fashion houses with global supply chains. The market research revealed that this was the case in the US; international fashion houses (mostly European) were prominent in this market and appeared to be well accepted by consumers. To penetrate the US market beyond supplying it directly with skins and/or leather, the Australian industry may consider partnering with an international fashion house (such as an Italian fashion house) that holds a strong competitive position in the US as another strategy for entry into this market. This strategy may ultimately offer less risk and cost than attempting to supply this market directly. However, it may take significant effort, cost and time to establish a partnership with an international fashion house (if a partnership can actually be established) and supply the required volumes and specifications.

12 References

Australian Government Department of Environment & Heritage 2006, *Apply for a Permit to Export or Import Wildlife Products* [online], viewed 25 August 2006, <<http://www.deh.gov.au/biodiversity/trade-use/permits/index.html>>.

Bodger, J & Goulding, B 2003, *Distribution of Meat Products From Prospective Australian Animal Industries: crocodiles, emus, game birds, rabbits, hares and snails*, RIRDC publication no. 03/023, Rural Industries Research and Development Corporation, Canberra.

Bomford, M & Caughley, J (eds) 1996, *Sustainable Use of Wildlife by Aboriginal Peoples and Torres Strait Islanders*, Australian Government Publishing Service, Canberra.

Britton, A 1995–2005, *Crocodylians Natural History and Conservation: crocodylian species list* [online], viewed 18 May 2006, <<http://www.flmnh.ufl.edu/cnhc/csl.html>>.

Burst, AC 2005, *Australia Livestock and Products Emerging Goat Meat Industry 2005*, USDA Foreign Agricultural Service report no. AS5015 [online], viewed 27 March 2006, <[http://www.stat-usa.gov/agworld.nsf/505c55d16b88351a852567010058449b/0dc1368bca76c4cf85257014006e0905/\\$FILE/AS5015.PDF](http://www.stat-usa.gov/agworld.nsf/505c55d16b88351a852567010058449b/0dc1368bca76c4cf85257014006e0905/$FILE/AS5015.PDF)>.

Caldwell, J 2004, *World Trade in Crocodylia Skins, 2000–2002*, UNEP World Conservation Monitoring Centre, Cambridge, UK [online], viewed 17–21 March 2006, <<http://www.unep-wcmc.org/species/projects/WorldtradeCrocSkins2000-2002.pdf>>.

Camargo, M 2005, *Distribution of Meat Products for Prospective Animal Industries in Export Markets*, RIRDC publication no. ?, Rural Industries Research and Development Corporation, Canberra. (Peter to fill in details)

Camels Australia Export 2001, *Introduction* [online], viewed 21 April 2006, <<http://www.camelsaust.com.au/intro.htm>>.

Chand, F 2005a, *The US Market for Exotic Skins—Stage 1*, Austrade, Toronto.

Chand, F 2005b, *The US Market for Exotic Skins—Stage 2*, Austrade, Toronto.

CITES Secretariat 2006a, Convention on International Trade in Endangered Species of Wild Fauna and Flora Website, *What Is CITES?* [online], viewed 19 May 2006, <<http://www.cites.org/eng/disc/what.shtml>>.

CITES Secretariat 2006b, Convention on International Trade in Endangered Species of Wild Fauna and Flora Website, *How CITES Works* [online], viewed 25 August 2006, <<http://www.cites.org/eng/disc/how.shtml>>.

CITES Secretariat 2006c, Convention on International Trade in Endangered Species of Wild Fauna and Flora Website, *CITES Species Database* [online], viewed 4 September 2006, <<http://www.cites.org/eng/resources/species.html>>.

Department of Agriculture, Fisheries and Forestry 2005, *Australian Agriculture and Food Sector Stocktake* [online], viewed 28 March 2006, <http://www.affa.gov.au/corporate_docs/publications/pdf/industry_dev/Stocktake2005.pdf>.

Department of Environment and Heritage 2004, *The Feral Camel (Camelus dromedarius)* [online], viewed 16 March 2006 – 30 April 2006, <<http://www.deh.gov.au/biodiversity/invasive/publications/camel/pubs/camel.pdf>>.

Department of Environment and Heritage 2006, *Emu Exports From Australia 2002–2005*, statistical information compiled by Matthew McCorry, Senior Permitting Officer, International Wildlife Trade.

European Union 2006, *International Customs Journal*, no. 14, 27th edition [online], viewed 2 June and 5 June 2006, <<http://www.ita.doc.gov/td/tic/tariff/EuropeanUnion.pdf>>.

FAOSTAT Agricultural Database 2005 [online], viewed 14 March 2006 – November 2006, <<http://faostat.fao.org/site/291/default.aspx>>.

FAO Commodities and Trade Division 2003a, *World Statistical Compendium for Raw Hides and Skins, Leather and Leather Footwear 1984–2002* [online], viewed 19 September 2006, <<http://www.fao.org/docrep/006/y5068t/y5068t00.HTM#Contents>>.

Findlaw, *California Penal Code Section 639-653.1* [online], viewed 31 August 2006, <<http://caselaw.lp.findlaw.com/cacodes/pen/639-653.1.html>>.

Forsyth, DM & Parkes, JP 2004, *Maximising the Conservation Benefits of the Commercial Goat Industry in Australia*, Australian Government Department of Environment and Heritage [online], viewed 27 March 2006, <<http://www.deh.gov.au/biodiversity/invasive/publications/commercial-goat/pubs/commercial-goat.pdf>>.

Holst, PJ 2003, *Australian Goat Leather*, Agricultural Research Station Cowra Agfact A7.8.7, 2nd ed., [online], viewed 24 March 2006, <<http://www.agric.nsw.gov.au/reader/goat-management-production/australian-goat-leather.pdf>>.

Lineapelle 2005, *Pre-Catalogo October 2005, brochure from Lineapelle, Italy, an international exhibition of leather, accessories, components, synthetics for footwear, leathersgoods, leatherwear and furnishings*.

MacNamara, K, Nicholas, P, Murphy, D, Riedel, E, Goulding, B, Horsburgh, C, Whiting, T & Warfield, B 2003, *Markets for Skins and Leather, from the Goat, Emu, Ostrich, Crocodile and Camel Industries*, RIRDC publication no. 02/142, Rural Industries Research and Development Corporation, Canberra.

Makin, B, emu leather producer and project partner, personal communication, June 2006.

Meat and Livestock Australia Limited (MLA) 2006, *Goat Industry* [online], viewed 27 March 2006, <<http://www.mla.com.au/TopicHierarchy/InformationCentre/IndustryOverview/GoatIndustry/default.htm>>.

Natural Resources, Mines and Water 2006, *Feral Goat Capra hircus* [online], viewed 27 March 2006, <<http://www.nrm.qld.gov.au/factsheets/pdf/pest/pa18.pdf>>.

Office of Economic and Statistical Research, Queensland Treasury 2006, information compiled by Zoe Douglas (Statistician), Information Products and Services.

Pacific Planet Ltd 2001, *Goat Skin* [online], viewed 24 March 2006, <http://www.pacificplanet.net/leather_goat_skin.htm>.

Foster, M, Jahan, N & Smith, P 2005, *Emerging Animal and Plant Industries—their value to Australia*, RIRDC Publication Number 05/154 [online], viewed 15 March 2006, <<http://www.rirdc.gov.au/reports/NPP/05-154.pdf>>.

Shim-Prydon, G & Camacho-Baretto, H 2006, *New Animal Products: New uses and markets for co/by-products of crocodile, emu, goat, kangaroo and rabbit*, RIRDC publication no. 06/117 Rural Industries Research and Development Corporation, Canberra.

World Leather Market 2000, *The Leather Global Value Chain and the World Leather Footwear Market* [online], viewed 24 March 2006, <http://www.factbook.net/leather_components.php>.

Appendices

Appendix A

Table A.1: Crocodylia species distribution and CITES classification

Species	Common name	Distribution	CITES classification	
			Appendix	Notes
<i>Alligator mississippiensis</i>	American Alligator	US	II	
<i>Alligator sinensis</i>	Chinese Alligator	China	I	
<i>Caiman crocodilus</i>	Common Caiman, Spectacled Caiman, Brown Caiman	Bolivia, Brazil, Colombia, Costa Rica, Cuba (int), Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Puerto Rico (int), Suriname, Trinidad and Tobago, US (int), Venezuela	II	
<i>Caiman crocodilus apaporiensis</i>	Apaporis River Caiman, Rio Apaporis (Spectacled) Caiman	Colombia	I	
<i>Caiman crocodilus crocodilus</i>	South American Spectacled Caiman	Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela	II	
<i>Caiman crocodilus fuscus</i>	Brown Spectacled Caiman	Colombia, Costa Rica, Ecuador (?), El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Venezuela	II	
<i>Caiman latirostris</i>	Broad-nosed Caiman, Broad-snouted Caiman	Argentina, Bolivia, Brazil, Paraguay, Uruguay	I	Excluding population of Argentina
<i>Caiman latirostris</i>	Broad-nosed Caiman, Broad-snouted Caiman	Argentina, Bolivia, Brazil, Paraguay, Uruguay	II	Population of Argentina
<i>Caiman yacare</i>	Yacare Caiman	Argentina, Bolivia, Brazil, Paraguay, Uruguay	II	
<i>Melanosuchus niger</i>	Black Caiman	Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay (?), Peru, Venezuela (?)	I	Excluding population of Ecuador
<i>Melanosuchus niger</i>	Black Caiman	Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay (?), Peru, Venezuela (?)	II	Population of Ecuador, subject to a zero annual export quota until an annual export quota has been approved by the CITES secretariat
<i>Paleosuchus palpebrosus</i>	Cuvier's Smooth-fronted Caiman, Dwarf Caiman	Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela	II	
<i>Paleosuchus trigonatus</i>	Schneider's Smooth-fronted Caiman	Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela	II	
<i>Crocodylus acutus</i>	American Crocodile	Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, US, Venezuela	I	Excluding population of Cuba
<i>Crocodylus acutus</i>	American Crocodile	Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, US, Venezuela	II	Population of Cuba

Species	Common name	Distribution	CITES classification	
			Appendix	Notes
<i>Crocodylus cataphractus</i>	African Slender-snouted Crocodile, African Sharp-nosed Crocodile, Long-snouted Crocodile	Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia (ex?), Ghana, Guinea, Guinea-Bissau (ex?), Liberia, Mali, Mauritania, Nigeria, Senegal (ex?), Sierra Leone, Togo, United Republic of Tanzania, Zambia	I	
<i>Crocodylus intermedius</i>	Orinoco Crocodile	Colombia, Venezuela	I	
<i>Crocodylus johnsoni</i>	Australian Fresh-water Crocodile, Johnstone's Crocodile	Australia	II	
<i>Crocodylus mindorensis</i>	Philippine Crocodile, Mindoro Crocodile	Philippines	I	
<i>Crocodylus moreletii</i>	Morelet's Crocodile, Belize Crocodile	Belize, Guatemala, Mexico	I	
<i>Crocodylus niloticus</i>	Nile Crocodile, African Crocodile	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti (ex), Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Israel (ex), Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe	I	Except those populations in App. II
<i>Crocodylus niloticus</i>	Nile Crocodile, African Crocodile	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti (ex), Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Israel (ex), Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe	II	Populations of Botswana, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Namibia, South Africa, Uganda, the United Republic of Tanzania (subject to an annual export quota of no more than 1,600 wild specimens including hunting trophies, in addition to ranches specimens), Zambia and Zimbabwe
<i>Crocodylus novaeguineae</i>	New Guinea Crocodile, Freshwater Crocodile	Indonesia, Papua New Guinea	II	

Species	Common name	Distribution	CITES classification	
			Appendix	Notes
<i>Crocodylus palustris</i>	Broad-snouted Crocodile, Marsh Crocodile, Mugger, Mugger Crocodile	Bangladesh (ex), India, Iran (Islamic Republic of), Myanmar (?), Nepal, Pakistan, Sri Lanka	I	
<i>Crocodylus porosus</i>	Saltwater Crocodile	Australia, Bangladesh, Brunei Darussalam, Cambodia, Cocos (Keeling) Islands, Fiji, Hong Kong, China, India, Indonesia, Malaysia, Micronesia (Federated States of), Myanmar, Palau, Papua New Guinea, Philippines, Singapore (ex), Solomon Islands, Sri Lanka, Thailand (ex?), Vanuatu, Viet Nam	I	Except populations of Australia, Papua New Guinea and Indonesia
<i>Crocodylus porosus</i>	Estuarine Crocodile, Saltwater Crocodile	Australia, Bangladesh, Brunei Darussalam, Cambodia, Cocos (Keeling) Islands, Fiji, Hong Kong, China, India, Indonesia, Malaysia, Micronesia (Federated States of), Myanmar, Palau, Papua New Guinea, Philippines, Singapore (ex), Solomon Islands, Sri Lanka, Thailand (ex?), Vanuatu, Viet Nam	II	Populations of Australia, Papua New Guinea and Indonesia
<i>Crocodylus rhombifer</i>	Cuban Crocodile	Cuba	I	
<i>Crocodylus siamensis</i>	Siamese Crocodile	Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar (?), Thailand (ex?), Viet Nam	I	
<i>Osteolaemus tetraspis</i>	African Dwarf Crocodile, West African Dwarf Crocodile	Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo, Uganda (ex?)	I	
<i>Tomistoma schlegelii</i>	False Gaviial, False Gharial, Malayan Gharial, Tomistoma	Indonesia, Malaysia, Thailand (ex)	I	
<i>Gavialis gangeticus</i>	Fish-eating Crocodile, Gavial, Gharial, Long-nosed Crocodile	Bangladesh, Bhutan (?), India, Myanmar (ex), Nepal, Pakistan	I	

(ex) = extinct.

(int) = introduced.

(?) = outstanding query over status.

Appendix I—Commercial trade of the species is prohibited in most instances.

Appendix II—Commercial trade of the species is allowed only with the issue of a permit.

Source: CITES (2006c), CITES species database.

Appendix B

Table B.1: US imports of camel leather and manufactured products, 2000–04 (US\$)

Item	2000		2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Garments	90	26,180	10,712	135,305	36	17,688	124	79,019	9,204	286,414
Large manufactured leather products	0	0	0	0	61	7,218	250	41,019	272	75,000
Small manufactured leather products	0	0	0	0	0	0	23	2,016	6	288
Shoes or boots	0	0	0	0	90	3,532	0	0	135	13,749
Skins (sub. whole skins, including tinga frames)	0	0	0	0	0	0	0	0	0	0
Trim (shoe trim, garment trim or decorative trim)	27	6,796	0	0	0	0	0	0	0	0
Total all	117	32,976	10,712	135,305	187	28,438	397	122,054	9,617	375,451

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table B.2: US imports of camel leather and manufactured products of camel leather, 2000

Item	Country	Units	Value US\$
Garments	Italy	87	25,970
	Syrian Arab Rep.	3	210
	Total all countries	90	26,180
Trims	Italy	27	6,796
	Total all countries	27	6,796

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table B.3: US imports of camel leather and manufactured products of camel leather, 2001

Item	Country	Units	Value US\$
Garments	France	10,619	124,017
	Italy	93	1,288
	Total all countries	10,712	135,305

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table B.4: US imports of camel leather and manufactured products of camel leather, 2002

Item	Country	Units	Value US\$
Garments	Italy	36	17,688
	Total all countries	36	17,688
Large manufactured products	Italy	61	7,218
	Total all countries	61	7,218
Shoes	Italy	90	3,532
	Total all countries	90	3,532

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table B.5: US imports of camel leather and manufactured products of camel leather, 2003

Item	Country	Units	Value US\$
Garments	Switzerland	112	75,778
	UK	4	2,527
	Italy	8	714
	Total all countries	124	79,109
Large manufactured products	Switzerland	208	35,808
	Italy	42	5,211
	Total all countries	250	41,019
Small manufactured products	Switzerland	23	2,016
	Total all countries	23	2,016

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table B.6: US imports of camel leather and manufactured products of camel leather, 2004

Items	Country	Units	Value US\$
Garments	France	622	221,822
	Italy	8,505	52,224
	Switzerland	77	12,368
	Total all countries	9,204	286,414
Large manufactured products	Switzerland	252	68,825
	Italy	20	6,175
	Total all countries	272	75,000
Small manufactured products	Switzerland	6	288
	Total all countries	6	288
Shoes or boots	France	104	10,280
	Switzerland	18	2,500
	Italy	13	949
	Total all countries	135	13,749

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Appendix C

Table C.1: US imports of crocodile skins and manufactured products, 2000–04 (US\$)

Item	2000		2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Garments	15	3,250	163	91,821	155	36,690	222	105,783	178	164,392
Large manufactured leather products	758	500,325	2,025	1,843,557	2,652	2,752,540	3,321	2,816,638	3,343	4,067,896
Small manufactured leather products	9,932	612,830	11,822	652,817	17,707	1,384,821	13,410	1,647,227	12,871	3,201,476
Shoes or boots	17,752	1,746,029	18,951	1,537,597	22,552	2,003,820	24,176	1,982,723	21,278	2,000,901
Skins (sub. whole skins, including tinga frames)	19,794	1,580,617	14,796	1,399,867	31,163	2,168,421	17,518	1,142,531	16,347	1,277,959
Trim (shoe trim, garment trim or decorative trim)	134	2,420	3,848	847	15,168	69,904	9,967	381,207	1,747	110,541
Total all	48,385	4,445,471	51,605	5,526,506	89,397	8,416,196	68,614	8,076,109	55,764	10,823,165

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.2: US imports of crocodile skins and manufactured products of crocodile skins, 2000

Item	Country	Units	Value US\$
Garments	Italy	4	1,832
	South Africa	10	351
	Mexico	1	200
	Total all countries	15	3,250
Large manufactured products	France	53	196,879
	Japan	215	167,000
	South Africa	163	55,361
	Hong Kong	12	49,553
	Australia	10	745
	Total all countries	758	500,325
Small manufactured products	Switzerland	1,283	220,461
	Italy	917	151,513
	Singapore	5,786	120,955
	Australia	655	29,676
	France	50	29,522
Total all countries	9,932	612,830	
Shoes or boots	Mexico	10,853	1,102,073
	Spain	4,141	334,517
	Italy	2,742	304,517
	Total all countries	17,752	1,746,029
Trims	Australia	2	1,300
	Italy	130	507
	Iran	1	350
	Total all countries	134	2,420

Skins	Singapore	9,068	674,998
	Zimbabwe	4,267	324,740
	Switzerland	841	204,950
	South Africa	2,654	187,342
	Australia	317	44,077
	Total all countries	19,794	1,580,617

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.3: US imports of crocodile skins and manufactured products of crocodile skins, 2001

Item	Country	Units	Value US\$
Garments	Italy	73	51,229
	Turkey	4	18,932
	Germany	2	13,242
	South Africa	84	8,418
	Total all countries	163	91,821
Large manufactured products	South Africa	386	783,337
	France	169	547,889
	Italy	592	396,854
	Australia	213	12,286
	Total all countries	2,025	1,843,557
Small manufactured products	Switzerland	1,497	253,111
	Italy	1,354	104,353
	Australia	2,625	62,413
	Singapore	2,908	55,871
	South Africa	956	50,877
	Total all countries	11,822	652,817
Shoes or boots	Spain	9,425	610,798
	Mexico	6,066	559,547
	Italy	3,230	324,559
	Total all countries	18,951	1,537,597
Trims	Spain	3,877	265
	Italy	21	582
	Total all countries	3,848	847
Skins	Singapore	7,178	698,320
	Zimbabwe	3,297	199,444
	South Africa	1,842	189,049
	Panama	1,098	123,795
	Australia	381	41,374
	Total all countries	14,796	1,399,867

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.4: US imports of crocodile skins and manufactured products of crocodile skins, 2002

Item	Country	Units	Value US\$
Garments	Italy	107	20,599
	Singapore	14	6,750
	France	4	5,669
	Australia	2	2,078
	Total all countries	155	36,690
Large manufactured products	France	338	995,142
	Italy	780	748,624
	Switzerland	393	488,288
	South Africa	504	322,274
	Australia	147	9,573
	Total all countries	2,652	2,752,540
Small manufactured products	Switzerland	8,002	382,504
	France	361	429,935
	Italy	3,913	299,310
	South Africa	1,759	126,156
	Australia	2,518	95,104
	Total all countries	17,707	1,384,821
Shoes or boots	Italy	9,753	814,750
	Mexico	6,554	556,411
	Spain	5,437	459,091
	Switzerland	434	129,778
	Total all countries	22,552	2,003,820
Trims	Italy	1,548	53,738
	France	9	16,118
	Spain	48	13,611
	Total all countries	15,168	69,904
Skins	Singapore	22,146	1,403,065
	France	2,242	313,045
	Zimbabwe	4,133	156,719
	South Africa	599	75,191
	Australia	101	25,669
	Total all countries	31,163	2,168,421

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.5: US imports of crocodile skins and manufactured products of crocodile skins, 2003

Item	Country	Units	Value US\$
Garments	Spain	68	45,809
	France	106	44,771
	Italy	26	14,918
	Total all countries	222	105,783
Large manufactured products	France	275	1,194,990
	Italy	1,050	544,904
	South Africa	757	509,473
	Switzerland	158	326,249
	Australia	387	26,821
	Total all countries	3,321	2,816,638
Small manufactured products	France	748	520,870
	Switzerland	2,192	338,738
	Italy	1,804	200,144
	Australia	2,782	162,182
	South Africa	905	84,644
	Total all countries	13,410	1,647,227
Shoes or boots	Italy	8,845	772,196
	Mexico	9,310	654,287
	Spain	5,763	494,587
	Switzerland	190	48,205
	Total all countries	24,176	1,982,723
Trims	Italy	5,266	339,039
	France	13	27,685
	Mexico	316	9,243
	Australia	65	616
	Total all countries	9,967	381,207
Skins	Singapore	14,977	949,664
	Zimbabwe	1,792	111,368
	South Africa	548	46,566
	France	15	5,265
	Australia	99	17,553
	Total all countries	17,518	1,142,531

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.6: US imports of crocodile skins and manufactured products of crocodile skins, 2004

Item	Country	Units	Value US\$
Garments	France	14	107,143
	Italy	105	26,355
	Mexico	5	1,422
	Switzerland	2	1,152
	Total all countries	178	164,392
Large manufactured products	South Africa	1,128	1,256,001
	Italy	1,195	1,102,602
	Switzerland	599	1,065,660
	France	84	558,752
	Australia	124	15,123
	Total all countries	3,343	4,067,896
Small manufactured products	France	729	1,300,261
	Switzerland	3,578	1,133,122
	South Africa	1,775	300,050
	Italy	1,994	231,793
	Australia	789	50,190
	Total all countries	12,871	3,201,476
Shoes or boots	Spain	7,268	588,412
	Italy	5,163	554,878
	Mexico	7,543	537,186
	France	719	157,891
	Total all countries	21,278	2,000,901
Trims	Italy	1,570	109,779
	Switzerland	1	750
	Total all countries	1,747	110,541
Skins	Singapore	16,044	1,193,502
	Australia	100	31,674
	France	18	10,659
	Total all countries	16,347	1,277,959

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table C.7: Alligator skin production in the US, 2003

State	Wild skins		Farm skins		Total Skins
	Number	Av. size*	Number	Av. size*	
Louisiana	33,568	41	210,521	19	244,089
Florida	11,716	43	22,627	32	34,343
Texas	1,553		12,701	25	14,254
Georgia	525		14,000		14,525
South Carolina	287		0		287
Alabama	150		0		150
Mississippi	145	47	0		145
Arkansas					
Total	47,944		259,849		307,793

* 'Av. size' pertains to belly skin and is presented in centimetres.

Source: Chand 2005b, compiled from Florida Fish and Wildlife Conservation Commission.

Table C.8: US imports of alligator skins and manufactured products, 2001–04 (US\$)

Item	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	630	586,743	436	166,513	655	1,013,306	591	364,789
Large manufactured leather products	8,927	6,827,007	6,868	5,541,793	8,387	7,281,346	7,003	6,956,528
Small manufactured leather products	209,827	29,244,352	236,463	29,271,479	257,143	31,541,325	268,089	37,363,543
Shoes or boots	131,040	13,027,015	106,527	10,079,451	98,234	10,888,338	81,562	10,825,644
Skins (sub. whole skins, including tinga frames)	21,290	3,603,238	27,891	3,002,306	17,000	2,193,209	27,131	1,877,091
Trim (shoe trim, garment trim or decorative trim)	2,368	178,661	1,847	99,791	2,897	349,532	2,054	244,291
Total all	374,082	53,467,016	380,032	48,161,333	384,316	53,267,056	386,430	57,631,886

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Table C.9: US exports of alligator skins and manufactured products, 2001–04 (US\$)

Item	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	4	51,026	11	63,426	28	8,000	4	21,881
Large manufactured leather products	134	193,864	259	235,813	206	211,176	300	201,325
Small manufactured leather products	7,639	3,985,725	7,517	3,807,548	8,916	5,519,743	13,871	4,791,651
Shoes or boots	163	44,342	226	56,101	776	342,838	837	160,355
Skins (sub. whole skins, including tinga frames)	337,971	33,738,881	212,168	20,356,281	312,275	32,653,620	232,590	24,653,474
Trim (shoe trim, garment trim, or decorative trim)	2	82	1	1,000	96	22,681	34	81,619
Total all	345,913	38,013,920	220,182	24,520,169	322,297	38,758,058	247,636	29,910,305

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Table C.10: US imports of caiman skins and manufactured products, 2001–04 (US\$)

Item	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	4,928	634,741	552	97,145	367	116,373	641	107,487
Large manufactured leather products	7,570	1,859,305	5,871	1,452,956	107,111	2,472,386	13,483	5,104,982
Small manufactured leather products	134,952	5,722,573	150,777	4,703,349	165,599	4,740,485	157,051	4,679,347
Shoes or boots	383,295	19,471,711	401,027	22,954,540	338,367	17,440,717	438,157	22,711,149
Skins (sub. whole skins, including tinga frames)	168,872	6,926,377	156,178	6,896,863	122,939	5,965,214	112,492	4,766,245
Trim (shoe trim, garment trim or decorative trim)	64,155	124,232	43,417	775,413	44,259	1,123,021	87,988	1,198,095
Total all	763,772	34,738,939	757,822	36,880,266	778,642	31,858,196	809,812	38,567,305

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Table C.11: US exports of caiman skins and manufactured products, 2001–04 (US\$)

Items	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	0	0	0	0	0	0	0	0
Large manufactured leather products	1	96	81	39,988	182	53,823	162	77,285
Small manufactured leather products	1,491	227,382	1,723	212,086	2,729	141,214	14,374	244,003
Shoes or boots	1,107	106,734	350	55,113	548	68,043	400	43,487
Skins (sub. whole skins, including tinga frames)	18,410	843,878	11,539	601,631	13,484	837,252	10,809	811,687
Trim (shoe trim, garment trim or decorative trim)	0	0	0	0	28	1,445	13	4,717
Total all	21,009	1,178,090	13,693	908,818	16,971	1,101,777	25,758	1,181,179

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Appendix D

Table D.1: Australian exports of emu skin and leather, 2002–05

DESTINATION COUNTRY	PRODUCT	YEAR APPROVED/ACQUITTED				Grand total
		2002	2003	2004	2005	
Destination unknown	Assorted emu products				280	280
	Assorted products			1,561,805		1,561,805
	Emu oil, skins, blown eggs and meat				0	0
	Emu product(s)		0			0
	Emu products	568,587	10,204	319,505	1,361	899,657
	Handbag(s)			0		0
	Leather		0	0	60	60
	Leather products			0	0	0
	Leather skins			0		0
	Manufactured leather accessories				0	0
	Oil, meat and leather			490		490
	Oil, skins, blown eggs		212			212
	Oil/skins/eggs			0		0
	Products	2,616				2,616
	Skin(s)				0	0
Skins			0		0	
Tanned skin(s)		0			0	
Total		571,203	10,416	1,881,800	1,701	2,465,120
Canada	Assorted leather goods		70			70
	Assorted manufactured products			35		35
	Emu products	30				30
	Emu skin products	120				120
	Manufactured accessories		315			315
	Manufactured accessories		105			105
Canada total		150	490	35		675
China	Assorted manufactured products				16	16
	Handbag(s)	822				822
	Wallet(s)	420				420
China total		1,242			16	1,258
Denmark	Assorted leather goods				70	70
	Assorted leather products			35		35
	Assorted manufactured products			105		105
	Emu skin products	30				30
	Manufactured accessories		35			35
Denmark total		30	35	140	70	275
Fiji	Emu products		2.5			2.5
Fiji total			2.5			2.5
France	Assorted leather goods				70	70
	Wallet(s)			1		1
France total				1	70	71
Germany	Assorted leather goods				70	70
	Assorted manufactured products			35	140	175
Germany total				35	210	245
Hong Kong	Leather skins			13,000		13,000
Hong Kong total				13,000		13,000

Italy	Assorted leather goods				210	210
	Assorted leather goods		70			70
	Assorted manufactured products			35		35
	Emu products	30				30
Italy total		30	70	35	210	345
Japan	Assorted leather goods		315		140	455
	Assorted leather goods		70			70
	Assorted manufactured products			420	70	490
	Belt(s)	40				40
	Belts/key rings/boots			70		70
	Emu products	60				60
	Emu skin products	60				60
	Manufactured accessories		105			105
	Skin(s)			12		12
Japan total		160	490	502	210	1,362
New Zealand	Assorted leather goods		140		805	945
	Assorted leather goods		140			140
	Assorted manufactured products			665	945	1,610
	Belt(s)	20				20
	Belts/key rings/boots			140		140
	Boot trim	70				70
	Emu products	300				300
	Emu skin products	270				270
	Handbag(s)		2			2
	Manufactured accessories		315			315
	Manufactured accessories		105			105
New Zealand total		660	702	805	1750	3,917
Russian Federation	Manufactured accessories		35			35
Russian Federation total			35			35
South Africa	Assorted manufactured products			70	105	175
	Belt(s)	20				20
	Emu skin products	30				30
	Manufactured accessories		70			70
South Africa total		50	70	70	105	295
Sweden	Assorted leather goods		180			180
	Assorted leather goods		250			250
	Assorted manufactured products			245		245
	Emu products	90				90
	Emu skin products	60				60
	Manufactured accessories		35			35
	Manufactured accessories		70			70
Sweden total		150	535	245		930
Switzerland	Assorted manufactured products			140	105	245
	Belt(s)	20				20
	Belts/key rings/boots			70		70
Switzerland total		20		210	105	335

United Kingdom	Assorted leather goods		175		665	840
	Assorted leather products			280		280
	Assorted leather goods		210			210
	Assorted manufactured products			630	735	1,365
	Belts/key rings/boots			140		140
	Emu products	240				240
	Emu skin products	150				150
	Manufactured accessories		525			525
	Manufactured accessories		35			35
United Kingdom total		390	945	1,050	1,400	3,785
US of America	Assorted leather goods		350		245	595
	Assorted leather products			35		35
	Assorted leather goods		280			280
	Assorted manufactured products			665	245	910
	Belt(s)				1	1
	Belts/key rings/boots			70		70
	Emu products	240				240
	Emu skin products	120				120
	Handbag(s)	6	3			9
	Manufactured accessories		280			280
	Manufactured accessories		105			105
US of America total		366	1,018	770	491	2,645
Grand total		574,451	14,809	1,898,698	6,338	2,494,295.5

* It is important to note that, because of the reporting nature required for Australian export permits and the fact that skin and leather exports are incorporated within various other emu product export categories, the above information should only be considered as an approximation of Australian emu skin and leather exports.

Source: Department of Environment and Heritage (2006).

Appendix E

Table E.1: US imports of emu skins and manufactured products, 2000–04 (US\$)

Item	2000		2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Garments	0	0	2	2,313	15	16,669	0	0	0	0
Large manufactured leather products	4	2,626	61	1,497	6	410	0	0	7	590
Small manufactured leather products	41	17,343	20	9,613	0	0	2	107	4	143
Shoes or boots	0	0	240	4,800	0	0	0	0	26	501
Skins (sub. whole skins, including tinga frames)	0	0	0	0	0	0	0	0	0	0
Trim (shoe trim, garment trim or decorative trim)	0	0	8	10,575	0	0	0	0	0	0
Total all	45	19,969	331	28,798	21	17,079	2	107	37	1,234

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.2: US imports of emu skins and manufactured products of emu skins, 2000

Item	Country	Units	Value US\$
Large manufactured products	France	4	2,626
	Total all countries	4	2,626
Small manufactured products	France	32	16,920
	Australia	9	423
	Total all countries	41	17,343

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.3: US imports of emu skins and manufactured products of emu skins, 2001

Item	Country	Units	Value US\$
Garments	Italy	2	2,313
	Total all countries	2	2,313
Large manufactured products	Mexico	60	1,300
	France	1	197
	Total all countries	61	1,497
Small manufactured products	France	19	9,569
	Australia	1	44
	Total all countries	20	9,613
Shoes or boots	Mexico	240	4,800
	Total all countries	240	4,800
Trim	Italy	8	10,575
	Total all countries	8	10,575

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.4: US imports of emu skins and manufactured products of emu skins, 2002

Item	Country	Units	Value US\$
Garments	Italy	7	8,301
	France	8	6,837
	Total all countries	15	16,669
Large manufactured products	Australia	6	410
	Total all countries	6	410

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.5: US imports of emu skins and manufactured products of emu skins, 2003

Item	Country	Units	Value US\$
Small manufactured products	France	2	107
	Total all countries	2	107
Large manufactured products	Australia	6	410
	Total all countries	6	410

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.6: US imports of emu skins and manufactured products of emu skins, 2004

Item	Country	Units	Value US\$
Large manufactured products	Italy	7	590
	Total all countries	7	590
Small manufactured products	Australia	2	119
	Italy	2	24
	Total all countries	4	143
Shoes or boots	Italy	26	501
	Total all countries	26	501

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table E.7: US imports of ostrich skins and manufactured products, 2001–04 (US\$)

Item	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	5,543	679,091	2,189	561,817	1,030	541,847	795	169,973
Large manufactured leather products	10,029	2,555,888	8,777	2,236,855	8,298	2,802,556	7,362	3,155,096
Small manufactured leather products	129,437	3,168,986	110,260	2,932,536	108,703	2,708,884	121,841	5,655,015
Shoes or boots	431,991	19,211,289	320,059	14,937,631	278,072	12,008,515	327,209	13,491,737
Skins (sub. whole skins, including tinga frames)	164,790	20,294,228	346,391	20,273,413	198,273	14,374,856	140,875	21,281,120
Trim (shoe trim, garment trim or decorative trim)	67,114	764,768	99,980	2,275,983	94,190	2,210,747	96,034	1,734,318
Total all	808,904	46,674,250	887,656	43,218,235	688,566	34,647,405	694,116	45,487,259

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Table E.8: US exports of ostrich skins and manufactured products, 2001–04 (US\$)

Item	2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value
Garments	76	6,279	5	1,296	22	49,229	200	7,113
Large manufactured leather products	257	88,060	229	120,997	101	141,902	102	102,308
Small manufactured leather products	1,806	47,837	410	99,993	301	71,166	378	67,189
Shoes or boots	1,839	136,773	12,382	581,897	1,886	172,211	2,231	184,189
Skins (sub. whole skins, including tinga frames)	60,939	3,384,968	160,303	3,886,624	77,275	3,645,375	31,670	3,688,152
Trim (shoe trim, garment trim or decorative trim)	39	5,155	26	273	3	878	104	16,295
Total all	64,956	3,669,072	173,355	4,691,080	79,588	4,080,761	34,685	4,065,246

Source: Chand 2005b, compiled from US Fish and Wildlife Service.

Appendix F

Table F.1: US imports of goat skins and manufactured products, 2000–04 (US\$)

Items	2000		2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Garments	302	98,595	92	62,459	2,206	230,748	285	127,849	695	117,710
Large manufactured leather products	63	10,773	0	0	0	0	43	19,361	0	0
Small manufactured leather products	98	7,151	27	458	0	0	10	183	99	446
Shoes or boots	4	720	306	10,237	262	18,382	400	13,157	0	0
Skins (sub. whole skins, including tinga frames)	132	13,590	159	3,449	3,142	23,627	886	24,091	67	15,444
Trim (shoe trim, garment trim or decorative trim)	0	0	8	138	10	2,948	616	65,156	81	14,897
Total all	599	130,829	592	76,741	5,620	275,705	2,240	249,797	942	148,497

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.2: US imports of goat leather and manufactured products from goat leather, 2000

Item	Country	Units	Value \$US
Garments	Germany	124	49,310
	India	123	9,130
	Italy	55	40,155
	Total all countries	302	98,595
Large manufactured items	Switzerland	21	1,132
	Italy	42	9,641
	Total all countries	63	10,773
Small manufactured items	Italy	18	2,985
	Philippines	80	4,166
	Total all countries	98	7,151
Shoes	Italy	4	720
	Total all countries	4	720
Skins	Argentina	5	50
	Canada	21	9,750
	China	100	3,400
	Italy	6	390
	Total all countries	132	13,590

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.3: US imports of goat leather and manufactured products of goat leather, 2001

Item	Country	Units	Value \$US
Garments	Italy	92	62,459
	Total all countries	92	62,459
Small manufactured items	Switzerland	26	420
	Philippines	1	38
	Total all countries	27	458
Shoes	France	306	10,237
	Total all countries	306	10,237
Skins	Canada	8	2,845
	Ghana	151	604
	Total all countries	159	3,449
Trim	Italy	8	138
	Total all countries	8	138

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.4: US imports of goat leather and manufactured products of goat leather, 2002

Item	Country	Units	Value US\$
Garments	China	720	83,735
	Spain	1,248	40,262
	Italy	135	60,841
	Total all countries	2,206	230,748
Shoes	France	90	12,764
	Italy	172	5,618
	Total all countries	262	18,382
Skins	Canada	37	9,658
	France	4	1,486
	Pakistan	3,088	11,891
	Total all countries	3,142	23,627
Trim	France	4	2,744
	Italy	3	203
	Total all countries	10	2,948

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.5: US imports of goat leather and manufactured products of goat leather, 2003

Item	Country	Units	Value US\$
Garments	Italy	172	98,584
	Hong Kong	89	23,658
	France	2	1,508
	Total all countries	285	127,849
Large manufactured items	France	25	12,425
	Greece	4	84
	Italy	14	6,852
	Total all countries	43	19,361
Small manufactured items	Switzerland	8	177
	United Kingdom	2	6
	Total all countries	10	183
Shoes	France	300	8,025
	Italy	100	5,132
	Total all countries	400	13,157
Skins	Canada	35	12,755
	India	761	6,459
	South Africa	90	2,565
	Total all countries	886	24,091
Trim	France	521	40,703
	Greece	60	123
	Italy	35	24,330
	Total all countries	616	65,156

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.6: US imports of goat leather and manufactured products of goat leather, 2004

Item	Country	Units	Value US\$
Garments	Italy	321	58,046
	Hong Kong	265	36,749
	China	75	11,887
	Total all countries	695	117,710
Small manufactured items	France	6	350
	Italy	93	96
	Total all countries	99	446
Skins	Canada	48	11,952
	Italy	1	2,672
	New Zealand	18	720
	Total all countries	67	15,444
Trim	Italy	74	14,371
	Canada	3	75
	France	3	251
	Greece	1	200
	Total all countries	81	14,897

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.7: US exports of goat leather and manufactured products, 2000–04 (US\$)

Item	2000		2001		2002		2003		2004	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Garments	1	5,758	4	5,204	41	65,663	9	8,610	10	3,360
Large manufactured leather products	0	0	0	0	0	0	1	282	1	85
Small manufactured leather products	0	0	0	0	0	0	0	0	0	0
Shoes or boots	0	0	0	0	0	0	0	0	2	445
Skins (sub. whole skins, including tinga frames)	1	33	0	0	533	21,492	0	0	19	3,865
Trim (shoe trim, garment trim or decorative trim)	0	0	0	0	5	23	8	494	35	11,228
Total all	2	5,791	4	5,204	579	87,178	18	9,386	67	18,983

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.8: US exports of goat leather and manufactured products of goat leather, 2000

Item	Country	Units	Value US\$
Garments	Italy	1	5,758
	Total all countries	1	5,758
Skins	Canada	1	33
	Total all countries	1	33

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.9: US exports of goat leather and manufactured products of goat leather, 2001

Item	Country	Units	Value US\$
Garments	Canada	2	204
	Italy	1	3,500
	Hong Kong	1	1,500
	Total all countries	4	5,204

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.10: US exports of goat leather and manufactured products of goat leather, 2002

Item	Country	Units	Value US\$
Garments	France	4	4,801
	Italy	8	9,360
	Hong Kong	11	44,500
	United Kingdom	18	7,002
	Total all countries	41	65,663
Skins	Italy	2	1,980
	Haiti	465	860
	Hong Kong	3	3,495
	United Kingdom	32	10,891
	Netherlands	2	1,980
	France	27	1,543
	Belgium	2	743
	Total all countries	533	21,492
Trim	France	2	2
	Italy	3	21
	Total all countries	5	23

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.11: US exports of goat leather and manufactured products of goat leather, 2003

Item	Country	Units	Value US\$
Garments	Italy	3	2,378
	France	1	684
	Hong Kong	1	3,000
	Canada	2	635
	Germany	2	1,913
	Total all countries	9	8,610
Large manufactured items	France	1	282
	Total all countries	1	282
Trim	Italy	8	494
	Total all countries	8	494

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Table F.12: US exports of goat leather and manufactured products of goat leather, 2004

Item	Country	Units	Value US\$
Garments	Canada	5	1,474
	Greece	2	407
	United Kingdom	2	1,000
	US	1	479
	Total all countries	10	3,360
Large manufactured items	Greece	1	85
	Total all countries	1	85
Shoes	France	2	445
	Total all countries	2	445
Skins	Korea, South	3	2,085
	Germany	10	360
	Canada	3	680
	Italy	2	740
	Total all countries	19	3,865
Trim	Finland	2	100
	United Kingdom	30	11,053
	Canada	3	75
	Total all countries	35	11,228

Source: Chand (2005a), compiled from US Fish and Wildlife Service.

Appendix G

Table G.1: US imports of goat or kid skin, 2000–04 (by value)

HS (Harmonised Schedule) Code—4103100000: Goat or kid hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared).

HS Code—410310100: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonized Tariff Schedule of the US), not pretanned.

HS Code—4103102000: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonized Tariff Schedule of the US), vegetable pretanned but not further prepared—07/01/2002.

HS Code—4103103000: Raw hides and skins of goat or kid (not excluded by note 1c to chapter 41 of the 2004 Harmonized Tariff Schedule of the US), pretanned (other than vegetable) but not prepared—01/01/2004.

Note that before 2002 all skin categories were included under the HS Code 4103100000.

HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
		<i>In actual US dollars</i>						
4103100000	Afghanistan	0	0	0	0	0	0	na
.	Algeria	0	28,700	0	0	0	0	na
.	Argentina	390	30,750	0	0	0	0	na
.	Australia	0	0	0	0	0	0	na
.	Canada	17,572	22,298	0	0	0	0	na
.	China	7,735	31,923	0	0	0	0	na
.	Colombia	0	3,763	0	0	0	0	na
.	Cote d'Ivoire	0	6,800	0	0	0	0	na
.	Dominican Rep.	0	0	0	0	0	0	na
.	France	6,396	11,405	0	0	0	0	na
.	Germany	0	0	0	0	0	0	na
.	Ghana	5,880	1,414	0	0	0	0	na
.	Guinea	1,040	0	0	0	0	0	na
.	Hong Kong	0	817	0	0	0	0	na
.	India	0	0	0	0	0	0	na
.	Italy	2,224	14,710	0	0	0	0	na
.	Mali	127,268	129,200	0	0	0	0	na
.	Mexico	0	0	0	0	0	0	na
.	New Zealand	0	0	0	0	0	0	na

HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
.	Pakistan	160,291	158,366	0	0	0	0	na
.	Peru	8,002	48,268	0	0	0	0	na
.	Saudi Arabia	0	0	0	0	0	0	na
.	South Africa	0	0	0	0	0	0	na
.	Spain	0	0	0	0	0	0	na
.	Turkmenistan	300	0	0	0	0	0	na
.	United Kingdom	14,182	1,005	0	0	0	0	na
Subtotal— 4103100000		351,280	489,419	0	0	0	0	na
4103101000	Brazil	0	0	0	7,100	7,100	0	-100.0%
.	France	0	0	10,895	22,007	22,007	0	-100.0%
.	Ghana	0	0	264	0	0	0	na
.	Mali	0	0	2,500	8,190	8,190	0	-100.0%
.	Nigeria	0	0	294	0	0	0	na
.	Saudi Arabia	0	0	115,491	58,050	0	0	na
.	Pakistan	0	0	10,789	0	0	0	na
.	China	0	0	7,146	0	0	585	na
.	Italy	0	0	5,129	0	0	2,385	na
.	New Zealand	0	0	0	7,930	7,930	3,000	-62.2%
.	Cote d'Ivoire	0	0	9,410	7,570	6,100	12,000	96.7%
.	Canada	0	0	216,140	90,221	77,525	84,120	8.5%
Subtotal— 4103101000		0	0	378,058	201,068	128,852	102,090	-20.8%
4103102000	Canada	0	0	4,982	0	0	0	na
.	China	0	0	0	825	825	0	-100.0%
.	India	0	0	11,692	0	0	0	na
.	Pakistan	0	0	141,221	0	0	0	na
.	Peru	0	0	3,925	1,500	1,500	0	-100.0%
.	Suriname	0	0	0	431	431	0	-100.0%
.	United Kingdom	0	0	1,127	0	0	0	na

HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
Subtotal—4103102000		0	0	162,947	2,756	2,756	0	-100.0%
4103103000	Argentina	0	0	0	20,998	20,998	0	-100.0%
.	India	0	0	1,470	4,399	4,399	0	-100.0%
.	Korea	0	0	426	0	0	0	na
.	Morocco	0	0	568	0	0	0	na
.	United Kingdom	0	0	10,141	1,293	493	0	-100.0%
.	Turkey	0	0	0	319	319	0	-100.0%
.	Peru	0	0	1,030	0	0	0	na
.	Mexico	0	0	6,284	6,626	6,626	0	-100.0%
.	Canada	0	0	0	400	400	0	-100.0%
.	Cote d'Ivoire	0	0	303	0	0	0	na
.	France	0	0	850	2,801	2,801	344	-87.7%
.	Pakistan	0	0	810	9,050	9,050	1,460	-83.9%
.	Iraq	0	0	0	0	0	2,000	na
.	Italy	0	0	5,418	8,315	6,508	3,699	-43.2%
.	Ghana	0	0	610	7,780	7,780	5,640	-27.5%
Subtotal—4103103000		0	0	27,910	61,981	59,374	13,143	-77.9%
Total		351,280	489,419	568,915	265,805	190,982	115,233	-39.7%

Source: Chand (2005a), from data compiled by the US Department of Commerce, the US Treasury and the US International Trade Commission.

Table G.2: US imports of goat or kid skin, 2000–04 (by quantity)

HS Code—4103100000: Goat or kid hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared).

HS Code—410310100: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonized Tariff Schedule of the US), not pretanned.

HS Code—4103102000: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), vegetable pretanned but not further prepared—07/01/2002.

HS Code—4103103000: Raw hides and skins of goat or kid (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), pretanned (other than vegetable) but not prepared—01/01/2004.

Annual and year-to-date (YTD) data from January to October

Quantity description	HS code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
			<i>In actual units of quantity</i>						
Pieces	4103100000	Afghanistan	0	0	0	0	0	0	na
.	.	Algeria	0	4,218	0	0	0	0	na
.	.	Argentina	6	7,500	0	0	0	0	na
.	.	Australia	0	0	0	0	0	0	na
.	.	Canada	15,202	10,462	0	0	0	0	na
.	.	China	10,420	50,000	0	0	0	0	na
.	.	Colombia	0	33	0	0	0	0	na
.	.	Cote d'Ivoire	0	1,280	0	0	0	0	na
.	.	Dominican Rep.	0	0	0	0	0	0	na
.	.	France	1,030	1,800	0	0	0	0	na
.	.	Germany	0	0	0	0	0	0	na
.	.	Ghana	735	421	0	0	0	0	na
.	.	Guinea	130	0	0	0	0	0	na
.	.	Hong Kong	0	5	0	0	0	0	na
.	.	India	0	0	0	0	0	0	na
Subtotal—4103100000			27,523	75,719	0	0	0	0	na
All other:			67,733	92,697	0	0	0	0	na
.	4103101000	China	0	0	281	0	0	3	na
.	.	Nigeria	0	0	397	0	0	0	na
.	.	Pakistan	0	0	967	0	0	0	na
.	.	Italy	0	0	99	0	0	3	na
.	.	Ghana	0	0	800	0	0	0	na

Quantity description	HS code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
			<i>In actual units of quantity</i>						
.	.	Brazil	0	0	0	439	439	0	-100.0%
.	.	Cote d'Ivoire	0	0	1,882	1,210	1,000	2,000	100.0%
.	.	New Zealand	0	0	0	1,464	1,464	930	-36.5%
.	.	Mali	0	0	500	1,820	1,820	0	-100.0%
.	.	Saudi Arabia	0	0	72,000	24,000	0	0	na
.	.	France	0	0	300	24,898	24,898	0	-100.0%
.	.	Canada	0	0	35,949	30,882	26,967	32,851	21.8%
Subtotal— 4103101000			0	0	113,175	84,713	56,588	35,787	-36.8%
.	4103102000	Canada	0	0	1,731	0	0	0	na
.	.	United Kingdom	0	0	19	0	0	0	na
.	.	India	0	0	1,143	0	0	0	na
.	.	Pakistan	0	0	15,107	0	0	0	na
.	.	China	0	0	0	1	1	0	-100.0%
.	.	Suriname	0	0	0	34	34	0	-100.0%
.	.	Peru	0	0	690	300	300	0	-100.0%
Subtotal— 4103102000			0	0	18,690	335	335	0	-100.0%
.	4103103000	Cote d'Ivoire	0	0	50	0	0	0	na
.	.	Iraq	0	0	0	0	0	2	na
.	.	Korea	0	0	29	0	0	0	na
.	.	Morocco	0	0	77	0	0	0	na
.	.	Peru	0	0	282	0	0	0	na
.	.	Canada	0	0	0	1	1	0	-100.0%
.	.	France	0	0	120	8	8	12	50.0%
.	.	Turkey	0	0	0	11	11	0	-100.0%
.	.	United Kingdom	0	0	331	84	34	0	-100.0%
.	.	Pakistan	0	0	47	100	100	13	-87.0%
.	.	Italy	0	0	226	144	109	581	433.0%
.	.	Mexico	0	0	300	414	414	0	-100.0%
.	.	India	0	0	172	534	534	0	-100.0%
.	.	Ghana	0	0	61	778	778	634	-18.5%

Quantity description	HS code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
			<i>In actual units of quantity</i>						
.	.	Argentina	0	0	0	1,172	1,172	0	-100.0%
Subtotal— 4103103000			0	0	1,695	3,246	3,161	1,242	-60.7%
Subtotal pieces			27,523	75,719	133,560	88,294	60,084	37,029	-38.4%

Source: Chand (2005a), from data compiled by the US Department of Commerce, the US Treasury and the US International Trade Commission.

Table G.3: US exports of goat or kid skin, 2000–04 (by value)

HS Code—4103100000: Goat or kid hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared).

HS Code—410310100: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), not pretanned.

HS Code—4103102000: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonized Tariff Schedule of the US), vegetable pretanned but not further prepared—07/01/2002.

HS Code—4103103000: Raw hides and skins of goat or kid (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), pretanned (other than vegetable) but not prepared—01/01/2004.

Annual and year-to-date (YTD) data from January to October

HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
		<i>In actual US dollars</i>						
4103100000	Austria	0	0	0	0	0	0	na
.	Bermuda	0	0	0	0	0	0	na
.	Canada	119,243	29,040	0	0	0	0	na
.	Cayman Is	0	0	0	0	0	0	na
.	Chile	0	25,800	0	0	0	0	na
.	China	0	0	0	0	0	0	na
.	Costa Rica	0	0	0	0	0	0	na
.	Denmark	0	3,000	0	0	0	0	na
.	France	0	0	0	0	0	0	na
.	Germany	0	9,893	0	0	0	0	na
.	Greece	0	0	0	0	0	0	na
.	Guyana	0	0	0	0	0	0	na
.	Haiti	103,246	96,859	0	0	0	0	na
.	Hong Kong	100,080	42,202	0	0	0	0	na
.	Indonesia	8,950	0	0	0	0	0	na
Subtotal— 4103100000		331,519	206,794	0	0	0	0	na
All other:		562,744	796,329	0	0	0	0	na
4103101000	Brazil	0	0	22,400	0	0	0	na
.	Canada	0	0	20,536	0	0	0	na
.	Israel	0	0	93,863	0	0	0	na
.	Japan	0	0	1,198,045	0	0	0	na
.	Korea	0	0	5,348,114	0	0	0	na
.	Slovenia	0	0	13,940	0	0	0	na

HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
		<i>In actual US dollars</i>						
.	Vietnam	0	0	4,261	0	0	0	na
.	Thailand	0	0	22,295	0	0	0	na
.	Taiwan	0	0	90,650	0	0	0	na
.	Hong Kong	0	0	612,342	29,843	0	0	na
.	China	0	0	2,214,723	63,000	0	0	na
.	Haiti	0	0	0	0	0	7,500	na
.	France	0	0	9,000	0	0	8,670	na
.	Italy	0	0	735,509	171,125	148,200	33,075	-77.7%
.	Spain	0	0	234,948	59,069	59,069	100,382	69.9%
Subtotal— 4103101000		0	0	10,620,626	323,037	207,269	149,627	-27.8%
All other:		0	0	452,586	1,082,214	838,584	742,825	-11.4%
4103102000	Turkey	0	0	0	7,707	7,707	0	-100.0%
.	Mexico	0	0	0	0	0	23,442	na
Subtotal— 4103102000		0	0	0	7,707	7,707	23,442	204.2%
4103103000	Canada	0	0	9,111	42,159	42,159	0	-100.0%
.	Turkey	0	0	267,208	266,870	266,870	0	-100.0%
.	Mexico	0	0	0	5,350	5,350	0	-100.0%
.	Dominican Rep.	0	0	0	24,010	24,010	0	-100.0%
.	Hong Kong	0	0	17,427	0	0	0	na
.	Brazil	0	0	0	0	0	4,724	na
.	Italy	0	0	0	0	0	9,900	na
.	Haiti	0	0	71,690	31,496	27,231	27,475	0.9%
Subtotal— 4103103000		0	0	365,436	369,885	365,620	42,099	-88.5%
Total		894,263	1,003,123	11,438,648	1,782,843	1,419,180	957,993	-32.5%

Source: Chand (2005a), from data compiled by the US Department of Commerce, the US Treasury and the US International Trade Commission.

Table G.4: US exports of goat or kid skin, 2000–04 (by quantity)

HS Code—4103100000: Goat or kid hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared).

HS Code—410310100: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), not pretanned.

HS Code—4103102000: Raw hides and skins of goats or kids (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), vegetable pretanned but not further prepared—07/01/2002.

HS Code—4103103000: Raw hides and skins of goat or kid (not excluded by note 1c to chapter 41 of the 2004 Harmonised Tariff Schedule of the US), pretanned (other than vegetable) but not prepared—01/01/2004.

Annual and year-to-date (YTD) data from January to October

Quantity description	HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
Pieces	4103100000	Austria	0	0	0	0	0	0	na
.	.	Bermuda	0	0	0	0	0	0	na
.	.	Canada	31,813	14,933	0	0	0	0	na
.	.	Cayman Is	0	0	0	0	0	0	na
.	.	Chile	0	6,000	0	0	0	0	na
.	.	China	0	0	0	0	0	0	na
.	.	Costa Rica	0	0	0	0	0	0	na
.	.	Denmark	0	3,394	0	0	0	0	na
.	.	France	0	0	0	0	0	0	na
.	.	Germany	0	11,192	0	0	0	0	na
.	.	Greece	0	0	0	0	0	0	na
.	.	Guyana	0	0	0	0	0	0	na
.	.	Haiti	66,366	52,040	0	0	0	0	na
.	.	Hong Kong	29,400	18,148	0	0	0	0	na
.	.	Indonesia	427	0	0	0	0	0	na
Subtotal—4103100000			128,006	105,707	0	0	0	0	na
All other:			443,943	500,618	0	0	0	0	na
.	4103101000	Brazil	0	0	5,600	0	0	0	na
.	.	Canada	0	0	3,200	0	0	0	na
.	.	Israel	0	0	4,397	0	0	0	na
.	.	Japan	0	0	18,970	0	0	0	na
.	.	Korea	0	0	91,760	0	0	0	na

Quantity description	HS Code	Country	2000	2001	2002	2003	2003 YTD	2004 YTD	Percentage change YTD 2003 to YTD 2004
			<i>In actual units of quantity</i>						
.	.	Slovenia	0	0	465	0	0	0	na
.	.	Vietnam	0	0	143	0	0	0	na
.	.	Thailand	0	0	343	0	0	0	na
.	.	Taiwan	0	0	2,170	0	0	0	na
.	.	Hong Kong	0	0	11,372	657	0	0	na
.	.	China	0	0	46,440	2,101	0	0	na
.	.	Haiti	0	0	0	0	0	251	na
.	.	France	0	0	301	0	0	290	na
.	.	Italy	0	0	30,832	5,789	4,943	1,103	-77.7%
.	.	Spain	0	0	20,216	1,717	1,717	3,130	82.3%
Subtotal— 4103101000			0	0	236,209	10,264	6,660	4,774	-28.3%
All other:			0	0	38,283	68,615	42,159	61,269	45.3%
.	4103102000	Turkey	0	0	0	257	257	0	-100.0%
.	.	Mexico	0	0	0	0	0	782	na
Subtotal— 4103102000			0	0	0	257	257	782	204.3%
.	4103103000	Canada	0	0	305	1,407	1,407	0	-100.0%
.	.	Turkey	0	0	38,977	31,726	31,726	0	-100.0%
.	.	Mexico	0	0	0	179	179	0	-100.0%
.	.	Dominican Rep.	0	0	0	801	801	0	-100.0%
.	.	Hong Kong	0	0	2,658	0	0	0	na
.	.	Brazil	0	0	0	0	0	158	na
.	.	Italy	0	0	0	0	0	300	na
.	.	Haiti	0	0	2,395	1,055	912	2,167	137.6%
Subtotal— 4103103000			0	0	44,335	35,168	35,025	2,625	-92.5%
Subtotal pieces			128,006	105,707	280,544	45,689	41,942	8,181	-80.5%

Source: Chand (2005a), from data compiled by the US Department of Commerce, the US Treasury and the US International Trade Commission.

Appendix H

Communication plan

1 PRODUCT

2 COMMUNICATION OBJECTIVE

3 TARGET AUDIENCES

4 KEY MESSAGES

