Division of Marketing
Agricultural Development and Diversification (ADD) Program

1995 Grant Final Report

Grant Number 10083

Grant Title Emu Product Market Development

Amount Awarded $29,820.00

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ADD Grant Project Final Report

EMU PRODUCT MARKET DEVELOPMENT

Contract Number: 100083

Project Duration: 7/1/95 to 12/1/97

Project Manager: Jayne M. Wick

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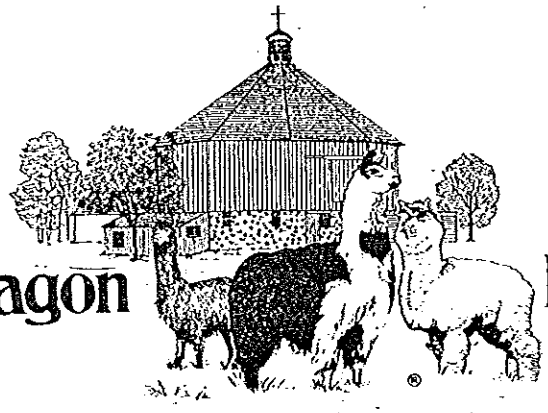

Octagon Farms

December 1, 1997

Mr. Bud Sholts
DATCP Division of Marketing
P.O. Box 8911
Madison, WI 53708-8911

Dear Mr. Sholts:

It is with great pleasure that I submit to you the Final Report for our ADD Grant Project. The project particulars are listed below.

1995 ADD Grant Project Final Report

Contract #10083, Emu Product Market Development
Project Dates: July 1, 1995 to December 1, 1997
Amount of Funding Awarded: $29,820
Principal Contact Person: Jayne M. Wick, Project Manager
Address: Octagon Farms, 364 Lake Shore Road, Grafton, WI 53024
Telephone: 414/377-8420 (voice) or 414/377-8450 (fax)
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We have endeavored to provide the maximum amount of information from this project with the funding available to us. The project has favorable results, as witnessed by the formation of a Wisconsin emu and ostrich processing company earlier this year. That company, Snowy Ridge Specialty Meats, LLC, is confident of the future of alternative red meat livestock being produced in Midwest and has already had a significant impact on the emu industry here in Wisconsin.

Thank you for the ever-present support provided by you and your staff throughout this project. We look forward to the opportunity to discuss any of the enclosed information, findings and opinions with DATCP staff and any other interested parties.

If you have any questions on any of the materials we have provided as a result of this project, please don't hesitate to contact me at the numbers listed herein.

Best regards,

Jayne M. Wick
Project Manager

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I. Executive Summary

The primary goal of this study was to develop and provide information necessary for capital-intensive investment in grow out and slaughter facilities in Wisconsin, as well as to ascertain the feasibility of marketing products from Wisconsin-raised emu. The objectives of this study were entirely in support of developing a commercial emu industry in Wisconsin.

It was initially believed, and hereby supported, that the commercial market for emu products can be developed at a faster pace with market specific information than without this information. Concurrently, education was an important component of the project, serving to expose various market segments to the qualities and attributes of emu products, and evaluate acceptance in each market segment.

Data was acquired from a number of different sources: Food Shows, Farm Shows, Personal Interviews, Sales Calls, and Independent Product Testing. Data collected from the various sources was analyzed for patterns. The patterns that were identified from the various data sources were compared to industry trends and areas of growth.

The bottom line question from this project was whether the viability exists to develop a commercial emu market in Wisconsin based on current and anticipated market demand for emu products. It did not look at the economics of raising emu, and that factor alone has a great deal of influence on the industry's viability.

The findings of this project are in support of commercial emu market development in Wisconsin. At the same time, the market is still so embryonic that a massive investment in market and product development has its share of risk. To offset that risk, it is recommended that market and product development be done with complementary industries, such as other alternative red meat livestock.

National and international acceptance of emu products is growing, yet years of effort to build a market can be destroyed in a matter on weeks if good animal husbandry practices are shortcutted or ignored completely. These practices include raising the animals naturally, without the use of growth stimulants or prophylactic antibiotics.

The findings support prioritization of products in the following order: Meat, Oil, Leather. This grant project provided sufficient information to justify continuation of emu farming at Octagon Farms. We believe it will provide similar justification to other Wisconsin emu producers.

II. Project Objectives

The primary goal of this study was to develop and provide information necessary for capital-intensive investment in grow out and slaughter facilities in Wisconsin, as well as to ascertain the feasibility of marketing products from Wisconsin-raised emu. The objectives of this study were entirely in support of developing a commercial emu industry in Wisconsin.

In order to gather the type of information necessary to support a commercial market, the project set out to research buying criteria and preferences in various market segments (i.e. grocer versus foodservice) and geographic areas (i.e. New York City versus Des Moines).

It was initially believed, and hereby supported, that the commercial market for emu products can be developed at a faster pace with market specific information than without the needed information. Concurrently, education was an important component of the project, serving to expose various market segments to the qualities and attributes of emu products, and evaluate acceptance in each market segment.

Specifically, this project was intended to meet every single objective of the ADD grant program. The eight (8) ADD Grant Program Objectives, their Expected Results as outlined in our grant proposal dated March 15, 1995, and their Actual Results as a result of this project are all outlined in the matrix on the following page.

ADD GRANT OBJECTIVE	EXPECTED PROJECT RESULTS	ACTUAL PROJECT RESULTS
1. New or Alternative Agricultural Products	This project will identify buying criteria for emu end products. The result will be market research that supports the development of products best suited to the marketplace's needs and wants.	This project identified appropriate markets for emu meat and oil products, and assumptions were made regarding appropriate markets for emu leather products.
2. Creation of Jobs in the Food and Agricultural Industry	As end markets are determined and production facilities are developed, jobs will be created in such areas as slaughter, processing, packing, manufacturing, and distribution of emu products.	As of this report, 3+ jobs have been created in support of emu slaughter, processing, packing, and manufacturing of emu products as a result of the formation of Snowy Ridge Specialty Meats in 1997. Distribution of products is primarily being supported by emu producers (farmers) and existing distributors.
3. Diversification and Expansion of Production, Processing and Distribution of Agricultural Products or Livestock	In some cases, new slaughter and processing facilities will arise to handle emu exclusively; in other cases, existing slaughter and processing facilities will diversify and expand to accommodate emu livestock. In either case, this objective will be met with distribution of emu products.	A new USDA slaughter and processing facility was established for the processing of emu and ostrich during 1997 (Snowy Ridge Specialty Meats) in Elroy, Wisconsin. In addition, existing Wisconsin state-inspected slaughter and processing facilities have expanded to include slaughter of emu livestock.
4. Product Market Development and Expansion, including Development of Value-Added Agricultural Products	The gist of this project is to develop a market for emu, prove its viability, identify the products that will be best suited to specific regions and market segments, and provide high-level specs for the development of emu end products.	The project proves that markets exist for emu products. The viability of the industry is yet to be completely proven. This author believes a great deal of work still needs to be done in reducing the cost of raising the birds to improve the economic scenario for the breeder/grower.
5. New Capital Investment and/or Expansion in the Agricultural Industry	If the emu end market proves viable, the infrastructure necessary to support slaughter, processing and manufacturing in Wisconsin will require new capital investment and expansion.	With the creation of Snowy Ridge Specialty Meats, a Wisconsin USDA processor of emu and ostrich that opened its doors in 1997, new capital investment has already been witnessed. This company is already making plans for expansion in 1998.
6. Commercial Application of New Technologies or Practices related to Agricultural Products	This project is intended to develop high-level specifications that can be used in tanning emu hide here in Wisconsin.	This project was able to identify and document high-level specifications that can be used in tanning emu hide here in Wisconsin; however, an appropriate Wisconsin company was not identified for processing and manufacturing of emu hides.
7. Improvement in the Competitive Position of Wisconsin's Agricultural Industry	Wisconsin has the potential to be a leader in the emu industry. With the support of the Wisconsin Department of Agriculture and the farming community, Wisconsin has the opportunity to do it right, and right from the start.	Wisconsin farmers have, for the most part, been steadfast in their confidence in the emu industry. While there has been a decline in both emu farmers and the number of emu in Wisconsin since this grant proposal was written in 1995, this author is encouraged by the efforts taken by Wisconsin farmers to cull poor breeding stock, improve feed and labor efficiencies, and "hang tough" as the industry develops.
8. Efficient Use of Farmland and Other Agricultural Resources	Emu as an alternative livestock are efficient in both their use of farmland, feed, vet expense, and labor. If this project proves the viability of the emu end market, this objective will be met.	There have been no discoveries contrary to the stated objective and attributes of emu farming. With increased pressure for U.S. agriculture to be sustainable, emu farming is well on track to support this objective.

III. Study Methodology and Evaluation Criteria

Study Methodology

Data was acquired from a number of different sources: Food Shows, Farm Shows, Personal Interviews, Sales Calls, and Independent Product Testing.

The project supported data collection from food shows at the regional, national and international level.

The regional food show supported by this project was the Wisconsin Restaurant Association (WRA) in February, 1996. This show caters to the foodservice industry in and around Wisconsin. We were fortunate to be invited to participate in this show in three different capacities: Vendor, Competition, and Showcase.

- ✓ As a vendor, the project team provided show attendees with prime meat product samples, freshly prepared, and invited feedback on the product. In conjuction with this aspect of the show, information was provided on the meat and its availability.

- ✓ As a participant in the Competition, meat was provided to a panel of chefs that were required to prepare a meal from the "mystery box" of ingredients, of which emu meat was a part. This provided exposure via the competition results, chef feedback, and media coverage.

- ✓ Finally, as a speaker in the Showcase, a group of approximately 50 attendees learned of the origin, attributes, and cooking particulars of emu meat with an opportunity to see and taste the product firsthand.

The national food show which was supported by this project was the National Restaurant Association (NRA) show in May, 1996, held in Chicago, Illinois. The attendees at this show represented a much broader cross section of the food industry than was found at the regional level. Again, prime meat products were prepared and presented to attendees. Support was received from Alto-Shaam, a Wisconsin foodservice equipment manufacturer, in the use of equipment and staff for preparation of the meat. Again, excellent media exposure was a result of this show, with an article published in the Wall Street Journal and a national foodservice periodical about our presence at the show.

The international food show that we participated in was the ANUGA '97 food show in Cologne, Germany, in October, 1997. An even broader cross section of the food industry was seen here than at the national level, as the scale of the show was much larger than the NRA show in Chicago. At this level, more time was spent researching country specific food preferences and competition than at the national or regional level. Product and literature was available, and interviews were conducted

with a select number of attendees that expressed interest in the alternative red meats.

Regional farm shows included the Wisconsin State Fair and Wisconsin Farm Progress Days in years 1995, 1996 and 1997. They provided the opportunity to educate the public and increase public awareness of the attributes of emu products. Product literature, personal visits, surveys and product sampling were all part of farm show participation. Specific farm shows that were participated in included Wisconsin Farm Progress Days in 1995, 1996, as well as Wisconsin State Fair in 1995, 1996 and 1997.

Personal interviews were conducted with individuals currently involved with the emu industry, those involved with ancillary services that could eventually support the emu industry, and with potential users of emu products.

Sales calls to foodservice executives (owners, managers, and chefs) served as another vehicle for data collection.

Independent product testing was effectively utilized to identify variability in processing emu oil from fat. Fat samples from the same group of Wisconsin-raised emu were sent to three different nationally-recognized emu oil processors. Documentation that accompanied the samples included a protocol of how the fat should be handled, how the oil should be processed, and how the results will be analyzed. The processed oil that was received from these three processors was then sent to an independent testing laboratory, experienced in testing emu oil. The identity of the three processors was not disclosed to the testing lab. The results of this testing are included in the Exhibits and indicate that, in fact, great variability exists in processing emu oil and that, without testing, inferior oil can go undetected.

Evaluation Criteria

Data collected from the various sources was analyzed for patterns. The patterns that were identified from the various data sources were compared to industry trends and areas of growth.

Other criteria was not as objective, but rather, subjective. For example, the general increase in consumer awareness from one year to the next at the same farm show (i.e. State Fair, Farm Progress Days) was recognized, but difficult to assess. Booth personnel were asked to indicate the general awareness of the public as they approached the booth; since this was not a measured criteria, it is considered subjective, but nonetheless, valuable.

IV. Findings

Following are the findings from our data collection, analysis and research.

Market Acceptance, Preferences and Buying Criteria

The market acceptance for emu meat at the foodservice level is better at the higher end of the market, e.g. white tablecloth restaurants. This is because the chef in this type of establishment is less concerned about offering something new to their customers than a mid-range or lower end restaurant. The preferences of the white tablecloth chefs are for primal meat cuts (whole muscle cuts of good tenderness and quality. Buying criteria at this level includes flavor, tenderness, price, freshness, consistency, availability and service.

The market acceptance of emu meat at a consumer level is high for both primal meat cuts and processed meats, such as sausages, once the consumer is educated on the product and allowed to sample the product. There is a tendency for the average consumer to "shy away" from trying the meat because of the concept of a "red meat bird". This is further complicated by the fact that the primal cuts are best served medium rare, and the consumer is taught that meat from fowl should always be prepared well done. This is why education and awareness are so important.

The preferences of the consumer are to try the product at a better restaurant, especially the primal cuts, primarily because of the need to prepare it correctly and the price. For home use, prepared products, such as pre-cooked brats, sausages, links, and burgers are more preferred; the prices are lower and the preparation is easier. Buying criteria at the retail (consumer) level includes flavor, price, ease of preparation, nutritional composition, and availability of recipes.

Market acceptance for emu oil at a manufacturing level (cosmetic and pharmaceutical companies) is low, primarily because of the absence of processing standards for the oil. The liability issues that surround the use of products for pharmaceutical use require that standards be in place to assure such things as purity and stableness. Since the project proposal was written, great strides have been made in the development of oil standards in conjunction with the American Oil Chemists Society (AOCS).

Today, there are International Emu Oil Processing Guidelines for oil renderers and processors to utilize in their manufacturing process. As further research goes into this effort, more and more manufacturers are becoming interested in the properties of emu oil.

Market acceptance for emu oil and products that incorporate emu oil at a consumer level is high, once the consumer is educated on the product and allowed the

opportunity to sample the product. This is a similar profile to the market acceptance of meat at a consumer level. The preferences are for labeled oil and oil products with information on its uses. More consumers appreciate the value of emu oil as an odorless inflammatory than for any other use, probably because of the aging of the consumer. Buying criteria includes function, packaging, accompanying information, odor (more specifically, lack of odor), and price.

Market acceptance for emu leather and products at a manufacturing level (tanners and product manufacturers) is low, principally because of the lack of consistency of the hides, as well as the limited availability and high price. These factors, together, are pushing the raw "green" hides to Mexico for tanning where the process can be completed at a fraction of the cost of U.S. tanning and with higher quality. The downside is the difficulty of doing business with Mexican tanners and the risk that hides may not even be returned when tanned, or purchased by the Mexican business.

In terms of manufacturing product from emu, the inconsistency and limited availability force the products to be hand-made, increasing the cost of the product and reducing the number of manufacturers that can effectively create product from the hides. Other problems include damage to the hides from bird injuries, processing errors, inadequate curing, poor tanning, and inappropriate storage. Buying preferences are for consistent hides, first and foremost. Buying criteria at a manufacturing level includes quality, consistency, availability and price.

Market acceptance of emu leather goods at the consumer level is high. The beauty of professionally manufactured product that accentuate the attributes of emu body and leg skin are definitely appreciated by most consumers. The preferences are for personal items, such as wallets, key fobs, business card cases, portfolios, and the like. The main buying criteria at a consumer level includes appearance, composition and price.

Demand for Product by Region and Market Segments

Meat products are currently more in demand in the foodservice industry than in the consumer market because of the large amount of media attention that has provided education to chefs and foodservice executives on alternative red meats. The presence of vendors offering these meats at food shows and at the restaurant has provided a much faster upstart to this segment of the industry than has been afforded at the consumer level.

Since the number of upscale, white tablecloth restaurants is greater in larger metropolitan cities, it is no surprise that these cities have a greater demand for emu and similar alternative red meat products than in smaller cities across the United States.

Within the consumer market, the segments that present the most opportunity in the short term are natural food oriented and health conscious consumers.

Oil products are in demand wherever they are sold and promoted, regardless of the size of the community. The market segments that present the most opportunity are senior citizens, athletes, and homeopathy consumers.

Leather products are not in great demand in any region or market segment at this time. However, we see the greatest potential in the large metropolitan cities in specialty leather goods stores, due to the limited availability of product and the high price.

Market Niches Most Favorable to Product Development

In the meat arena, it is this author's belief from the data collected and industry research that the greatest potential for profitability is in value-added product development, targeted at health-conscious, nutrition oriented consumers. This market niche is growing at a pace at least 10 times as fast as the overall food industry.

In the oil arena, the natural therapy market being served by health food stores and practitioners of homeopathic medicine is the market niche most favorable to product development.

And finally, in the leather market, the upscale boutique in the major metropolitan, fashion conscious cities is the market we recommend for product development and market development.

Ordering Potential for Products by Category and Type

The project was unable to provide quantifiable data to support this section.

Pricing Indicators by Product Category and Type

In the foodservice industry, the top primal cuts of meat are generally able to be sold to the white tablecloth restaurants for $9.99 per pound and up. This presumes that the primal cuts are fully trimmed, individually vacuum packed, delivered frozen, and have received USDA approval. The selling points at this level are price/performance (a smaller portion size is needed than for beef, pork, or veal because of the meat's density), the quality (fully trimmed means the chef is more productive and has less waste), and flavor (providing the restaurant with a new, distinctive product to offer to its customers that has excellent flavor).

In the retail market, products should be packaged such that the price per package is under $5.00 to encourage purchase by the price conscious consumer that is seeking nutritional food products for the family. It is recommended that raw products, such as primal cuts of steak and bulk ground not be sold in retail for two reasons: (1) lack of consumer familiarity will prevent turnover of product in an appropriate timeframe, thus contributing to excessive waste from spoilage; and (2) adequate preparation of the meat is necessary to fully enjoy the meat and inadequate preparation will contribute to consumer dissatisfaction.

Pricing for emu oil products should be conscious of consumer price points. Most consumers, it is believed, are less willing to pay over $10 for an unknown, unproven product. Therefore, products should be sized to allow the consumer to try the product with a minimal investment; if the consumer likes the product, a larger, more economical package can be made available at a higher price point.

Emu leather products, since they are very unique, must be priced based on what the market will bear. This price will vary from city to city, and retailer to retailer. This project was unable to provide any further information on pricing of emu leather products.

V. Conclusions and Recommendations

Viability of a Commercial Emu Market in Wisconsin

The bottom line question from this project was whether the viability exists to develop a commercial emu market in Wisconsin based on current and anticipated market demand for emu products. It did not look at the economics of raising emu, and that factor alone has a great deal of influence on the industry's viability.

The findings of this project are in support of commercial emu market development in Wisconsin. At the same time, the market is still so embryonic that a massive investment in market and product development has its share of risk. To offset that risk, it is recommended that market and product development be done with complementary industries, such as other alternative red meat livestock.

National and international acceptance of emu products is growing, yet years of effort to build a market can be destroyed in a matter on weeks if good animal husbandry practices are shortcutted or ignored completely. These practices include raising the animals naturally, without the use of growth stimulants or prophylactic antibiotics.

Therefore, it is the recommendation of this author that processors develop guidelines for producers, establish buying criteria for the livestock, and provide random testing to check for use of drugs. This should be done in conjunction with the USDA, if possible, so that a standard can be established for processors and producers across the United States. In absence of a national standard, however, Wisconsin processors and producers should take the lead in the development of these standards and guidelines.

Packaging and Labeling Recommendations for Meat

As indicated Section IV of this report, the demand for meat products is driven by several factors or buying criteria depending on the market segment. The research and the data analysis from this project indicates that (1) the market for emu meat products exists at several levels, (2) product development should be done based on the buying criteria of each market segment, and (3) packaging should be geared to the specific buying criteria of each market segment.

For foodservice, meat should be USDA inspected and packaged chef-ready. This means trimmed of all silverskin and connective tissue, and in the case of the drum cuts, free of tendons. Trim meat ground for foodservice should be free of sinew, bone fragments, and excessive silverskin. All meat for foodservice, without exception, should be vacuum packaged for maximum shelf life. Blast freezing is recommended unless a relationship with a restaurant calls for regular delivery of fresh product. Labeling should be specific to the individual muscle cut or

composition of the meat and include the USDA authorized "bug" when processed under USDA inspection.

For retail sale, meat should be packaged consumer-ready. This implies that the product is either ready to eat or ready to heat. Since the consumer market is more likely to purchase emu for its nutritional make-up, nutritional information should be provided in label form on each package. In addition, a complete product label including the product name, ingredients, storage requirements and processing facility information should be on each package, as approved by State or Federal authorities, depending on whether the plant is state or federally inspected. Finally, safe handling instructions should be located somewhere on all products that require consumer preparation.

Retail products should be packaged with price in mind. A price point of $5 or less is more likely to encourage a consumer to purchase an unknown, yet attractively packaged meat product than one priced over $5. Therefore, products and packages should be geared to this price point.

For example, ground ¼ pound emu patties can be sold two per package at retail for under $5 per package. Nutritional snack sticks can be packaged individually or in packs of four for under $5 per package. Liver sausage can be packaged in attractive 10 oz. sticks for under $5 per package. Other products that fall into this category are summer sausage, brats, breakfast links, and ring bologna. These are products the consumer is already familiar with, but if prepared appropriately, have the added value of high nutritional content. Packaging needs to present this information at a retail level to both educate and encourage consumer purchase for the extra price.

Packaging and Labeling Recommendations for Meat

Emu oil is a natural product, and as such, does not require FDA approval to market it at retail or wholesale levels. Common sense, however, must prevail when packaging and labeling a product that is going to be used by the public. Sanitary containers should be utilized and packaging should be done in a sanitary environment. Product liability insurance should be carried by the reseller if the product is being repackaged and relabeled prior to sale. Repackaging of products destined for internal use should be avoided; this should be done by a licensed pharmaceutical company and not by private individuals. Labeling should clearly include the following information: Product Name, Product Weight, Batch Information, Vendor/Distributor Name and Phone Number.

Product Design and Manufacturing Strategies for Emu Hide

There is a natural beauty in a quality emu hide as demonstrated in the samples of tanned body and leg skins included with this final report. However, there are several

factors that impact the viability of the hide market, not the least of which is availability of quality raw emu hides.

Even though this project was focused on identifying potential markets for products, the author is compelled to address findings related to the feasibility of this market. Following is a list of husbandry and processing issues that will have a definite impact on the viability of the hide market.

1. If the emu are raised with their toenails intact, there is a likely chance that the hide will be scarred from bird injuries, either attributable to fighting or fencing.
2. If the bird is too young, the hide will not be tough enough for removal without injury.
3. The processor must take care not to cut the hide during removal from the carcass during slaughter.
4. Inadequate curing and storage of the "green" hide can damage the skin beyond repair.
5. Inappropriate tanning equipment, chemicals and processes will provide results of insufficient quality for the market.
6. The processing timeframe to get from "green" hide to finished product is estimated from four to six months. During this timeframe, considerable monies are tied up for working capital, adding to the final cost of the product.

Note: It appears that the leg skins are more inclined to withstand damage from injury, processing, curing or tanning errors. In the case of the body skins, it appears that the appropriate age to process a bird for meat and fat is achieved sooner than the appropriate age to process a bird for its hide.

Having said this, any product design undertaken with emu hide should be targeted to the upscale consumer, should utilize emu as a complement to other leathers in the manufacture of products, should avoid the placement of emu hide in areas of high wear and tear, and should be priced taking the value of money into consideration.

Sales and Marketing Priorities and Strategies

The findings support prioritization of products in the following order: Meat, Oil, Leather. The strategies for each of the product lines was discussed in the previous sections of this report.

Results and Impacts

This grant project provided sufficient information to justify continuation of emu farming at Octagon Farms. We believe it will provide similar justification to other Wisconsin emu producers.

With the creation and anticipated expansion of Snowy Ridge Specialty Meats, a USDA emu processor located in Wisconsin, the market for emu meat and other products is expected to grow, benefiting Wisconsin emu farmers and Wisconsin agriculture.

VI. Exhibits

Exhibit A. Emu Meat Comparative Nutritional Information

Exhibit B. Emu Meat Preparation Guidelines and Recipes

Exhibit C. High-level Specifications for Emu Leather & Hide Samples

Exhibit D. Emu Oil Processing Test Results

Exhibit E. Consumer Education Materials on Products

Exhibit F. Agricultural Education Materials on the Industry

Exhibit G. ADD Grant Project Economic Impact Survey

Nutritional Comparison of Meats

Serving Size: 100 Grams (3.5 oz)

Analysis	Emu Thigh (Raw)	Ostrich Thigh (Raw)	Pork Lean Loin (Broiled)	Turkey Flesh Only (Roasted)	Beef Lean Steak (Broiled)	Chicken Flesh Only (Roasted)	Venison Lean Steak (Raw)
Protein (grams)	20	22	24	25	23	27	23
Calories	93	97	275	135	240	140	100
Cholesterol (mg)	49.3	58.0	84.0	59.0	77.0	73.0	64.8
Fat (grams)	1.5	2.0	19.0	3.0	15.0	3.0	0.5
Saturated Fat (grams)	0.5		7.0	0.9	6.4	0.9	
Monounsaturated Fat (grams)	0.6		8.8	0.5	6.9	1.1	
Polyunsaturated Fat (grams)	0.3		2.2	0.7	0.6	0.7	

Sources: Emu: Silliker Laboratories of Texas, Inc.
Ostrich: AMSI Quality Testing Laboratory Rept #C80-0100
Pork, Turkey, Beef & Chicken: USDA "Homes and Garden Bulletin #72"
Venison: Texas A & M University

For more information, please call Octagon Farms, 414/377-8420 (voice) or 414/377-8450 (fax)

Nutritional Comparison of Meats

Analysis	Emu[1]	Ostrich[1]	Pork[1]	Rabbit[2]	Beef[1]	Deer[1]	Poultry[1]	Goat[2]	Fish[1]
Water (%)	73.6	75.4	70	74.5	75	74.5-75.1	73-75	75.8	82
Fat (%)	1.7-4.5	1.2	25	2.3	2-14.7	3.3	1-3	2.3	1
Protein (%)	21.2	21.7	18-28	21.8	18-22	20.6	23-24	20.6	16
Collagen	1.1-2.0	0.37			0.5	1.24			
Magnesium (mg/100 g)	28.7-30.9		17-25	29	20	29	20-27		25-50
Phosphorus (mg/100 g)	480-490			226		249		180	240-500
Potassium (mg/100 g)	313.5-317			378		330		385	250-400
Cholesterol (mg/100 g)	39-48	37.8	80-105	81	63		64-90	57	
Calcium (mg/100 g)	4.5-7.7		10	12	10	7	8-17	13	20-40
Energy (KJ/100 g)	471-531	438	1335.8	477	657.6	494	478.6	455	397.4
Calories (Kcal/100 g)	113-127	104.7	319.3	114	157.2	108	114.4	109	70-120

Sources: [1]ADRIA Quimper (France)
[2]USDA Composition

For more information, please call Octagon Farms, 414/377-8420 (voice) or 414/377-8450 (fax)

Gourmet Emu Meat

Emu meat is a beautifully textured, richly flavored red meat from the world's second largest bird. This superb meat boasts the added advantage of being low in fat, calories and cholesterol while high in protein.

The emu has been raised for millions of years in the outback of Australia by the aborigines, similar to the way American Indians raised buffalo. Today the emu is being raised in the United States for its meat, leather and oil.

A Flavorful, Heart-Healthy Meat

Research shows that emu meat is 97% fat free, higher in protein, vitamin C and iron than beef, and lower in cholesterol than chicken. Since emu can be raised naturally, emu meat contains no chemical additives or preservatives. *Emu meat gives red meat lovers what they want, and health conscious consumers what they need.*

Meat Cuts

The emu produces tender primal cuts, specifically, the foresaddle, hindsaddle and drum, which comprise a series of small muscles from the thigh, back and leg. There is no breast or forequarter on an emu. The boneless primal cuts are vacuum packed, affording them a 60+ day refrigeration life. The boneless primal cuts are available in individual, 1-2 pound chef-ready packages, or in 4-5 pound quarters (thigh or drum).

Preparation

Gourmet emu meat is wonderful to work with. The superb texture and leanness requires that emu meat not be overcooked; it is best when done to medium rare, or when juices begin to rise. If it toughens from overcooking, simply slow cook it as you would beef to return its tenderness.

Serving Suggestions

The filet is a top prime cut from the hindsaddle of the emu; it is considered one of the finest cuts. Consider lightly marinading the filet and grilling it for the best flavor (a 5 oz. filet is sufficient for an entree). Slice diagonally and serve on a bed of flavored pasta with fresh, steamed pea pods. Emu meat is very tightly textured, so be sure to show it off when presenting it on the plate.

Get ready for a distinctly different taste and texture from the Drum. An Emu Drum Roast averages 4 to 5 pounds and is wonderful smoked or roasted. It is available fresh or smoked, bone-in or boneless. When sectioned out, the drum can effecively be used in recipes calling for emu prime, such as Emu Bourguignon, for a rich and tender flavor. Use the Alto-Shaam with this cut for extra flavor, moisture and tenderness.

Ground Emu makes the best burgers. Besides tasting great, ground emu retains moisture without shrinking. Try this heart-healthy meat in any of your favorite recipes requesting ground and watch your guests enjoy! Ground emu is the secret ingredient in our Gourmet Emu Pesto Meat Loaf with fresh tomato basil sauce...moist and lean with a flavor to die for!

A variety of excellent low-fat processed emu products are available, including jerky, hot sticks, breakfast links and summer sausage. Make emu part of your daily diet for a healthier lifestyle!

To order fresh emu or emu meat products, please call or write:

Octagon Farms, Inc.

364 Lake Shore Road
Grafton, WI 53024

414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Meat Preparation Guide

Emu meat is beautifully textured, richly flavored red meat from the world's second largest bird, the emu. This superb meat boasts the added advantage of being low in fat, calories and cholesterol while high in protein.

The emu has been raised for millions of years in the outback of Australia by the aborigines, similar to the way American Indians raised buffalo. Today the emu is being raised in the United States with great care and nutrition.

Flavorful, Heart-Healthy Meats

Research shows that emu meat is 97% fat free, higher in protein, vitamin C and iron than beef, and lower in cholesterol than chicken. These birds are raised naturally, so their meat contains no chemical additives or preservatives. *Emu meat gives red meat lovers what they want, and health conscious consumers what they need.*

Meat Cuts USDA- or State-Inspected

The emu produces tender primal cuts; the trim is used for ground meat. Fully 100% of the meat from the emu is a rich red meat. All of our meat is inspected by state or federal authorities to guarantee you safety and wholesome goodness.

Storage & Preparation

Emu meat has a long fresh shelf life (up to 60 days in cold refrigeration), when kept in its airtight packaging. The superb texture and leanness requires that the meat not be overcooked; it is best when done to medium rare, or when juices begin to rise. An internal temperature of 130°F is most desirable. Ground meat can be served medium rare or well done.

Serving Suggestions

Emu filets can be grilled (best) or sauteed. Consider lightly drenching the filet in olive oil and balsamic vinegar before grilling for a wonderful, fresh flavor. A 4 to 5 oz. serving per person is sufficient for a main dish.

There are two distinct offerings of filets. Prime cuts are the top two cuts from the emu, while the select cuts are from the second best two cuts.

Emu meat strips are prime cuts of emu, packaged in strips or chunks for use in your favorite recipe. Stroganoff, stews, and fajitas all taste much better when you use emu.

Ground emu makes the best burgers. Besides tasting great, our pre-formed patties are very moist and don't shrink. Ground emu also works well in your favorite recipe, with none of the undesirable fat your body doesn't need.

Don't leave the house without taking along a handful of healthful and flavorful emu snack sticks. These wonderful items boast great flavor without any of that greasiness you get in traditional snack sticks.

Emu liver, heart and soup bone are excellent for pate, soups, and stews, besides being good for you.

Farm Raised, Wholesome, Fresh

Octagon Farms
364 Lake Shore Road
Grafton, Wisconsin 53024

414/377-8420 (voice)
414/377-8450 (fax)
octagonfrm@aol.com (e-mail)

Gourmet Emu Pesto Meat Loaf

2 lbs. ground gourmet emu
1-1/2 t. salt
1 t. seasoned pepper
1 T. olive oil
2 T. finely chopped garlic
1 c. fine bread crumbs
1/3 c. pine nuts, toasted
1 c. finely chopped, loosely packed fresh basil
1/2 c. finely chopped fresh parsley
1/2 c. (3 oz.) freshly grated Parmesan cheese
1 egg, lightly beaten

Toast pine nuts for 2 minutes in 300° F. oven. Combine salt, pepper, crumbs, pine nuts, basil, parsley, and cheese. Add to meat. Heat oil in a small skillet; add garlic and cook, stirring, until soft. Add to meat. Lightly beat egg and add to meat. Blend all ingredients well. Put the mixture in a 6-cup loaf pan. Pack down and smooth top. Bake at 350° F. for about 1 1/4 hour or until internal temp. registers 165° F. on a meat thermometer. Remove from oven and let stand for about 15 minutes while you prepare the sauce.

Fresh Tomato Sauce:

2 T. olive oil
1/2 c. finely chopped onion
1 t. finely minced garlic
2 c. peeled, chopped fresh tomatoes
1 bay leaf
1/2 t. dried thyme
salt to taste
freshly ground pepper to taste
1 T. unsalted butter
1/4 c. chopped fresh basil

Heat oil in saucepan; add onion and garlic and cook, stirring until soft. Add tomatoes, bay leaf, thyme, salt and petter and bring to a boil. Cover, reduce heat and simmer for about 10 minutes. Remove and discard bay leaf. Stir in butter and basil. Serve tomato sauce with meat loaf.

Serves 6-8.

This meat loaf recipe is an excellent way to turn ground emu into a gourmet meal, excellent for a dinner party. The fresh meat, herbs and tomatoes blend well together. If you have a convection oven, bake the meat loaf at 325° F. instead of 350° F. as instructed above.

You will find very little residual fat after baking the meat loaf, one of the reasons emu meat is so healthy! If you'd like, you may make this recipe 1 day ahead, refrigerate, and re-heat for 30 minutes at 250° F.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Stroganoff

2 lbs. gourmet emu (round or drum)
2 T. seasoned flour
1 c. butter
1 chopped garlic clove
1 chopped onion
1 can beef broth
1 T. parsley flakes
1 T. worchestershire sauce
1 c. button mushrooms
1 c. sour cream
1 c. plain yogurt
3 T. seeded brown mustard
1 pkg. wide egg noodles

Slice emu 1" long, 1/2" wide. Lightly flour emu meat pieces. Saute emu in butter until lightly browned with garlic and onions. Add beef broth, parsley and worcestershire. Simmer for 2 hours on low heat. Approximately 30 minutes before serving, blend sour cream, yogurt and brown mustard. Add mushrooms and mustard cream mixture to meat. Simmer for 20 minutes to blend flavoring.

Serve over rice or wide egg noodles. Serves 6-8.

To order gourmet emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Italian Steak

1 1/2 lbs. gourmet emu rump
2 eggs, beaten
1 t. salt
1 t. pepper
1 c. bread crumbs
1/2 c. melted, unsalted butter

Tenderize emu with tenderizing mallet and slice 1/8" to 1/4" thick. Place slices in bowl of beaten egg. In another bowl, combine salt, pepper, and bread crumbs. Dredge emu slices in the bread crumb mixture and saute in butter for approximately 3 minutes on each side, or until lightly browned. Be careful not to overcook. Remove the meat from the skillet and set on paper toweling to absorb excess butter.

Serve with sauteed mushrooms and fettucine alfredo. Very simple, and very delicious.

Serves 4-6.

To order gourmet emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Shish Kabobs

2 lb. gourmet emu (drum, rump or round)
12 cherry tomatoes
12 large mushrooms
1 large red pepper, cut in strips or chunks
1 large bell pepper, cut in strips or chunks
1 large yellow onion, quartered

Marinade:

2 pkgs. Good Seasons Italian Dressing
Balsamic Vinegar
Olive Oil

Steam vegetables lightly, plunge into ice water, and drain. Toss with 1/2 of the marinade. In a separate bowl, toss the meat in the remaining marinade. Cover both tightly and refrigerate overnight. Drain both.

Skewer meat and vegetables alternately getting a nice mixture of color on the skewer. Grill over hot coals 10 minutes, turning often if not covered.

Serve with wild rice or rice pilaf.

4 servings.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Bourguignon

4 lbs. gourmet emu prime
6 slices diced bacon
2 cloves crushed garlic
2 lbs. sliced mushrooms
2 crushed bay leaves
1 t. thyme
2 T. freshly chopped parsley
1 t. salt
1/8 t. pepper
1/4 c. flour
1/2 c. unsalted butter
13 oz. consomme
14 oz. burgundy wine
10 small pearl onions (optional)
1 c. carrots, cut in 1" pieces (optional)

Cut emu into 1-1/2 to 2" cubes. Fry bacon and remove from skillet, leaving drippings. Add cubed emu meat and saute until evenly brown. Be careful not to overcook. Add garlic, mushrooms, bay leaves, thyme, parsley, salt and pepper. Add the bacon and remove from heat. In a small sauce pan, make a roux of the flour and butter until it is light brown in color. Add consomme and wine to the roux. Cook until slightly thickened. Add the roux to the meat mixture and mix well. If onions and carrots are desired, partially cook the carrots before adding the vegetables to the meat. Further simmer on low for 2 hours. Serve over noodles or rice. Serves 10-12.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
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414/377-8450 (fax)

Gourmet Emu Chili

1 lb. gourmet ground emu
1 medium onion, chopped
2 cloves garlic, minced
2 jalapenos, chopped
1 12 oz. can beer (not light beer)
1 16 oz. can tomato sauce
1 c. water
1 T. paprika
1 t. salt
2 1/2 T. chili powder
1 T. cumin
1/2 t. oregano

Brown gourmet ground emu meat in peanut or canola oil.

Add remaining ingredients in a large kettle and simmer on low heat for several hours, stirring often.

This heart-healthy and flavorful chili can be served immediately, but is best if cooled and reheated to allow the flavors to blend.

Serve alone, or with grated cheddar cheese, onions, and sour cream.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

WIEA Award Winning Emu Chili

2 c. pinto beans
4 lbs. gourmet ground emu
3 c. onion, chopped
2 c. celery, chopped
2 cloves garlic, chopped
2 large cans crushed tomatoes
2 small cans tomato sauce
1 can tomato paste
3 T. chili powder
1/2 t. cayenne pepper
1/4 T. oregano
1/2 T. cumin

Soak pinto beans overnight in water. Drain, rinse and cover with water, cooking until tender in a large kettle over low heat.

Brown gourmet ground emu meat in peanut or canola oil with 1 cup of the chopped onions. When beans are tender, add the browned meat and remaining ingredients to the large kettle of beans. Simmer on low heat for several hours, stirring often.

This flavorful chili can be served immediately, but is best if cooled and reheated to allow the flavors to blend. Serve alone, or with grated cheddar cheese, onions, and sour cream.

This recipe won the coveted 1st Place Peoples Choice award in a Chili Cook-Off in Wisconsin during September, 1994.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Gourmet Emu Marinades/Sauces

General Preparation Hints

Emu meat is delicious fresh or aged, marinaded or not. Individual tastes will vary, so we urge you to try preparing emu a number of different ways to develop your own signature recipe.

Aged emu meat has a much richer and gamier flavor than fresh emu. Tenderness will vary on the cut and aging. Filets should not be cooked beyond medium rare, as the meat is very lean and will become dry if overcooked.

Emu Marinade #1

Red Wine Base
2 oz. Cognac
Onion
Coriander
Peppercorns
Bay Leaves
Grated Carrot
Parsley
Juniper Berries
Saffron
(No Salt!)

Blend ingredients and marinade emu filets for several hours, if desired. Strain marinade and reduce. Pour heated sauce over filets or sliced meat.

Emu Marinade #2

Balsamic Wine Vinegar
Olive Oil
Fresh Herbs (Basil works well)
Dijon Mustard
(No Salt!)

This is a fairly light marinade and works well with grilled filets. Filets may be marked on the grill or pan seared and finished in an oven.

Emu Marinade #3

Dried Mushrooms
Brandy
Red Wine
Olive Oil
Shallots
Minced Herbs
Honey
(No Salt!)

Puree mushrooms until powdery, add brandy and cook until reduced. Add red wine, then oil, shallots, minced herbs and honey. Marinade for 12 hours. Grill and serve with a veal demi-glace.

Emu Marinade #4

Olive Oil
Peppercorns
(No Salt!)

Marinate overnight and prepare emu meat in oven until 145° - 155° F (med rare). Prepare a sauce for serving, consisting of wine, onions, peppers, hot mustard and greens.

Emu Serving Sauce

Cook emu meat trimmings with onion, celery and tomatoes on a sheet in 400°F oven until crispy (45 minutes or so). Place in a stock pot covered with water and reduce to half. Strain and reheat with a basic roux. Serve with sliced filet.

To order emu meat or for more information, call or write:

Octagon Farms, Inc. ©
364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

recipe-8

High Level Specifications for Emu Hide Processing

Removal of the hide should be done with care not to damage the hide. A sanitary, stainless steel sleeve is recommended for fisting the hide from the carcass for greatest productivity and lowest impact to the hide. If properly removed, the body skin will be transparent and lacking any carcass fat.

Hides with excessive scarring or holes in the center portion of the hide should be destroyed and not retained for further processing. This is true for both body skins and leg skins.

Once removed, the hide should be rinsed and immediately submerged in a special bactericide solution to kill bacteria and stop the enzyme action that will begin deteriorating the hide. Bactericide can be obtained from professional hide tanneries.

Upon removal from the bactericide solution, the hide should be well drained of excess solution, then layered on a sloping platform for salting. Approximately 1-2" of salt should be utilized per body skin for maximum absorption. To speed the absorption process and reduce cost, it is recommended to mix fine wood shavings with the salt. Leg skins can be effectively dried with only wood shavings.

Keep hides in a cool, dark, well ventilated place during the absorption process. Excessive heat will enable protein and enzymes to begin deteriorating the hides.

When thoroughly dried or cured, remove the salt from the hides and dispose of the salt. Stack the hides in preparation for shipment to the tannery.

To prepare for shipping, hides can be rolled or folded. It is suggested that the hides be placed in a plastic or canvas bag, then packed in a cardboard box for shipping by express.

SGS

August 27, 1997

Octagon Farms
364 Lake Shore Rd.
Grafton, WI 53024

ATTN: Ms. Jayne M. Wick

CERTIFICATE OF ANALYSIS

LAB NUMBER: A 10 7 04055-4057 **FILE NO:** 477681
SAMPLE DESCRIPTION: Emu Oil
SAMPLE SUBMITTED BY: Octagon Farms, Grafton, MI **RECEIVED:** August 20, 1997
SAMPLE IDENTIFICATION: Sample # 1, 2, 3

Based upon samples submitted to us, tested in our laboratory, reported to you as follows:

METHODS	TEST	RESULTS		
	SGS Lab No:	4055	4056	4057
	Sample ID	1	2	3
COI/T20	Sterols, ppm			
	Cholesterol	630	95	584
#10	Brassicasterol	-	42	-
	Campesterol	-	196	35
	Campestanol	-	-	-
	Stigmasterol	-	-	29
	D-7 Campesterol	-	-	-
	* D-5, 23 Stigmasterol	-	-	-
	* Clerosterol	-	-	-
	* B-Sitosterol	10	300	80
	* Sitostanol	-	-	-
	* D-5 Avenasterol	-	-	-
	* D-5, 24 Stigmasterol	-	-	-
	D-7 Stigmasterol	-	-	-
	D-7 Avenasterol	-	-	-

- Denotes none detected, detection limit = 10 ppm

SGS Control Services Inc.

E. Wayne Emmons
National Lab Director
Agricultural Division

SGS Control Services Inc.

P. O. Box 13484
1019 Harbor Avenue
Memphis, TN 38113
Tel: 901-775-1660
Fax: 901-775-3308

ORIGINAL

August 27, 1997

Octagon Farms
364 Lake Shore Rd.
Grafton, WI 53024

ATTN: Ms. Jayne M. Wick

CERTIFICATE OF ANALYSIS

LAB NUMBER: A 10 7 04055-4057
FILE NO: 477681
SAMPLE DESCRIPTION: Emu Oil
SAMPLE SUBMITTED BY: Octagon Farms, Grafton, MI
RECEIVED: August 20, 1997
SAMPLE IDENTIFICATION: Sample # 1, 2, 3

Based upon samples submitted to us, tested in our laboratory, reported to you as follows:

METHODS	TEST	RESULTS		
	SGS Lab No.	4055	4056	4057
	Sample #	1 CR	2 FT	3 BOP
Ca 5a-40	Free Fatty Acids, %	2.1	0.1	0.2
Cd 8-3	Peroxide value	2.0	2.0	19.0
	Moisture, %	0.04	<0.01	0.4
HPLC	Triglycerides, ECN, %			
	42	0.9	1.7	1.4
	44	9.1	9.6	12.5
	46	29.6	25.2	30.7
	48	43.0	43.7	39.7
	50	16.6	19.1	14.5
	52	0.7	0.7	1.7
Ce1c-89	Fatty Acid Profile, %			
	C 12	0.3	0.3	0.3
	C 16	21.1	18.7	18.8
	C16-1	4.6	3.2	2.6
	C 18	8.6	8.9	10.6
	C 18-1	51.0	52.8	49.7
	C 18-2	12.8	13.9	15.8
	C 20	0.2	0.2	0.2
	C 18-3	0.6	1.1	1.3
	C 20-1	0.4	0.4	0.4
	C 22	0.1	0.1	0.1
	Other	0.3	0.4	0.2

Based on and limited to the above analysis, sample # 1 is most typical of the emu oil that we have been testing. Occasionally, we see samples similar to #3, but we have never seen an emu oil sample with sterols like # 2.

Emu Leather Products

Emu garments and small leather goods are now available in a variety of styles and colors.

Accessories:

Men's Long Wallet
Ladies Clutch Wallet
Business Card Case

Handbags:

Brass Ring Tote	(12" x 10" x 2½")
Square Envelope	(8½" x 6" x 2½")
Large Envelope	(11" x 7" x 2½")
Executive Business Bag	(12" x 10" x 2½")
Small Classic Bag	(8" x 6" x 3½")
Tall Classic Bag	(9½" x 8" x 3½")
Large Classic Bag	(10½" x 6½" x 3½")
Mystery Bag	(8" x 9½" x 2½")
Business Bag	(9" x 9" x 2½")

Vests:

Men's & Ladies Vest - Black lamb with full quill emu on front of shoulders and pockets.

Ladies Vest - Tapestry with full quill emu on front lapel and buttons.

Miscellaneous:

Briefcase (Men's or Ladies) - Italian calfskin with full quill emu on front flap and back trim.

Key FOB - Full quill emu on brass ring.

Boots (Men's and Ladies) - custom sized emu boots with either full quill emu or legskin on toe, heel, collar or bottom.

Standard Colors:

Black, Red, Cognac, Mahogany, Coffee and Forest Green.

Exotic Emu Leather

Exotic, unique, buttery, supple...these are just some of the words used to describe emu leather, tanned body and leg skins of emus. Emus are the second largest bird in the world, indigenous to Australia and now being raised in the United States for their gourmet red meat, cosmetically pure oil, and exotic leather.

With a quill pattern that covers the entire body skin, garments and personal leather goods that incorporate emu full-quill leather possess qualities not available in any other leather. The hide's unique quill pattern is accentuated by its ability to accept virtually any color.

The emu's leg skins are somewhat stronger than the body skin and possess a reptilian appearance as opposed to a quill pattern. This makes them well positioned to such items as wallets, belts, and watch straps...even as accents on boots or shoes. And because the emu is being commercially raised and harvested, there is no concern for taking an endangered species' life here.

Put the emu's full-quill body skin and reptilian leg skin together in the same article and you possess one of the most unique and beautiful pieces of leather work available in the world.

Emu leather fashions are designed for discerning individuals who demand quality workmanship, exceptional materials, enduring styles and unique beauty!

For more information, call or write:

FACETS

364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Uses for 100% Pure Emu Oil

As a facial skin conditioner, use emu with or without your regular moisturizer to condition and protect your skin from dryness.

As a skin softener, emu oil restores rough, chapped hands to a soft, smooth and more youthful appearance and feel.

As a makeup remover, dab a cotton swab in emu oil and remove your makeup, leaving the residual oil to be absorbed by your skin, helping to reduce dryness around the eyes.

After shaving, use emu oil sparingly to replace the moisture removed by shaving and to eliminate irritation.

As an analgesic, emu oil is effective as a rub for relief from muscle stiffness or soreness. You may find relief within fifteen minutes; further improvement of joint use can be attained with continued use over time.

For burns, use emu oil to ease the pain from a burn depending upon the severity of the burn. Burns have also been found to heal faster with application of emu oil.

As a treatment of insect bites and skin rashes, emu oil eases the itching, stinging and swelling from insect bites and provides relief from rashes due to exposure to poisonous plants.

To condition leather, rub emu oil into purses, briefcases, portfolios and wallets. Please, test in an inconspicuous area first.

For pure oil or blended products, call or write:

FACETS
364 Lake Shore Road
Grafton, WI 53024
414/377-8420 (voice)
414/377-8450 (fax)

Elegant™ Emu Oil

Emu oil, or kalaya as it is referred to by the Australian aborigines, is a byproduct of the world's second largest bird, the Emu. Now being raised in the United States, this bird produces a layer of fat that resides between the bird's hide and meat. When rendered, the resulting oil possesses unique penetrating and therapeutic properties.

In Australia, the emu has been raised in the outback by the aborigines for millions of years, similar to the way American Indians raised buffalo. In recent years, when studying emus and the aborigines, it was recognized that tribes used emu fat to soothe and heal. This led to numerous research projects in Australia and the United States to better determine the oil's capabilities.

Research shows that emu oil is an exceptional active ingredient that can be used as a topical pharmaceutical oil and to enhance cosmetics. It has been found to possess properties effective for pain relief from sore and stiff joints, arthritis, and burns. It has recently been found to be high in mono and polyunsaturated fats and to penetrate the skin quickly and deeply without irritation.

While the properties of emu oil continue to undergo research, we are cautious about making claims to the oil's healing, medicinal or curative results. Through experimentation, however, a number of effective ways to utilize emu oil have been identified and outlined on the back of this sheet.

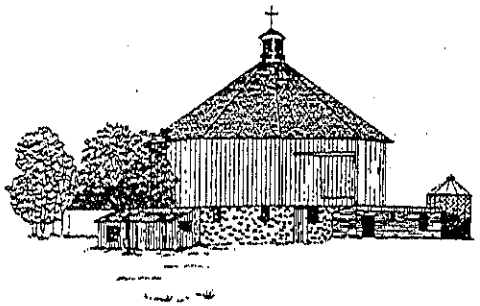
Emu oil has been found to be very stable and homogeneous when properly rendered. Elegant™ emu oil is 100% pure and natural and contains no additives. For best results, store emu oil in a cool, dark spot when not in use.

EMU:

A New Frontier in Ranching.

AMERICAN EMU ASSOCIATION
P. O. Box 8174
Dallas, Texas 75205

The FACTS About EMUS



Prepared by:

Octagon Farms, Inc.

364 Lake Shore Road
Grafton, WI 53024

414/377-8420 (voice)
414/377-8450 (fax)

Offering the finest in:

Business & Farm Planning
Quality Breeding Stock
Industry Consulting
Emu Products

Origin

Emus, native to Australia, are the world's second-largest living members of the ratite family of flightless birds. Others include the ostrich (Africa), rhea (South America), cassawary (Australia and New Guinea), and kiwi (New Zealand). Emus were originally imported to the US from 1930 to 1950 as exotic zoo stock. The emu was designated Australia's national bird, and an Australian government ban on exporting the emu has been in effect for over thirty years. With the exception of a 1993 importation from France, the expanding emu inventory in the United States is largely domestically bred.

Physical Characteristics

Emus are curious, playful, friendly, and easily handled. The mature emu is five to six feet tall and normally weighs 110 to 130 pounds. Stout bodied and long legged, emus can dash away at nearly 40 mph. Emus adapt well from temperature extremes in excess of one hundred degrees to below zero. The internal body temperature of the emu is normally 103-104 degrees Fahrenheit.

Breeding and Hatching

Emus are generally monogomous in captivity and, once mated, continue to mate for life. The emu hen can be productive for 20 years or more and may lay 20 - 50 eggs in a season. A hen may lay as early as 18 months, but normal laying begins at 2 to 3 years. Emus typically breed at the same time each year, triggered by changes in the number of daylight hours available. In the U.S., egg production typically begins between September and January and continues as long as the hen is able to produce eggs.

A single emu egg is usually laid as soon as 1 week after breeding in anywhere from 1 to 3 clutches on an annual basis. Each egg in a clutch is typically laid at 3 day intervals from the first, usually at the same time of day as the first. One week or more may separate a clutch, as this is a time of rest for the hen.

Depending on temperature, eggs normally take 50-54 days to hatch. Artificial incubation encourages the hen to continue laying. Hatching can occur naturally, or in an incubator or hatcher.

Care and Feeding

Emus are generally easy to care for. They have been found to have an extremely good immune system, helping them to heal very quickly, naturally, if injured. Normal vaccinations and regular wormings are recommended along with a steady supply of food and water; these will vary with your geographic area. Emus are a hardy animal and do well in cold climates if provided a sheltered area to use when temperatures drop below freezing.

Because of the possibility of common parasites, emus should not be allowed to coexist with ducks, sheep, pigs and the like. They naturally pair off as male and female and will remain a couple for as long as allowed. As a result they will only breed as a couple. Pairing can be assisted or left to nature. They are generally calm in nature and are not considered to be dangerous.

Uses

Ratite leather is widespread in upscale products including boots, belts, luggage, and accessory items. The fashion industry currently uses approximately 100,000 hides annually. Emu hide, about 6-8 square feet per adult bird, is supple and durable, better suited for actual garments. The unique dot or quill pattern is very subtle and attractive.

Emu oil is rendered from the fat taken from the bird during processing. A typical market age bird will yield 4-6 liters of oil. The oil is largely unsaturated, highly penetrating, and nontoxic. For centuries, the aborigines in Australia would apply the fat or oil, wrap the limb or the body, and lie in the sun for a variety of ailments. The oil is currently being used in several skin care and cosmetic products, and its potential is significant. Emu oil has also been found to have very unusual and unique thermodynamic properties, making it an excellent candidate for industrial applications.

Emu meat is gaining acceptance in gourmet restaurants and is featured in heart healthy menus. It could well be a main meat of the future. Already a proven consumer favorite in Europe, comparison data shows emu meat to be lower in cholesterol and higher in protein than beef, turkey, chicken, or catfish. About 30-40 pounds of red, tender meat is available from a mature bird. If each person in the US were to consume only one-quarter pound of emu meat annually, an annual harvest of 3 million emus would be needed.

Emu feathers, which can be dyed and washed, are used by fashion manufacturers for designer evening wear, vests, hats, and other trim. They are also used in high tech environments for delicate cleaning.

Communication

Emus communicate audibly during breeding. The male communicates by strutting and with his "voice box", making a grunting noise, while the female communicates with her drum sack, making a thumping noise like the beating of a drum.

Identification

The identification process most common within the emu industry is microchipping. These efforts help protect the emu gene pool, protects breeders from theft, and assures new buyers of the emu they are buying.

Services Offered

Octagon offers business planning assistance to those interested in emu farming. We offer quality breeding stock and can help arrange boarding of your birds, as well.