

Mink Farming

Fur farming began in North America in the 19th century, arriving in Europe in the early years of the 20th century. Today, after over 100 years of selective breeding, combined with good nutrition, housing and veterinary care, farmed fur-bearing animals are domesticated and amongst the world's best cared for farm animals.

The most common farmed fur-bearing animal is mink, followed by fox. Other species farmed on a smaller scale include nutria, chinchilla, fitch, sable and finn racoon. Most fur farming takes place in Northern Europe (64 per cent) and North America (11 per cent). The remainder occurs in countries as far apart as Argentina, the Baltic States, Ukraine and Russia.

Farmed furs are the mainstay of the fur trade, accounting for some 85 per cent of the industry's turnover. Production figures for mink and fox farming vary annually. Most recent figures (2000) show that approximately thirty million pelts were produced in that year (90 per cent mink; 10 per cent fox).

Fur farming provides a livelihood for many thousands of people in Europe and North America. In Europe, there are some 6,000 fur farms, providing full-time employment to 30,000 individuals. The fur sector as a whole provides some 338,000 full and part time jobs in the European Union. In North America there are some 900 mink and fox farms (470 in USA and 430 in Canada). Most farms are small family-run businesses. The fur sector as a whole provides some 270,000 full and part time jobs in North America.

Revenue from fur farming allows many farmers, particularly in Europe, to supplement income from other agricultural activities. Fur farming also allows farming to remain economically viable where climatic conditions limit the options open to farmers in terms of what they can produce and market profitably.

Fur farming provides an efficient use of animal by-products from human food production purchased from fish and poultry processors and other farming sectors. The consumption by fur animals of these by-products, which are not intended for human use, helps to keep down the actual cost of human food production.

Fur farmers have a vested interest in keeping their animals healthy and content. As anyone who owns and cares for fur-bearing animals knows, pet-owners included, the condition of an animal's coat is a key indicator of its well-being. Scientific research into the behaviour and welfare of farmed fur-bearing animals has been ongoing, particularly in The Netherlands, Russia and the Nordic countries, financed by governments and the fur sector.

Fur farming is well regulated and operates within the highest standards of care. In the European Union, Council Directive 98/58 sets down rules covering the welfare of all farmed animals, including fur farmed animals. Directive 93/119 deals with the slaughter and killing of fur and other farmed animals. Additionally, the Council of Europe adopted a Recommendation, revised in 1999, designed to ensure the health and welfare of farmed fur animals. The Recommendation deals comprehensively with matters of animal care, from the farming environment to stockmanship and inspection. Its requirements have been included in the European Fur Breeders' Association (EFBA) Code of Practice. In North America, fur farmers also follow strict Codes of Practice and conform to provincial, state or national animal welfare and other regulations.

Regular veterinary checks are carried out in accordance with industry guidelines, provincial, state or national requirements.

The present housing systems have evolved through independent scientific research (notably behavioural studies), and practical experience over many generations of animals on farms. Mink are generally housed in sheds four metres wide. These sheds are open-sided with roofing panels. They provide normal temperature and light conditions, while protecting against direct sunlight, wind and rain. Wire cages are placed in rows in the sheds. Foxes are housed in similar

sheds. In both cases, the cages are raised off the ground to ensure good hygiene. These cages give the farm animals sufficient space for normal movement and investigative behaviour.

In mink farming, year-round nest boxes bedded with straw or wood shavings are provided for breeding purposes and to ensure that the animals sleep and rest comfortably. Research has shown that the provision of a nesting box, which is now standard in mink production, is of great importance to the welfare of farmed mink.

Both mink kits and fox cubs remain in the same cage as their mothers until weaned at the age of 7 - 8 weeks. After that the animals are housed in little groups of 2 - 3 through their growth period, and only breeding animals, selected among the mature animals late in the autumn, are housed separately. Non-breeding mature animals are killed quickly and humanely. Methods used are closely controlled under national and European law and North American provincial/state or national requirements. They are administered on the farm thereby minimizing the need for stressful transport.

Generally, both mink and fox are fed on a wet feed made from fish, dairy, poultry and other agricultural by-products. This is high in nutrients and may have added supplements to ensure that ideal nutrition levels are provided to maintain good health and well-being. Clean water is available at all times.

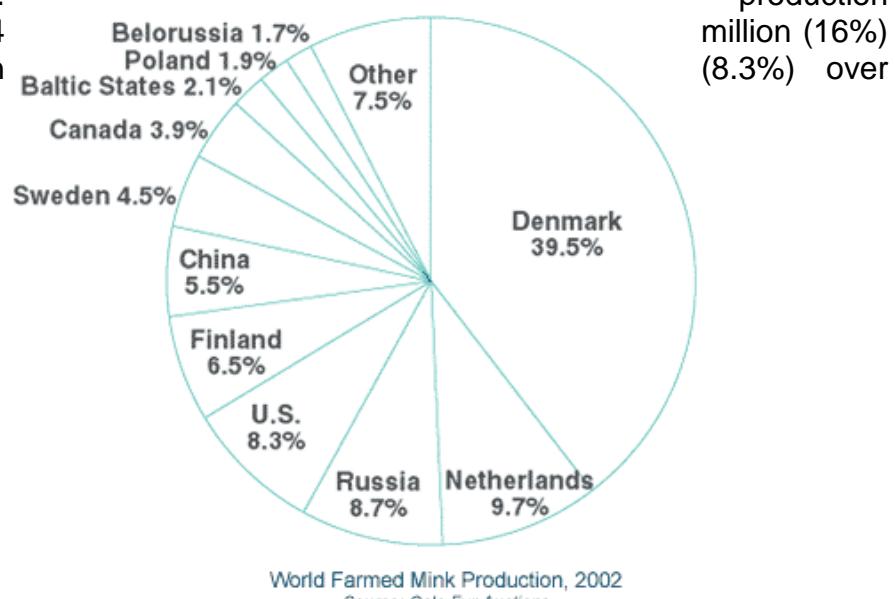
(International Fur Trade Federation)

The World Market

WORLD PRODUCTION of mink has remained fairly stable over the last 20 years, averaging about 28 million pelts annually.

During that time, however, production has become increasingly concentrated in one country, Denmark, while many other countries have seen production slip. Denmark's production rose from 6 million pelts, or 22% of world output, in 1983, to 12.2 million, or 39.5%, in 2002.

By contrast, U.S. declined from 4.4 to 2.55 million the same period.



(Fur Commission of the United States of America)

The fur industry extends so widely that it is almost impossible to quantify its global economic impact. However, some examples include:

- In the European Union it is estimated that the fur trade employs some 175,000 people directly, plus a further 50,000 working in supply trades. The total retail trade turnover of the EU in fur is estimated at over \$6 billion.
- Annual retail fur sales figures for the US alone increased by ten per cent in 1995 to \$1.2 billion with a further five per cent increase in 1996. The US fur industry comprises approximately 1,400 retailers and 100 manufacturers and employs over 50,000 people.
- In Canada, the entire fur industry adds some \$600 million to the Canadian economy annually. There are about 80,000 trappers in Canada, of whom about half are aboriginal people.
- Hong Kong is the world's leading exporter of fur clothing. Total exports surged by 48 per cent to HK\$ 2,359 million in 1996, reflecting buoyant sales to most major markets, including Japan, South Korea, the USA and Canada.

(International Fur Trade Federation)

The Canadian Market



Canadian Fur Trade at a Glance

The fur trade contributes

\$800 million

to the Canadian economy and provides important income for over

85, 000 Canadians

including many aboriginal and other people in remote and rural regions.

People of the Fur Trade

- 80, 000 trappers (including aboriginal communities)
- 2, 000 people in fur farming
- 2, 500 people in manufacturing and processing
- 2, 500 people in retailing
- 1, 000 people in related services

Canada's founding industry: a proud tradition of responsible conservation and impeccable craftsmanship.

EXPORTS (in millions of Canadian dollars)

SOURCE: INDUSTRY CANADA

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
RAW FURS	74.6	77.1	94.3	98.7	134.4	154.8	146.6	132.9	175.9	194.1
DRESSED FURS	11.3	12.4	17.2	27.3	32.4	25.9	34.1	21.5	20.3	21.9
FUR GARMENTS	57.2	71.1	84.7	83.7	122.2	112.0	106.9	95.7	119.2	118.4
TOTAL EXPORTS	143.1	160.6	196.2	209.7	289.0	292.7	287.6	250.1	315.4	334.4

Total fur exports have increased by one-third in the past two years.

Canada's main export market for fur apparel is the U.S.A. (80%+). Other leading export markets are Japan and the EU.

Main export markets for fur pelts are: the U.S.A., Korea, Hong Kong and Europe.

Furs Produced

Approximately 2 million fur pelts are produced annually in Canada: about half are wild furs and the rest are produced on fur farms.

Main Canadian wild furs: muskrat (34% of total wild furs), beaver (22%) and marten (17%). Other abundant species include fox, coyote, squirrel and raccoon.

Fur farms: the most common fur animal raised on farms in Canada is mink. Other farmed furs are fox and chinchilla.

Manufacturing / Processing

Most Canadian fur garment manufacturing is centred in Montreal (80%+) and Toronto.

The major fur dressing facilities are in Quebec City, Montreal, North Bay and Winnipeg.

The three important Canadian fur auction facilities are in Toronto, North Bay and Vancouver.

Marketing

The major marketing event for the Canadian fur trade is the North American Fur and Fashion Exposition in Montreal (NAFFEM) hosted each year by the Canadian Fur Trade Development Institute (CFTDI).

NAFFEM is the largest commercial fair of its type in North America, attracting some 200 exhibitors and 5,000 buyers-\$100 million in orders are written during this four-day event.

Nova Scotia & Newfoundland

Newfoundland's fur industry is quite small. In 2001, there were 19 fox farms, 2 mink farms, and 7 mixed farms. Virtually all of these were small scale, family operations. A total of 3000 fox pelts and 2300 mink pelts were produced.

While Nova Scotia's fox industry has fallen, it's mink industry has grown tremendously over the past decade. In 2000, there were 60 licensed mink producers, producing an annual crop of over 650,000 pelts.

NuMink Inc. - Our Goal

NuMink Inc. is owned and operated by Bill Barry, owner of *Barry Group Inc.* This company was incorporated on April 29, 2003. The directors of this company are Bill Barry, Joseph Barry and Catherine Moores.

It is the goal of *NuMink Inc.* to establish a mink farm, with the capacity to pelt 20,000 mink annually. We have many advantages which will help make this a successful venture. We have our own herring feed supply, which is very advantageous, since feed supply is usually the largest draw-back with expansion. Furthermore, herring is by far the best feed source for mink. In addition to this, we are already the largest fur producer within Newfoundland (sealskins), and are quite familiar with the fur industry and how it operates.

Site Plans



Various agricultural land sites in the Bay of Islands/Cormack area were visited and evaluated. It was decided that the best option for *NuMink Inc.* is taking over land currently owned by Melvin Payne, in Cox's Cove.

Melvin owns a large area of land, part of which is granted, and part of which is leased. The area to be purchased will total approximately 60 acres. This will consist of two fields, one on each side of the road.

This land is cleared, and in it's current condition, is suitable for mink ranching. Minimal leveling will be required. This land is accessible by dirt road, which stretches the distance between both fields.

Rights to adjacent crown lands have also been requested. This will provide us with a total of approximately 120 acres. This additional land may be used for manure spreading and forage growth. Hay can be harvested for lining nest boxes.

This land area is close enough to *Barry's Fisheries* that transportation of feed materials will be convenient. It will also allow *NuMink Inc.* to take advantage of the *T&H Fisheries* cold storage unit.

This site has municipal water access, which is also advantageous. A septic system will be installed.

The tentative farm lay out will consist of one large mink shed, in which the female breeding stock will be housed, male breeding stock, and all kits will be housed. This unit should be adequate for the initial 1-2 years. An additional unit will be added when required. Mixing of feed will either be conducted on-site in a feed kitchen, or in the vicinity of the fish plant. Prior to the introduction of mink next spring, a staff house will also be constructed, which will serve as a bunk house, and will contain a kitchen and bathroom for staff use.

Housing

Although mink are commonly housed in open-sided sheds, due to the Newfoundland climate and weather conditions, it is necessary that our sheds are constructed in such a manner that they are well ventilated in the warmer season, but are completely enclosed and draft-free in the colder months.

The outside shell will be constructed using metal sheeting and fiberglass panels. Fiberglass panels will be inserted into the roof as well to allow additional light access. Such light is required for the mink to progress through critical hormonal changes. Artificial lighting within the shed will also be required.



Fiberglass panels will be removable to allow for additional ventilation in the summertime. Mesh screens will be attached behind removable sections to prevent insect/animal entry. This will allow constant air flow during hot periods. Mink are extremely susceptible to intense heat.

During the colder winter months, the building will be tightly secured. It is important that the animals are kept in a dry, draft-free environment. Thus, snow and wind must be kept out. Wooden nest boxes will be provided for additional warmth in the colder months, and during whelping season. The kits will be born in April/May when the temperature is still quite cold, so extra bedding will be provided to build warm nests.

Waste Management

Manure management is not a big concern for this operation, since the amount of excrement will be minimal.

Initially, the manure will be collected manually. As we increase our breeding stock, and the amount of manure produced increases, we will purchase equipment for automatic manure collection.

The collected manure will be stored on a concrete platform, which will prevent leakage. Local farmers will collect this manure for spreading on their fields.

Odour Control

Efforts will be made to ensure that the ranch is well-drained. This will reduce the odour associated with manure. In addition to this, the manure will be stored on a concrete foundation, and will be encased in sawdust, which is an effective method of reducing odours.

All excrement will be removed from the sheds on a regular basis, ensuring that the odour levels within the sheds are kept low.

It should be noted that prevailing winds in this area are blowing away from the residential area.

Security Measures



from climbing over the fence.

A wire fence will be erected around the perimeter of the site containing the mink sheds. This will prevent mink from escaping, in the event that they break out of their cages. It will also prevent other wild or domestic animals from entering. Furthermore, it will prevent human trespassers. This wire will extend 12" into the ground to prevent animals from digging under. The addition of barbed wire may also be considered to prevent trespassers

A bunk house will be constructed on site, and as the operation grows, it may be necessary that the farm is attended at all times. A permanent residence will be constructed on site in the future.

Mink Stock

It is crucial that only the best breeding stock is purchased. This is the basis for the entire operation – and the determining factor of its future. We will purchase our breeders from various top mink ranchers in Canada and the United States.

Our first purchase will be made this spring. At that time, 450 bred females will be introduced to the farm. After whelp, the farm will be housing about 2500 animals. The initial 450 mink will be purchased from Ronnie Crowell, an industry leader in Nova Scotia. Not only has Ronnie committed to providing us with quality AD-Free breeding stock, but he has also committed to providing training and assistance to our staff as we learn the mink business.

Our goal is to breed 5,000 females annually, thus producing 20,000 kits.



Labour Force

People of various professions will be contracted in the initial construction/set-up of the operation. After that, a general manager will be hired, and workers, according to our requirements. Within 5 years, we predict that *NuMink Inc.* will be employing in excess of 15 people (full-time & part-time).

Daphne Boudreau, a graduate of the Nova Scotia Agricultural College has accepted the position of operations manager of *NuMink Inc.* Daphne is currently completing her master's degree in mink nutrition, and has been working with one of the top fur researchers in the world. The odds are great that Daphne will join our company.

For the remainder of the positions, Cox's Cove residents will be trained and employed by *NuMink Inc.*

Feed Source

A feed ration formulation program has been purchased from the *Fur Institute of Canada*. This is an easy-to-use program that allows one to accurately design their own feed rations, to meet the nutritional requirements of the mink. Thus, all feed ration formulation will be conveniently handled in-house.

The best feed source for mink is herring. *Barry Group Inc.* is the largest North American processor of herring. This gives us a huge advantage. This will ultimately be the biggest feed component. Offal from other fish, such as cod, capelin and mackerel will also be incorporated into the diet. Chicken scraps or seal meat will have to be added to the feed ration as well, and these are both easily accessible. The required grains may be purchased through companies such as *Co-op of Shur Gain*.

As discussed above, the raw materials may be stored in our already established cold storage unit, and the rations will be mixed adjacent to the plant initially.

Drinking water will be supplied to the mink through water nipples, attached to piping containing water constantly circulating under pressure. A heated wire prevents the water from freezing during the winter months.

Health Protection

All breeding stock purchased must be Aleutian-free certified. As new breeding stock is being introduced, they will undergo a period of quarantine. A shed will be constructed for this purpose.

Depending on the mother's history, at either the age of 6-8 weeks, or 11-12 weeks, all kits will be vaccinated against Distemper, Viral Enteritis, Botulism and Pseudomonas.

Agricultural veterinarians are located in Pynn's Brook, and are available when needed.

Animal Welfare

Animals housed for production, will be cared for humanely, and in accordance with the *Recommended Code of Practice for the Care and Handling of Farm Animals*. Pen design/sizes will meet or exceed regulations. Animals will be fed twice daily to meet their nutritional requirements. Animals will be kept disease-free through

High Herd Health Programs and necessary bio-security programs. All workers will be carefully trained in mink handling and requirements, and stress-reduction.

In addition to animal-welfare issues, it is in our best interests to maintain the mink's quality of life since pelt quality is directly related to animal health and comfort.

Euthanasia

The term "euthanasia" is derived from the Greek term "eu" meaning "good" and "thanatos" meaning "death". Thus, a "good death" is one that occurs without pain and distress.

Hypoxia, through exposure to high levels of carbon monoxide is the most commonly used method of euthanizing mink. If the correct levels of carbon monoxide are being used (3.5%), the mink showed decreased consciousness within ~13 seconds of exposure and coma within ~21 seconds. The consistent lack of defecation and urination of mink during this process indicate that it is a rapid, stress-free death.

Pelting

Pelter mink will be euthanized in December via contained exposure to carbon monoxide. At this point their fur is in prime condition.

Frozen mink carcasses will be transported to *340 Rancher's Co-op* in Nova Scotia for pelting and processing.

Conclusion

I hope that we can work together to make this a prosperous venture, which will provide employment to local residents and diversity to industries in the area.

If you have any questions, or require further information, please let me know. I may be contacted by phone at (709) 785-7387 or by e-mail at cmoore@numink.ca.

