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## Some Economic Aspects of the Silver Fox Industry Including a Brief Study of the Economic Possibilities of the Industry in Northern Utah and Vicinity

Duncan Wayne Henrie

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SOME ECONOMIC ASPECTS OF THE SILVER FOX INDUSTRY  
Including a Brief Study of the Economic Possibilities  
of the Industry in Northern Utah and Vicinity.

A THESIS

Submitted to the Department of Economics, School of  
Commerce, Utah State Agricultural College, in  
partial fulfilment of the requirements for the Degree  
of Master of Science.

DUNCAN WAYNE HENRIE

Logan, Utah

February 1930.

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## INTRODUCTION

The question is often asked, does the production of silver fox fur pay? Being a new industry in this part of the country (1924 was probably the beginning) not much is known concerning the facts of the business by the average person. In the following pages an economic discussion of the factors of this industry will be given. To begin with a short history of the fur industry and fur farming is given, to give perspective and background, as it is only through the history of the past that we are able to judge the future.

The question as to what a silver fox is, is discussed, together with comments on other types of foxes which are being raised commercially. Breeding standards of the industry with the names of the national and international organizations and the addresses of their headquarters are given. The natural factors of silver fox production, with capital, management and marketing are sub-divided and discussed in detail. Trends of the industry and the conclusions reached concerning this industry are given, together with the results of a survey of the fox industry in this section of the country.

The subject matter of this thesis was obtained in the following manner. Fox farms were visited in order to learn of the general facts of the industry. The

"Black Fox Magazine" and the "Canadian Fur Trade Journal" were subscribed for. Books on the industry such as "Allen's Theory and Practice of Fur Farming" and the Government bulletins were read to give background. Then a form of questionnaire was prepared, the purpose of which was to get specific information from various fox farms. Out of twelve farms from which this information was obtained, nine were visited in person and the data written on the questionnaire as it was given by the caretaker or manager. About eight or nine of these questionnaires were mailed to managers of fox farms which the author was unable to visit and three were filled out and returned. A copy of this questionnaire and a summary of the results will be found in the appendix. The interpretation of the results will be found in the thesis proper.

Complete statistics concerning the world's output of silver foxes and silver fox fur have not been obtained. It is not possible to obtain exact figures on the total industry in the United States. The industry is so young that records have not been gathered. The prices shown for the last two years were obtained by writing to the fur auction houses for their records, some of which have complete statistics of their sales, and some do not have

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any. In Canada the Dominion Bureau of Statistics has furnished statistics which are very valuable in showing trends.

HISTORY OF FUR INDUSTRY PRIOR TO FUR FARMING.

With the discovery of America and the subsequent founding of colonies in North America, it was only natural that the fur trade should spring into prominence because of the abundance of fur animals found there.

Fur trading between the Indians and the whites of Europe was carried on before the Pilgrims landed at Plymouth, the chief trading centers being in Canada and in New York. Organized commercial enterprises founded under French Authority by Chauvin in Canada and centered at Tadoussac were known as early as 1598.\*<sup>1</sup>

The Demonts obtained a trading commission for one year from the French King in January of 1608. In 1627 Cardinal Richelieu of France founded "The Company of One Hundred Associates" which was to have a monopoly of the fur trade to extend from 1628 to 1643.\*<sup>2</sup> By this time the fur trade and the lure of gold had attracted the attention of Englishmen. The Duke of York was granted by the king of England what is now New York, New Jersey and Delaware. The Dutch had lost their possessions in America in their war with England and thus the new Amsterdam fur trade had come into possession of the British.

At this period the names of Radisson and Gressilliers as two of the most important fur traders should be mentioned

- \*1. Fur Production of Canada.  
Season 1926-27. P.1.  
Dominion Bureau of Statistics.
- \*2. Theory and Practice of Fur Farming.  
Allen and McClure. P.4.

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in the light of subsequent events. These two men worked at times for the company of "One Hundred Associates" and at other times as independent traders. Their territory was farther west in the region of Lake Superior and Hudson Bay. Coming down to Montreal one time with a large consignment of furs they failed to come to terms with the French Authorities and were fined for illicit trading. This action on the part of the French caused Radisson and Grossilier to seek an alliance with the English. Later Grossilier guided the "Nonsuch" an English ship, to the mouth of the Rupert River where a fort was built, the first on the bay. Later when the "Nonsuch" returned to England laden with furs it added to the zeal of the Englishmen to gain control of the fur trade in the new world.

Consequently only a short period of time elapsed until the formation of the Hudson Bay Company in 1607 <sup>any</sup> took place with Prince Rupert as the first governor. The struggle for supremacy between the Hudson Bay Company and a new French Company established in 1685 and called the "Company of the North" was a bitter one with the fortunes of war favoring first one and then the other. The treaty of Utrecht (1713) ended the strife and the Hudson Bay Region was ceded to the British as a permanent possession. The company taking advantage of this, rapidly pushed their trading operations inland and consequently their profits in the next few years were great.

With the fall of Quebec in 1769 independent

traders grew numerous and rival companies were formed which contested for the fur trade enjoyed by the older company. The most powerful of these were "The Northwest Company" and the "X.Y. Company."

Among the American competitors the most prominent was John Jacob Astor who commenced fur trading operations in New York as early as 1784. In 1810 with men who were formerly connected with the "North West Company", he organized the "Pacific Fur Company" and founded Astoria on the Columbia River in 1811.

To prevent Astoria being captured by the British it was sold in 1813 to the "North West Company" but at the Treaty of Ghent in 1814, it was stipulated that Astoria be restored to the United States.

The conflict between the "North West Company" and "Hudson's Bay Company" continued for some years but finally in 1821 a merger of the two companies took place and from that time on "Hudson's Bay Company" was dominant and years of prosperity followed.\*<sup>3</sup>

The principal fur bearers at this time were the beaver, otter, lynx, fisher, mink, martin, muskrat, and the several kinds of foxes. At this time the beaver and the sea otter occupied a prominent place in the fur trade but at the present time the latter is practically extinct and the former, due to the encroachment of civilization is becoming a negligible factor in the fur trade. Due to changed conditions, both in transportation and in the fur

\*3. Theory and Practice of Fox Ranching.  
J.A.Allen and Chesters, McClure, p 10.

industry itself, we find at the present time more demand for the common furs such as muskrat, etc. Furs of this type can be readily dyed and tinted and sold under a different name. Martin, mink, and skunk are also proving very popular.

Occasionally during this period in the history of the fur trade the trappers and Indians caught what was known to the fur industry as a black or silver black fox. Due to its scarcity and because of the wonderful luster of its pelt, the black or silver fox pelt always brought a fabulous price. The silver black fox has never been found on any other continent but North America and is a descendent from the common red fox. It is what is known as a sport or mutation in the animal kingdom.

Due to the fact that one silver fox pelt would bring hundreds of dollars more than the common red variety, we can readily see why it was that the first men who conceived of the idea of fur farming should naturally turn to the silver fox.

## History of Fur Farming.

As early as 1860 John Hadley of Wellington County, Ontario, ranched the first pair of silver foxes but discontinued this attempt after a short time. As to whether Mr. Hadley was successful in this venture, we do not know but surmise that no young were reproduced or he would not have discontinued the enterprise so soon.

Sir Charles Dalton was the next man who became interested in the possibilities of producing silver black foxes under domestic conditions. After several unsuccessful attempts, he purchased a pair of silver foxes from John Martin of Prince Edward Island. Mr. Martin had dug these animals out of a den the year previous but they had failed to breed the first year of captivity. Dalton had better luck and was successful in obtaining two litters from this pair. As some of the pups from these matings were not up to the standard of their parents, they were pelted.\*<sup>4</sup> Later Dalton was able to get from Lories Holland, Bedeque, Prince Edward Island, two other pairs of black foxes. In the year of 1890 Mr. Dalton took Mr. Robert T. Oulton in as a partner and they moved their foxes to Cherry Island, the home of Mr. Oulton.\*<sup>5</sup>

\*4. Black Fox Magazine. August 1929. P.1.

\*5. Theory and Practice of Fox Ranching.  
Allen and McClure. P.18.

In 1900 Mr. Dalton sold to Robert Tulpin and James Gordon a pair of silver black foxes. These foxes were removed to Black Banks, Prince Edward Island. It was around these two enterprises that the black fox industry has been built up.

Dr. J.A.Allen and W. Chester S. McClure on page 20 of their book have this to say: "Although it may be claimed that the early development of the fox farming industry centered in Prince Edward Island, mention must be given to workers outside of this province. In 1898 Johann Beitz, Piastre Bay, Quebec, brought silver foxes from Alaska and had some success in breeding these in captivity. L.L. Burrowman, Wyoming, Ontario, is credited with keeping foxes under domestication for twenty years. In 1903 his stock began to increase. During 1910-11 R.E. Hamilton and G.W. and B.J. Gillis introduced the business in Ontario, and they may therefore be regarded as pioneers in that province.\*<sup>6</sup> The Alaska fox was first domesticated by J.E.Milligan and George Morrison. Unaware that the silver black fox was being bred in captivity in far-off Prince Edward Island, Morrison, in the interior of Alaska, was busy establishing a strain of foxes known later as the Alaska. According to Morrison's own account he got his inspiration quite accidentally, "One day an Indian came into my store to purchase tobacco. He had in a basket three

\*6. Theory and Practice of Fox Farming.  
Allen and McClure. P. 25.

little black foxes that he had dug out from their den on the bank of a river. As soon as I saw these pups it occurred to me that if I could buy them and raise them and if they would breed, I could develop a wonderful business."\*<sup>7</sup> Two of these pups lived, bred the following season and gave birth to six puppies. Later other foxes were secured from the same source, and these, with the original foxes, formed the foundation of this strain of Alaskan ranch bred foxes. Milligan a native of Prince Edward Island, returned to Alaska after a sojourn in his native province. The possibilities of fox ranching, as demonstrated by Dalton, strongly appealed to him, and some foxes were secured in Alaska and shipped to the Island, where high prices were obtained. He learned of Morrison's pioneer work in ranch foxes, and a partnership was formed in 1914.\*<sup>7</sup> The ranch in Alaska was closed and the best of the breeding animals transferred to Prince Edward Island."

As was mentioned before, the fur farming industry had its beginning on Prince Edward Island and prior to 1910, the people engaged in this business had endeavored to build up a strain of breeding foxes in which the offspring would breed true to type. In doing this they had culled their flocks each year and sold the pelts on the markets.

As a result of this, exaggerated tales of profits to be made in this industry began to circulate with the result that fabulous prices were offered for breeding stock.

\*7. Silver Black Fox and Its Domestic Cultivation. Milligan-Morrison. P.14.

Due to this boom, no foxes were pelted in 1911 except those too poor to be sold for breeding stock. The demand was far greater than the supply, resulting in the shipping into Prince Edward Island of foxes from all provinces where they could be obtained. These foxes were a mixture of breeds and their offspring did not breed true to form. Nevertheless they were used and sold as breeders with the result that many of those ranches which today are having trouble with poor offspring can be traced to this boom period where any pair of foxes brought fabulous prices.

During this boom period many ranches were started in the New England States and the industry has since quickly moved westward, until at the present time they are being grown successfully in the Pacific Coast States, the Rocky Mountain Region, North and South Dakota, Minnesota, Wisconsin, Michigan, the New England States and some other states farther south in the Appalechian Mountains. Practically all of Canada and Alaska is suitable to fox farming. At the present time, according to estimates made by the biological survey of the United States, there are two thousand five hundred fox farms in the United States and about three thousand in Canada.

According to the estimate made by the American Fox Institute, in the spring of 1929, there were approximately one hundred and twenty thousand live foxes in existence of which no more than twelve thousand had eighty-five per cent perfection of good fur and could be called good foxes. The rest will have to be weeded out and will not bring the high prices that the others do.

The fur markets of the world before the entry of the British into the fur trade of Canada were at Paris, Vienna, Amsterdam and Leipzig; but due to the dominance of the British in later years the leading market quickly shifted to London, England, which held a dominant position until the world war. Since then great competing centers have sprung up, such as Montreal, New York, St. Louis, and Seattle.

At the present time there are three recognized breeds of silver foxes. "The Pure Canadian or Standard Bred Fox" whose origin was in Prince Edward Island and which has been bred to its present standard by such men as Dalton and Oulton. It is to this strain that most of the foxes in the states owe their origin.

Then there is the "Alaska Fox" which originated from wild silver foxes, captured in Alaska and domesticated by Milligan and Morrison. This strain of foxes is reported to be much larger than the standard fox but so far as I know, none of these animals have been sold for breeding purposes. Messrs. Milligan and Morrison have been breeding up this strain and from the reports of prices paid for the pelts of those they have sold, they evidently have a high grade fox.

Besides the two standard strains mentioned above, Fromm Bros., Nieman and Company of Wisconsin have produced what is known as the "Silver Cross Fox." The "Silver Cross" is the result of cross breeding the Alaskan breed of Silver fox with "The Standard Bred Fox" of Prince Edward Island. This crossing of the two breeds took place in 1908

and today this new type is recognized as a standard with the name copyrighted.

In addition to raising of Silver foxes in captivity, we now find a considerable number of people who are raising what is known as the blue fox. The blue fox is a descendent of the white fox of the Artic regions. This type of fox is approximately the same size as the silver, its coat being similar to a real dark maltese cat, known as a silver blue having scattered silver hairs through their pelt.

### What is a Silver Fox?

On page two of bulletin 1151, U.S. Department of Agriculture they have defined the question. "The name Silver Fox, as commonly used by furriers, includes the dark phases of the ordinary red fox, variously called silver, silver gray, silver black, or black. The color of the red fox of the Northeastern states and its allies of the colder parts of North America varies from red to black, and these extremes, with the gradations between them, form four more or less distinct phases, known respectively, as red, cross or patch, silver and black.

The Silver fox, therefore, is a color phase of the red fox. It is dark all over, with silver hairs inter-mixed, but no red, and the tip of the tail is generally, but not always, white. The guard hairs which give the silver appearance to the pelage are not entirely white, but are black with a white band. Variation in guard hairs is common.

In the red phase the coat is entirely rich fulvous; that is, tawny or dull yellow with a mixture of gray and brown, excepting restricted black markings on the feet and ears, a white area at the end of the tail, and certain white banded hairs on the back and rump. From this phase to the next the black increases in extent until in the typical cross fox the black predominates on the feet, legs, and underparts, while

fulvous overlying black covers most of the head, shoulders, and back. A gradual increase of the black and elimination of the fulvous or its replacement by white brings the next phase, the silver fox, in which no fulvous appears, the entire pelage being dark at the base and heavily or lightly overlaid with the banded guard hairs previously described. Silver foxes vary from almost entirely silver to those which are entirely black except for a few white banded guard hairs on the back and rump. Finally in the black fox the white is absent from all parts except the tip of the tail, which, as in all phases is usually white.

In general, the cross fox is fairly common, the silver very scarce, and pure black exceedingly rare. The prices usually paid for the different skins vary according to the relative scarcity of the animals and the market demand. Red fox skins command only a moderate price; cross foxes bring somewhat more; and silver foxes several times as much. Black foxes are not so popular at present, for the reason that dyers can so closely imitate them with a dyed red fox that the average person cannot tell the natural black fox from a dyed skin."\*<sup>8</sup>

\*8. Silver Fox Farming Bulletin, #1151.  
U.S. Department of Agriculture. P.2.

Breeding Standards of the Fox Industry.

It is only natural that the men engaged in the fox industry should look to some form of standard in this new industry so that in the selling of breeding stock, the purchaser would receive papers which would certify as to the kind of animal sold.

The fox breeders of Prince Edward Island formed the first organization of this nature and is known as "The Silver Fox Breeder's Association of Prince Edward Island."

Later a group of breeders organized what is known as "The Canadian National Silver Fox Breeder's Association."

At the present time both of these organizations are well fixed financially and functioning in a manner that reflects credit on their work. Undoubtedly this new industry has been greatly helped by these two organizations.

In the U.S. the industry has organized the "American National Fox Breeders Association" and "The American Fox Institute."

"The purposes of "The American Fox Institute" are to maintain accurate standards of fox value, to improve the quality of breeding stock through scientific methods, and to keep the industry clean and progressive. The American Fox Institute is a clearing house of information on the buying, selling, breeding, and care of

foxes. The Institute has nothing to sell--it performs only service--consult it freely."

"The Institute is operated for the welfare of the industry, the protection of the beginner, the success of honest breeders, and its efforts are designed to aid the development of better foxes and consequent production of better pelts. The information it distributes is of an impartial nature. It does not show favors to its members nor discriminate against non-members. It is a non profit making organization. Its income is entirely devoted to scientific research and the dissemination of educational information."

"Its Board of Directors is made up of men from both Canada and the United States, men who are prominent in the fur industry and who are working to put the industry on a stable basis. In order to keep the industry clean, "The American Fox Institute" is cooperating whole-heartedly with the "Better Business Bureaus of America." The address of the American Fox Institute is, The New Rust Building, Washington, D.C."

The address of the "American National Fox Breeder's Association" is Minneapolis, Minnesota. The concensus of opinion among the fur farmers in this Survey, was that it does not pay to have foxes scored as there is but little demand for breeding stock and scoring does not help the sale of pelts.

NATURAL FACTORS OF SILVER FOX PRODUCTION.

## Climate.

Most people hold the opinion that climate plays an important part in the production of good fur and well they may for history tells us that furs come from the colder regions or at least temperate ones. The productions of fur on a farming basis is not old enough as yet, to show whether good fur can be produced in the warmer regions. The fur industry had its origin in a cold moist climate and has been coming south into warmer dryer climates, but whether there will be a line of demarcation where good fur cannot be produced is yet a question. "The natural habitat of the Silver fox includes the greater part of Northern North America from the central United States northward to and including the border of the treeless tundras."\*9. In this Section of the country we certainly have plenty of cold weather to produce the maximum growth of fur, but the question is do we have sufficient moisture? Foxes grown where the humidity is high at all times like it is at Prince Edward Island and on the islands off the coast of Alaska are supposed to develop better fur than do those in a climate just as cold but much dryer, but this remains to be proven. Perhaps a few more years will

\*9. Silver Fox Farming.  
U.S. Department of Agriculture.  
Bulletin No. 1151, P.4 and 7.

show what effect this dryness will have on the quality of fur produced here.

In connection with climate, the matter of shade may be discussed. Articles on the subject of shade for foxes are quite common, but as yet no proven facts are available. However most fox farmers will agree that excessive sunshine causes fox pelts to turn brown in spots and give the pelt a dingy appearance. In fact some farms build sheds for the foxes to go in, in the day time when no other shade is available.

#### Cost of Land.

Land in this section of the country cannot be considered an important element in the industry of fur farming. The reasons for this are readily apparent when we find that an acre of land is sufficient to farm twenty or thirty pair of foxes and still have plenty of room. The cost of land, of course, depends on the kind and location, but as secluded spots consisting of otherwise waste land, are often utilized in this industry, land as a factor in fur production is cheap. It should not cost over one hundred dollars per acre.

#### Kind of Land.

A fox farm can very well use land that is no good for any other purpose, with perhaps the exception

of grazing. In fact, some of the best fox farms are located on rocky land which is quite heavily timbered, such as some old creek bed, or on side hills. The trees in the case of the former, provide shade and the rocky soil dries out quickly making the pens more sanitary. Any type of soil, providing it is well drained can be used successfully. At the present time, some ranches say that land on which alfalfa and other thick vegetation crops can be grown is best as the foxes eat this and it tends to keep them more healthy. On the other hand, there are those who fill the bottom of the pens with gravel, which prevents vegetation growth. Askbrook says, "It has not been definitely determined that certain types of soil are more favorable than others to the propagation of fox parasites. Soils possessing an undue amount of moisture, and densely shaded situations are favorable to the development of parasites."\*10 Sunshine is the best disinfectant for keeping the pens and grounds free from disease, and I favor the latter. However, they are still experimenting with the various types of land, but as yet no definite results have been established.

\*10. Silver Fox Farming. Bulletin #1151.  
U.S. Department of Agriculture P.7

CAPITAL IN RELATION TO THE FUR INDUSTRY.

Having already discussed the natural factors in relation to the fur industry, we now come to the problem of capital and without doubt, in the competition of the three, capital is the most important thing. Around it hinges the crux of the fur industry and not on the cost of land or the price of labor.

Fur Farm Equipment and Its Cost.

The following will give a fairly accurate estimate of the amount and the cost of equipment found on the average fox farm in this section of the country. The prices will of course vary, depending on what amount of material is bought, where obtained, and on the quality.

The first item to be considered in equipment and its costs will be the kennel. The kennel is what we might call the home of the fox. It is here where it flees when frightened; it is here where the offspring are born and where the fox spends a large proportion of its time. Many kinds and varieties of dens have been used, from a hollow log on up through the scale to barrels and well-built kennels, made by experienced carpenters. The consensus of opinion at the present time is in favor of a well-built kennel, warm and off the ground. The claim is that more of the pups born are raised to maturity and that the general health of the foxes is better.

The following figures are for one of the latest and considered by some fox men as one of the best kennels that can be built.

Amount of Lumber	173 feet	Cost of Lumber	\$14.68
Amount of nails	4 lbs.	Cost of nails	.25
Amount of paper lining	20 sq.ft.	Cost of p.lining	.50
Amount of hinges	5 pairs	Cost of hinges	1.25
Amount of screws	20	Cost of screws	.05
Amount of oil dressing	1 quart	Cost of o. dressing	.30
Amount of paint	1 $\frac{1}{2}$ pints	Cost of paint	.48
Amt. of Corrugated fastners	24	Cost of fastners	.10
Amount of hook-eyes	2	Cost of hook-eyes	.05
Amount of labor	11 hours	Cost of labor	10.00
Amt. of labor for painting	1 $\frac{1}{2}$ hours	Cost labor	1.00
		TOTAL	\$28.66

#### Pens.

The size and shape of pens vary as does the type of construction. The following specifications are for the standard pen.

Standard Size. 25 feet wide by 50 feet long, 7 feet high.

Wire for floor covering	250 ft. 2" mesh.	5 ft. wide @ 6¢	\$15.00
Wire for sides and ends	150 ft. 1 $\frac{1}{2}$ " mesh.	5 ft. wide @ 6¢	9.00
Wire for sides and overhand	150 ft. 2" mesh.	4 ft. wide @ 5¢	7.50
Steel posts	13 per pen @ 60¢ each		7.80
Tie staples	18 lbs. @ 16 $\frac{1}{2}$ ¢ per lb.		1.65
Hinges on door	2 pairs @ 20¢ per pair		.40
Lock on door	1 @ 40¢ per lock		.40
Spring to close door	1 @ 10¢ per spring		.10
Labor for construction	40 hours at 50¢ per hour		20.00
		TOTAL	\$61.85

## Construction Cost per rod of Guard Fence.

Amount of wire	16½ feet long. 9 feet high	\$1.98
Amount of posts	1	.60
Labor	2 hours @ 50¢ per hour	1.00
Sundries		<u>.05</u>
TOTAL		\$3.63

## Incinerator.

An incinerator is found on most farms to burn the bones. The cost will, of course, vary in relation to the kind. The following costs represent a fairly good one but others which will serve the purpose can be built for considerable less.

Grates - - - -	-\$25.00
Cement- - - -	3.00
Bricks - - - -	10.00
Labor- - - -	<u>22.00</u>
TOTAL - - -	-\$60.00

## Equipment for Slaughtering Horses.

Some farms have no special equipment for slaughtering of the horses, but where many are killed it saves much time and exertion to have facilities to handle this job in the proper manner. An estimated cost of such equipment is given below.

Cement floor	10 feet by 12 feet	\$20.00
2 uprights	12 feet by 12 by 12 feet long	5.00
1 cross bar	9 feet long	1.00
rope	30 feet 1½ inch.	2.00
Knives		2.00
Steels		<u>1.50</u>
TOTAL		\$31.50

### Storage Plant to Keep Meat.

Many types of places are found for keeping the meat so that it will not spoil. Some ranches are equipped with modern refrigerator plants and buildings that cost from \$3000.00 up, while others use cellars or other types of places. No estimated cost of such equipment could very well be given as it would depend entirely on the type selected.

### Truck and Trailer.

Any farm will, of necessity, need a truck and trailer. The horses are often bought at a distance and to lead them to the slaughter house would entail the loss of much time. Here again the costs will depend on the type and choice of the buyer. A second-hand truck will, of course, cost less than a new one. The price may vary from \$100.00 upwards. A good trailer may be built for around \$75.00.

### Equipment for Feeding.

As the meat cannot be fed to the foxes until it is ground and mixed with other food, it necessarily takes some equipment here, but as stated before, the cost will vary with the type used or selected. The following is a list of equipment as found on most fur farms.

Buckets and tubs to handle meat.

Motor for power.

Belts and pulleys.

Grinder.

Mixer.

Wheel barrows or other equipment to haul feed to pen with.

Equipment for Pelting.

Pocket knife- - - - -	\$1.50
Stretching boards - - - - -	1.50
Fox tongs - - - - -	<u>5.00</u>
Total- - -	\$8.00

Miscellaneous Costs.

In addition to the above equipment, most farms when they start are faced with the necessity of bringing water and power to the farm. As to the cost, no estimate can be made here as conditions alone will determine it.

Cost of Breeding Stock.

Buying foxes for breeding purposes is quite a bit like purchasing other types of farm livestock. The pick of the herd costs more than does the rest of the animals. At the present time foxes, with considerable silver in their fur, demand the better prices. A few years ago the regular price on a pair of foxes in this section of the country, was eighteen hundred dollars, but this figure has been reducing each year until at the present time a good grade of fox can be obtained for from three hundred to four hundred dollars. This rapid decline in the price of breeding stock is without doubt due to the fact that the fur raiser would rather sell them at this price than to take chances on pelting when the average price of pelts is around one hundred dollars.

High prices of breeding stock in the beginning are traceable to the fact that these foxes had to be shipped in, with broker's commissions, salesmen's commissions, inspection charges, and in some instances, a tariff charge.

As a criteria of comparison, in relation to price of live animals, statistics on the sale of live foxes is given for Canada for two years, 1926-27. No statistics are available for the United States.

1926.

Adults:

Number, 2990  
 Value, \$623,419.00  
 Av. Val. \$ 209.00

Young:

Number, 7524  
 Value, \$1,565,911.00  
 Av.Val. \$ 208.00

1927.

Adults:		Young:	
Number,	2939	Number,	9865
Value,	\$650,016.00	Value,	\$1,851,800.00
Av.Val. \$	221.00	Av.Value \$	188.00

Upkeep Costs on A Fur Farm.

The pens and kennels of a fox farm are exposed to the elements at all times, and just how long they will last in this country remains to be seen. However, as the pens are constructed of galvanized wire, they should last around ten years. The kennels, if they are well constructed to start with and painted to begin with, should last much longer than the pens. The foxes are certainly not rough with them.

Such equipment as trucks and trailers, the incinerator, grinder, etc., can be expected to depreciate much faster than the pens and kennels. Some farms have figured depreciation as high as seventeen per cent, and taking the equipment of the whole ranch into consideration, perhaps this is not any too high.

In talking about depreciation we should also consider the breeding stock. Practically all fox owners will tell you that the life of the average fox is better than ten years and that you can expect them, up until the time they are ten years old, to mate and reproduce young. After that it is better to pelt them and avoid chances on them not raising a litter.

### Costs of Producing a Fox Pelt.

The cost of producing a fox pelt, will of course, vary among all owners. The estimated cost given by the different managers varied from thirty-five dollars to around fifty dollars, in cases where they were taking care of their own animals. Two cases of costs will be given, one in which the costs are taken directly from the expenses on a ranch and the other from where the owner of the foxes has someone else take care of them.

### The Costs of Producing An Individual Fox Pelt.

In working out the following cost sheet, all the expenses, except marketing costs, were taken from an income tax report, filed by a well-known fox farm. The number of pairs kept for breeding purposes that year was one hundred and twelve. The increase was figured as the average of all the fox farms for the five year period, which was one hundred and thirty-five per cent after deducting death losses. The marketing costs were estimated on a six per cent commission basis, on the average price per pelt of \$88.33.

The Capital investment for the production of a single fox pelt would be about as follows at the present prices. Depreciation figured at seventeen per cent, which it was, would in six years write off the original cost of the buildings and equipment.  $6 \times \$9.74$  equals investment in buildings and equipment of \$58.44. One pair of foxes at say \$400 producing two and three-quarter pelts would make

the capital investment of livestock per pelt equal \$145.45.  
Capital investment of livestock plus buildings and equipment equals \$199.89.

Summary of Costs.

Light, Heat and power-	- - - - -	- \$	.97
Express-	- - - - -		.37
Marketing Costs-	- - - - -		5.19
General expense-	- - - - -		.17
Taxes on foxes--	- - - - -		1.24
Truck expense-	- - - - -		1.27
General repairs-	- - - - -		.42
Labor-	- - - - -		13.85
Feed - - - - -	- - - - -		11.64
Medicine - - - - -	- - - - -		.20
Office expense - - - - -	- - - - -		.37
Telephone- - - - -	- - - - -		.19
Property taxes - - - - -	- - - - -		.70
Corporation tax- - - - -	- - - - -		.13
Depreciation- - - - -	- - - - -		9.74
		Total - -	-\$46.35
Sale price of pelt for three year average-	- - - - -		-\$88.33
Less total costs of producing pelt-	- - - - -		- 46.35
			<hr/>
INTEREST ON INVESTMENT AND PROFIT-	- - - - -		-\$41.98

The Costs of Production on Ranched Foxes.

To figure the costs of production on the pelt of a ranched fox, it will be better to figure the costs of production of a litter of foxes, which according to our average would be close to two and three-quarter foxes and then divide our total costs by this two and three-quarters to get the cost of one pelt.

#32

Ranching charges on pair of foxes - - - -	-\$150.00
Average taxes on pair of foxes- - - - -	4.00
Express charges on 2 3/4 of pelts- - - - -	1.00
Pelting charges- - - - -	7.50
Marketing charges equals 6% of sales or- - -	14.57
Sales of 2 3/4 pelts at \$88.33- - - - -	-\$242.90

Cost of producing 2 3/4 pelts- - - - -	-\$177.07
Cost of producing 1 pelt- - - - -	64.20

Interest on Investment & Profit- - - - -	-\$65.83
(One pair of foxes)	
Interest on Investment & Profit on one pelt- - - -	-\$24.13

### MANAGEMENT.

On some fox farms the manager and caretaker are one and the same, while on others they are different individuals. It is the managers job, whether he owns the business or is just hired, to look after its interests, to produce as efficiently as possible. Of course, all managers are not the same, some are bound to fail and others will make a success in most any type of business and the fur farming industry is no exception.

On a fox farm the manager would do well to concern himself with some of the following problems, disease, escape, breeding to produce better stock, primeness of pelts and records.

### Diseases.

Of course, no person could expect the average caretaker or manager on a fox ranch to be able to diagnose and treat all the different diseases to which a fox is susceptible. The Dominion Bureau of Statistics, in their report on "The Fur Farms of Canada for 1927" have listed in the order of greatest frequency the cause of deaths of thirteen thousand, six hundred and forty-eight foxes during the years of 1926 and 1927. The cause of death, according to them is as follows.\*11

\*11. Reference. Fur Farms in Canada, 1927. Page 7.

Cause of Death	1926		1927	
	Adults	Young	Adults	Young
Worms	138	823	183	1402
Distemper	250	315	236	1354
Accidents	165	116	97	210
Malnutrition	2	46	1	302
Killed	14	8	104	193
At birth		186		265
Injury			64	113
Pneumonia	47	49	43	134
Fighting	90	86	58	117
Killed by parents		117		152
Indigestion	29	85	47	87
Killed by mate	98	29	93	22
Ear mites	20	37	25	66
Strangled	30	49	22	57
Predatory birds			1	72
Congestion of lungs		5	16	49
Over feeding	8	30	14	49
Poision	22	24	28	34
Devoured	9	27	11	32
Parasites	12	39	21	19
Kidney disease	6		30	5
Diarrhea	20	45	4	28
Lack of sanitation				31
Diseases of stomach	9	71	5	26
Deserted by mother		7		28
Influenza	24	22	6	22
Colds, exposures, chilled		304	23	484
Miscellaneous causes	144	494	181	428
Unkown causes	362	854	682	1497
TOTAL	1508	3868	1995	6277

The number of young which died in Canada in proportion to the number of pups born, is as follows, in 1926. The percentage of deaths was 15% and in 1927 it was 16%. The percentage of deaths of the young in my survey was not available separately but the total percentage for both young and old is as follows:

Year	# of foxes	# died	percentage
1925	315	16	5%
1926	559	30	4.5%
1927	921	65	7%
1928	1476	79	5.3%
1929	2300	125	5.4%

In reference to the year of 1929, it must be mentioned that the survey was taken during the summer months of 1929 so that this figure may be somewhat greater than what it shows.

Listed among the major cause of death in the survey just completed are the following: incorrect feed, distemper, lack of sanitation, fly blown food, accidents, carelessness, worms, fighting, pneumonia, killed by parents, and other minor causes. In the survey of twelve ranches, two had had distemper and practically all had trouble with worms.

Dr. Allen in the September issue of 1929, page one, of the Black Fox Magazine, described a test whereby they can tell if a fox has worms by testing the feces of the animal. As for distemper, doctors in Canada and the United States are working hard to perfect a remedy or something that will immunize the herd. From Brothers of Wisconsin, successful breeders of the "Silver Cross Fox" have endowed the University of Wisconsin with a sum of money in order that the school can experiment on this disease and perhaps find a remedy.

The diseases of foxes, their cause, prevention, and cure, are exhaustively treated in "The Theory and Practice of Fox Ranching" by Dr. J.A. Allen and W.C. Chester S. McClure. When other types of high priced animals become sick a veterinarian is called in. Why not do the same with a fox?

### Escape, Accidents, and Fighting.

The fox is a very spry and cunning animal and any possible chance of escape is investigated and tried by them. The best safe-guard against the escape of any animals is to have a good guard fence enclosing the pens. In any ranch it is not uncommon to find foxes escaping from their pens and if no guard fence encloses these pens, the chances are that the ranch has lost a fox, for re-capture is difficult under such circumstances. As an example of what might happen when no guard fence is used, on one of the ranches near here, the foxes dug a hole under the fence and a half-dozen or more escaped through the same hole, before it was discovered. Another time the wind blew a tree down within the enclosure, which fell across the fence. The foxes ran up the tree to the top of the fence and then jumped to the ground. About thirty escaped in this manner.

Some farms have fox hounds to re-capture the escaped foxes but even when they do get them back in this manner, the fox is pretty well used up and sometimes dies as a result. Then if the pelt is torn, it doesn't bring much, especially if it is unprime.

Accidents in which the animal falls and breaks a leg, dying from the resultant injury, are quite common. Foxes run up the corners of the pens and the accidents occur when they drop back to the ground. Some fox men say they are going to make their next pens round, or semi-round, and think this will prevent the foxes from

climbing the fences. They never climb except when they get in a corner.

Some fox farmers have had young pups crawl through the mesh wire and into other pens where the old foxes killed them. The trouble here was that they used two inch mesh wire on the bottom of the pens, whereas if they had used one and one-half inch mesh wire, this type of loss would never have resulted.

Fighting has resulted in quite a few deaths, but they now have a method whereby they clip the tusks of the foxes, thus preventing them from doing serious damage to each other. It has also been found that fighting occurs much less in pens where only a few foxes are kept; so some farmers have separated litters of four and five as soon as they were old enough to wean and put part of them into another pen.

#### Breeding to Produce Better Stock.

Some of the original stock which came to this section of the country were good silver foxes, some were practically black and some turned out to be Sampsons. Black fox pelts are cheap and sampsons are practically worthless. Some foxes produced poor offspring and had to be done away with. At the present time, the foxes of this part of the country are of a much better grade than they were to begin with. Each year most of the ranchers are culling their flocks of the undesirable ones, and it

is probably for this reason that the average price of the fox pelts from this section was so far below the average for the United States. When it comes to breeding or mating so as to produce a better quality of animals in regard to size and fur, the best evidence of the quality of the individuals mated may be found in their offspring. Of course, records should be kept of all the foxes in this regard, so mating to produce prepotency and fecundity in the herd is not such a hard matter after all. Foxes of today breed pretty true.

#### Primeness of Pelts.

Primeness of pelts in the herd will depend on the feed the foxes have had during the summer and also on the climatic factors. When the fox's pelt is prime, the hair is clear and glossy and radiates the color. Foxes in the same herd, under the same conditions, will become prime at different times. Foxes that are to be pelted should be watched carefully so that they will not become over-prime, as pelts of this type bring much less than those which are not quite prime.

The concensus of opinion among fox men is that pelts from animals a year or more old bring better prices than the skins taken from pups in the fall which were born the previous spring. Pelting takes place in this section all the way from September to early in the next year.

### General Care of Foxes.

In the general care of foxes the labor is much the same as taking care of other domestic livestock. It is more or less a matter of routine work. The foxes have to be fed and watered each day and if there are any injured they have to be treated. The runs and kennels have to be cleaned out occasionally and in some instances fumigated. The preparing of food for the foxes is not such a complicated task that a man of ordinary intelligence could not soon learn to do it. Meat, eggs, vegetables and other foods are fed to the foxes in varying proportions. Sometimes they grind it all up then run it through a mixer and apportion it out to the foxes. Horses have to be killed and the meat taken care of and occasionally rabbits and other small mammals are captured, killed and used for food. When rabbits are used, the heads and feet are chopped off, the fur peeled and the intestines taken out, then they are ground and fed to the foxes. In case of squirrels and other small animals they are fed whole. The work of building pens and guard fences and the general care of a fox farm does not necessarily require the attention of a specialist, yet without doubt, better results would be obtained if the caretaker had previous training of this kind before taking over the care of a fox farm. Taken as a whole we cannot consider labor as the chief element in fur production in this section of the country. Labor is plentiful and a good caretaker for a fox farm may be employed at the rate of one hundred and fifty dollars per month or less.

Records.

A more systematic and accurate method of keeping books would be of great value to the industry at the present time. Too many of the managers of the fur farms cannot give statistical information which if they could, would be of great value to them in figuring out their future needs. Some of them have no records of their death losses and increase, and are not exactly sure what their feeding costs are.

In concluding this discussion on the subject of management, let it be made clear that this is not intended to be a discussion on the theory and practice of fur farming, but it is merely intended to point out some of the problems which the ranchers here are having to cope with. This author recommends that anyone who is caretaker or manager, of a fox ranch, to provide themselves with Askbrook's "Fur Farming for Profit," Allen's "Theory and Practice of Fur Farming", and to subscribe for the "Black Fox Magazine." Many interesting and helpful articles will be found within its pages. The United State's Department of Agriculture also publishes bulletins on this type of fur farming and may be had on request. Management is important in any business, and the business of fur farming is no exception. Some men can make a success of nearly everything they try while others fail. Some men in the fur farming industry will be successful and some will fail just as they do in any other type of farming. Management of a fur farm offers plenty of problems and much can be learned beside what is already known.

MARKETING.

In the marketing phase of this industry the discussion will center around pelts. A few people have occasionally sold a pair or two of live foxes, but at the present writing there seems to be no demand for breeding stock, and anyone engaged in this type of business can only figure on profits from the sale of the fur. The Silver fox pelt is as a rule sold at auction by some fur house. The principal markets for this type of fur are at the present time, New York, London, Seattle and Montreal Canada. The brokerage houses charge a commission of six percent for auctioning off the skins. Some of the more important of these firms are, The New York Auction Company, the Canadian Fur Auction Sales Company of Montreal, Frederick K. Huth Company, New York, Lamyson and Sons Company, London and the Seattle Fur Exchange. Marketing will be discussed under the following heads, supply, demand, and price.

Supply.

As was mentioned in the chapter on the history of fur farming, the supply of Silver Fox furs, before eighteen hundred and ninety all came from their natural home, the Northlands of North America. From a nucleus of a few pair in 1890 the number has increased until at the beginning of 1929, it was estimated that there was around three thousand ranches in the United States, with close to fifty thousand foxes. Canada had over three thousand fox farms and probably had more than sixty thousand foxes on them. However the foxes on the farms in the United States

are not all Silver, but include all the other types.

The percentage rate of increase per pair of foxes, is hard to estimate. Some figure on one hundred per cent; some on two hundred; and there are some as low as fifty per cent or less. In the survey conducted among the farms of this vicinity, the following increase was found, not counting death loss. Death loss is shown in disease under management.

<u>Year</u>	<u>Number of Pairs.</u>	<u>No. pups born.</u>	<u>% increase.</u>
1925	54	207	191%
1926	147	265	123%
1927	208	505	121%
1928	338	800	118%
1929	462	1376	148%

Figuring the percentage rate of increase for all the farms in the United States and Canada, it is doubtful if it will be over one hundred percent when the death loss is deducted. Canada and the United States are the principal producers of silver fox fur, although at the present time there are some ranches being established in various countries in Europe. Silver fox fur can be imitated by taking the gray hairs from a badger and glueing them on the hide of a black fox. Fur of this kind is called "pointed fox" and can readily be told from the original by pulling on the silvered hair. If it is imitation, the hair can be pulled out rather easily.

#### Demand.

The beauty and lustre of the silver fox fur has always placed it among the top ranks in the demand for furs. Silver fox fur is used to make boas, muffs, tippits, rugs,

trimmings for coats and scarfs. Probably ever since the days of Adam, women have used fur as adornment for the feminine figure. At the present time, they wear furs both winter and summer. The demand for furs depends a good deal on styles.

Along about 1920 the United States learned how to make cheap and better dyes. She also learned the secret of better tanning methods which leaves the skin much more pliable so that it will drape over the figure much the same as cloth. Due to this, the common type of fur became much cheaper and more desireable and the designers of fashion began using furs. Since that time there has been an unprecedented demand for furs because they were both stylish and cheap.\*<sup>12</sup>

The supply of silver fox fur has increased many times but the demand is still good, especially for the better grade. When it first became known that silver fox farming was being carried out in Canada and Prince Edward Island, many predictions were made that the demand for this type of fur would soon be nil, as the supply would be too great, yet there was sold in the United States last year eighty-five thousand fox skins (all types) and in Canada one thousand six hundred and twelve skins.

A.B.Balcom in Quarterly Journal of Economics 30; 665-81, August 1916, in an article entitled "Fox History of Speculation" has this to say, "Nor can there be any

\*12. Selling Furs on Our Own Market.  
Current Opinion 60:328. May 1916.

question with regard to continuity of demand for the commodities produced. The demand is based not only on the serviceableness of furs in cold climate, but on the exceptional beauty of the silver fox fur and its satisfaction of the desire for distinction." The above prediction was made in 1916 and it seems to have worked out as he said it would.

The following figures show the imports of silver fox skins into the United States during the past few years.\*13

<u>Year</u>	<u>Number of Skins</u>	<u>Av. Valuation.</u>
1925	556	\$97.25
1926	4323	57.63
1927	5427	75.81

The tariff on the above would be figured at 50% ad valorem basis.

The Total Value of Raw Furs Imported.

<u>Year.</u>	<u>Value.</u>
1925	\$5,726,725.00
1926	\$7,272,366.00
1927	\$8,655,919.00

It has been argued that only rich people can afford to buy silver fox fur and that consequently the demand for this fur would soon fall off as all those who could afford to buy would have bought; but if we can assume that a man or woman with an income of \$5000.00 per year can purchase this type of fur, if they wish, then there is

\*13. Fur Production of Canada.  
Season 1926-27. P. 15.

at least left a large potential market. The "World's Almanac" gives statistics for 1927 showing that there was at that time eight hundred and forty-five thousand and thirty people in the United States with the above mentioned income. Other countries would, of course, have many who could afford to buy silver fox fur.

Price.

The price of silver fox skins in the early days of fur farming and prior to that was probably considerable higher than what they are at the present. Statistics for Canada can be given for several seasons and show a fairly even trend. Statistics for the United States are not available except for last season. The estimated average price per fox pelt of the silver variety was \$160.00. This included blacks, quarter silvers, and half silvers. The blacks would average about \$75.00. The quarter silver, \$125.00, and the half silver \$250.00. The above figures are for the United States for 1928.

The New York Auction Company, Inc., in "The Fur Market Digest for 1928" shows the following prices:

<u>Number of Skins.</u>	<u>Type of Skin.</u>	<u>Av. Price.</u>
1968	All silver	\$181.00
2244	3/4 silver	200.00
2563	1/2 silver	176.00
312	1/4 silver	157.00
520	slightly silver	73.00
239	black	55.00
995	low, rubbed, badly rubbed	30.00
<hr/>	<hr/>	<hr/>
8841	All of the above	\$156.00

Average excluding low, rubbed and  
badly rubbed-----\$172.00

Their report in "The Fur Market Digest 1929"

is as follows:

<u>Number of Skins.</u>	<u>Type of Skin.</u>	<u>Average Price.</u>
3150	All silver	\$209.00
2720	3/4 silver	184.00
2480	1/2 silver	156.00
307	1/4 silver	101.00
422	slightly silver	64.00
268	black	54.00
891	low, rubbed	41.00
10238	All of the above	\$162.00

Average, excluding low rubbed and  
badly rubbed - - - - - \$173.00

The prices of pelts from the fur farms  
included in the survey are shown below:

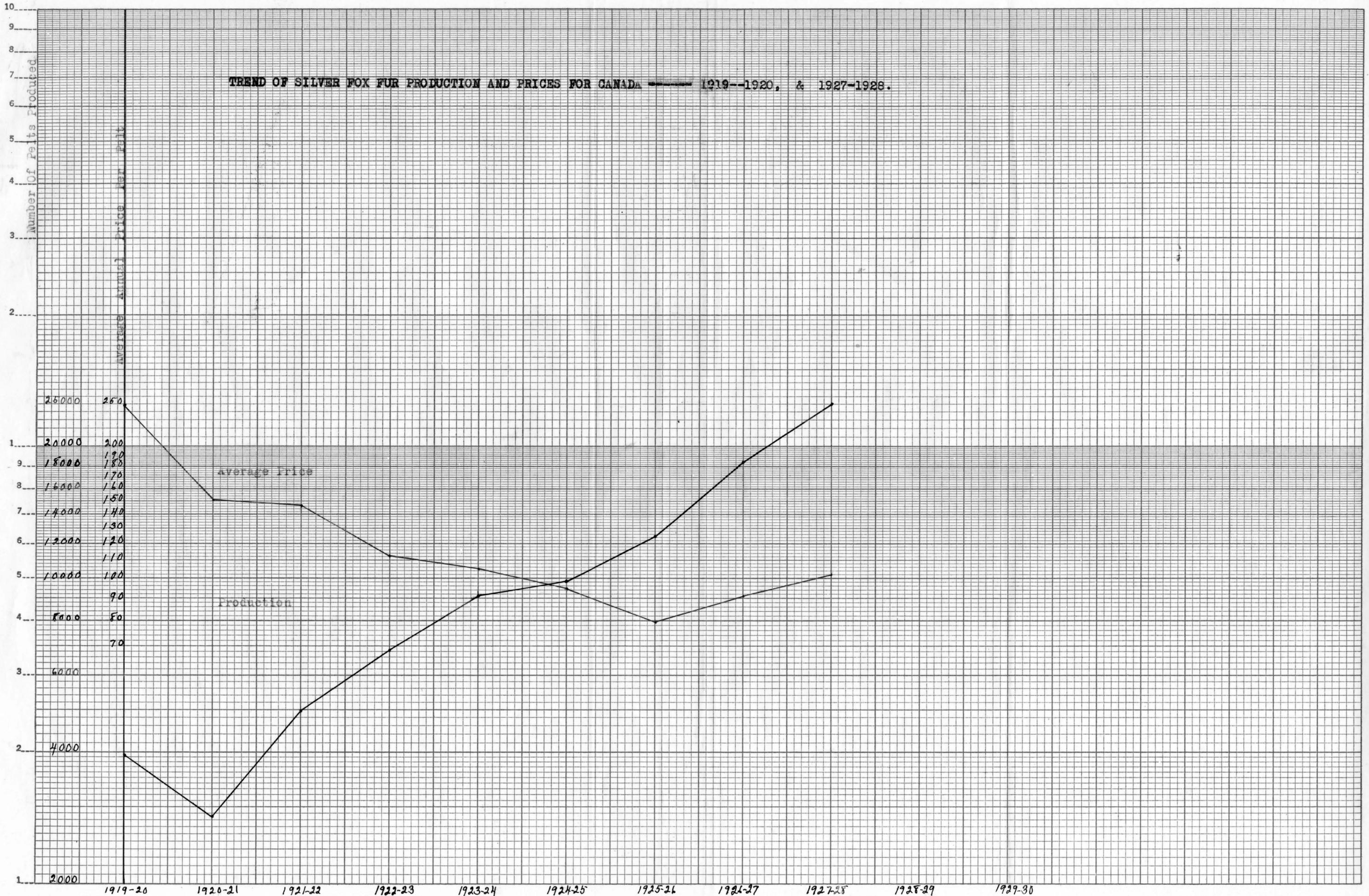
<u>Year.</u>	<u>No. of skins.</u>	<u>Type of skin.</u>	<u>Av. Price.</u>
1926	11	All classes	\$126.00
1927	260	" "	96.19
1928	395	" "	79.33

Statistics concerning number and average  
price of silver fox pelts, in Canada are shown below:\*14

<u>Year.</u>	<u>No. of skins.</u>	<u>Type of skin.</u>	<u>Av. Price.</u>
1919-20	3931	All types of	\$246.46
1920-21	2843	silver	151.99
1921-22	4979		147.42
1922-23	6865		112.80
1923-24	9090		105.86
1924-25	9858		96.15
1925-26	12464		79.21
1926-27	18398		91.01
1927-28	24833		101.26

\*14. Fur Production of Canada  
1927-28. P. 18.

TREND OF SILVER FOX FUR PRODUCTION AND PRICES FOR CANADA 1919--1920, & 1927-1928.



## TRENDS OF THE INDUSTRY.

If figures were available, trends of the industry could be shown more easily and to much better advantage on graphs. Those which are available will be shown in the above manner while those which are not will be indicated by the author, in the direction they seem to be going. The following subjects will be discussed in relation to trend; production methods, type of product, fur organizations, supply, demand, and price.

### Production Methods.

Fox farming is a new industry as compared with other types of farming, and many problems have confronted the raiser of this type of animal. However, improvement has been and is continually being made in improved methods of production. Hazards of escape are being eliminated, diseases are being overcome, feeding practices are improving, and a type of animal which will breed true to that type is being produced.

In Canada, large scale production is not being attempted. The fox farmers there seem content to raise foxes on a moderate scale. A lot of people have foxes but none of them attempt to produce the quantity of animals, such as some of the farms in the United States.

The money complex of the Canadian and the American seems to be different. The Canadian fur farmer seems content with a moderate income whereas the American wants to make millions and right now. As to whether it is better to produce

furs on a large scale or not remains to be seen, but I am inclined to think that in future years, a large proportion of this type of fur will be produced as a side-line on the farms, where utilization of waste products will lessen the cost of production. Another factor which may cause the trend of production to move toward the smaller farm is that in event fashions should throw furs out of style, it is doubtful if the specialized fur farmer could withstand the period of low prices until fashion decreed that furs would be worn again. The diversified farmer could probably weather such an event better than the specialized farmer.

#### Type of Product.

At the present time all fox farmers are eliminating as fast as possible foxes which do not contain a fair amount of silver. The reason for this is obvious, as the furs which are half and three-quarters silver bring much better prices.

#### Organization of the Industry.

Organizations such as "The Silver Fox Breeders Association of Prince Edward Island," "The Canadian National Silver Fox Breeders Association," "The American National Fox Breeders Association" and "The American Fox Institute" which are national and some inter-national organizations, are growing steadily. New members are being added and their financial status is improving. Many state and local organizations are also being formed in the United States,

Fox shows and fur exhibits are being held and in some places summer schools are listed for fox farmers.

Price, Supply, And Demand.

The supply of silver foxes in 1890 was limited in number. A few pair being the beginning. As to the trend of supply from that time to the present, no statistics are available to show this trend but it is known that there was in Canada at the beginning of the present year, something in excess of sixty-thousand foxes.

The fox industry in the U.S. began in the neighborhood of 1908, with a few pair, and at the beginning of last year there was close to fifty-thousand foxes. The U.S. is the same as Canada in regard to statistics so the actual trend of growth cannot be shown but it has probably been much faster in proportion than what the growth in Canada was. Up until the last few years there has been fairly good demand for live foxes for breeding stock, thus enhancing profits and probably influencing the growth of the industry. With the chance of profits from this source curtailed, I rather expect to see the expansion of the fox industry slowed up in comparison to what it has been in the past.

The price of silver fox fur was very high to begin with, prices being reported as high as two thousand dollars in some instances. No doubt marked fluctuations in the price of this commodity would be observed if statistics were available to chart the prices from 1890 to the present

time. Statistics available do show that the price has a tendency to vary inversly with the supply.

The demand for this type of fur has always been good, especially for the better class of fur. The majority of silver fox fur has in the past been bought by the richer class of people, but with a reduction in price it may be that a new market will be opened in the middle class which would of course be far larger than the previous demand.

CONCLUSIONS.

In summing up the factors of this industry, the following things are found. The natural factors of climate etc. seem favorable in a good many sections of the United States, and particularly so in Northern Utah and vicinity. Land is cheap, labor is plentiful and the price of capital is not so high that a profit cannot be made with an average increase and average costs. The average price of silver fox pelts in Canada for the last six or seven years, shows that the demand for this type of fur must be fairly stabilized. The price variation for the last two years in the United States, taking into consideration all the statistics available, would not show a variation of over ten per cent.

In view of what has been shown, the future of the fox farmer would seem to be good; but it must be remembered that the demand for fur is based on style, which can be very fickle. New styles are created each year and if new ones were adopted and popularized in which fur was not used, the price of fur would sink to disastrous levels.

There are what the merchandisers call "Style Cycles" which include the creation of styles, the adoption of styles, the popularization of styles, large scale production and abandonment. This last phase may come almost over night and articles which a few weeks before were in demand and which even now look good and wear well are cast

aside because of dame fashion.\*15 Something else has taken milady's eye and the old cannot be worn because the wearer would lose caste by being out of fashion. Fickle fashion maybe the greatest hazard of the fur farmer today. On the other hand Calvin Fletcher, Professor of Art at the Utah State Agricultural College, tells us that "fur has been used continuously in one form or another for the last three hundred years." The style of furs worn has changed in the past and will probably continue to change in the future, but this increases the demand rather than decreases it, for many of the furs are not suitable for remodeling and are discarded. It must also be remembered that fur has utility value in that it protects the wearer against the elements and is very durable compared to some forms of clothing. Women, as a rule, like to wear fur as the wearer is flattered by its use.

The Silver fox industry has been growing by leaps and bounds in the last few years, as shown by the increase in the number of live animals on the farms of the United States and Canada. Because of this I look to see the supply catch up to the demand before many years. Silver fox fur has been very popular in the past because it has been exclusive, but when it becomes too common we can look for a change to something else by the elite of society.

As to what effect such things as stock market

\*15. Commercial Aspects of Styles.  
Paul Cherington. Harvard  
Business Review. Vol. 2 P. 423.

crashes will have on the demand and price of silver fox fur is hard to determine at the present time, but in view of the fact that silver fox fur is classed as a luxury and therefore very sensitive to business conditions, we can expect a marked reduction in demand and price.

The price of the furs from this section of the country which were sold in December and January 1930 have shown reduction from forty to seventy per cent from those of last year. Whether this marked reduction was entirely due to the business conditions resulting from the stock-market crash or whether the skins were of an inferior grade cannot be determined.

A P P E N D I X.

Sample Copy of Questionnaire.

Will you please fill out the following questions concerning your fox farm. The reason I am asking for this information is that I wish to obtain the records of a group of fox farms then take their averages to see what this industry is doing. A summary of the results will be sent you if you wish them.

Number of Pelts Sold.

1925  
1926  
1927  
1928  
1929

Value of Pelts Sold.

1925  
1926  
1927  
1928  
1929

Number of Foxes Sold.

1925  
1926  
1927  
1928  
1929

Value of Live Foxes Sold.

1925  
1926  
1927  
1928  
1929

Number of Pairs Kept for  
Mating Purposes.

1925  
1926  
1927  
1928  
1929

Number of Pups Born.

1925  
1926  
1927  
1928  
1929

Death Losses of Old Foxes.

1925  
1926  
1927  
1928  
1929

Death Losses of Young Foxes.

1925  
1926  
1927  
1928  
1929

List cause of death in order of importance.

- |    |     |
|----|-----|
| 1. | 6.  |
| 2. | 7.  |
| 3. | 8.  |
| 4. | 9.  |
| 5. | 10. |

How much does the feed for a pair of foxes cost you per year?

How much does it cost you to produce a fox pelt, including all expenses?

How much are your taxes per pair of foxes per year?

How much are your medicine costs per pair of foxes per year?

Where do you sell your pelts?

What percentage do the fox houses charge for handling the pelts?

How much does it cost you to have your foxes pelted?

Do you belong to any fox breeders association?

Do you believe in having foxes scored?

How much are the ranching charges on a pair of foxes at your farm?

Answers to the above questionnaire were obtained from the following places: Logan, Providence and Salt Lake City in Utah; Preston, Thatcher, Cleveland, McCammon, Idaho Falls and Driggs in Idaho; and Afton in Wyoming.

SUMMARY OF RESULTS.

Number of Pelts Sold.

1925	
1926	11
1927	260
1928	395
1929	

Ave. Value of Pelts Sold.

1925	
1926	\$126.00
1927	96.19
1928	79.33
1929	

Number of Foxes Sold.

1925	44 pairs
1926	40 pairs
1927	21 pairs
1928	14 pairs
1929	12 pairs

Ave. Value of Foxes Sold Per Pair.

1925	\$1663.63
1926	1780.00
1927	1485.71
1928	1364.28
1929	1045.08

Number of Pairs Kept for Breeding Purposes.

1925	54
1926	147
1927	208
1928	338
1929	462

Number Pups Born.

1925	207	% increase	191
1926	265	% increase	123
1927	505	% increase	121
1928	800	% increase	118
1929	1376	% increase	148

Number of Foxes Included in Survey.

1925	315
1926	559
1927	921
1928	1476
1929	2300

Number Died. % of Death.

1925	16	5%
1926	30	4.5%
1927	65	7%
1928	79	5.3%
1929	125	5.4%

The causes of death in order of importance were as follows:

- |                        |                        |
|------------------------|------------------------|
| 1. Incorrect feed.     | 6. Carelessness.       |
| 2. Distemper.          | 7. Worms.              |
| 3. Lack of Sanitation. | 8. Fighting.           |
| 4. Fly Blown Food.     | 9. Pneumonia           |
| 5. Accidents.          | 10. Killed by Parents. |

The feed costs on a pair of foxes varied from \$10.00 to \$80.00, with the average at \$30.00.

The average cost reported, including all expenses, in the production of a silver fox pelt was \$40.00.

The average taxes on a pair of foxes per year were \$4.00.

The principal markets were Seattle Fur Exchange, Seattle Washington, Huth and Company, New York City, New York, and Lampson and Company, London England.

The foxes were generally pelted by their owners.

The majority did not belong to any fox breeders association.

They did not believe in having foxes scored saying it did not help in the sale of pelts and there was not much of a market for live foxes.

The average ranching charges on a pair of foxes per year were \$150.00.

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