

**CIHM
Microfiche
Series
(Monographs)**

**ICMH
Collection de
microfiches
(monographies)**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1998

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below.

- Coloured covers / Couverture de couleur
- Covers damaged / Couverture endommagée
- Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- Cover title missing / Le titre de couverture manque
- Coloured maps / Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- Bound with other material / Relié avec d'autres documents
- Only edition available / Seule édition disponible
- Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.
- Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from filming / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments / Commentaires supplémentaires:

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed / Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies / Qualité inégale de l'impression
- Includes supplementary material / Comprend du matériel supplémentaire
- Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image / Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.
- Opposing pages with varying colouration or discolorations are filmed twice to ensure the best possible image / Les pages s'opposant ayant des colorations variables ou des décolorations sont filmées deux fois afin d'obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10x		14x		18x		22x		26x		30x	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12x		16x		20x		24x		28x		32x	

The copy filmed here has been reproduced thanks to the generosity of:

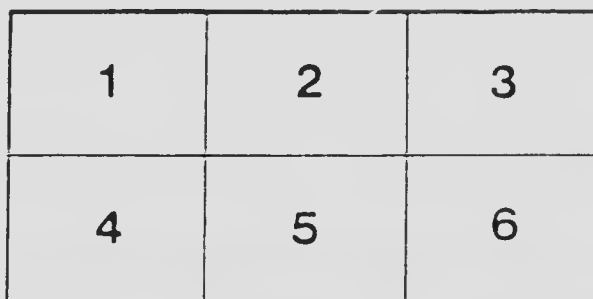
National Library of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

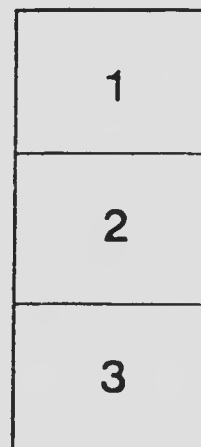
Bibliothèque nationale du Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

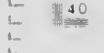
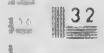
Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.



MICROCOPY RESOLUTION TEST CHART

ANSI and ISO TEST CHART No. 2



APPLIED IMAGE Inc

455 East Main Street
Rochester, New York 14609-1100
716-484-3000 (In N.Y.)
716-484-6389 (Fax)



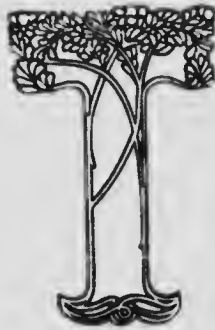
THE AUTHOR

Youngest son of Silas Rayner, pioneer fox breeder, who is raising foxes successfully at 80 years of age.

A MANUAL ²
FOR
FOX BREEDERS

(Copyright Canada and United States 1920, by E. H. Rayner)

BY
E. H. RAYNER
SUMMERSIDE, P. E. ISLAND
CANADA



CONTENTS

Admonitions	Page 29
Care and Feeding	" 18
Diseases and Parasites	" 24
Foreword	" 5
Furring Foxes	" 27
Guard Fences	" 13
Handling Foxes	" 26
Housing	" 14
Ranch Construction	" 9
Sanitation	" 26
Silver Fox Industry	" 7
Teeth	" 25
Watch House	" 14

QL 721

00

10

FOREWORD

The purpose of this manual is to furnish information and instruction regarding the ranching, housing, breeding, feeding and care of Silver Foxes.

The author does not claim infallibility on this important subject, nor does he seek to convince the reader that there are not some differences of opinion among successful breeders of foxes. What he does claim is, that he is at present, and has been since 1912, a successful breeder and handler of these valuable and sensitive animals; and the suggestions herein set forth are the result of careful and painstaking efforts on his part to solve the problems incident to the development of satisfactory and successful methods of raising foxes, coupled with much valuable information obtained from the pioneer breeders, to whose labors and perseverance we are indebted for the establishment of this great conservation movement and international industry.

He is confident therefore, that if the following instructions are adhered to in a common sense manner, the rancher will achieve a large measure of success. No set of rules can be made to govern all foxes and all cases. A successful breeder of any live stock must rely upon his own initiative and judgment in peculiar and unusual circumstances; and this is particularly true when applied to the breeding of that class of semi-domesticated wild animals.

It is his keen hope that the results of his experience may be helpful to those who undertake to follow his methods, and he wishes to wish the fullest measure of success.



THE SILVER FOX INDUSTRY

SILVER Fox breeding was first attempted on Prince Edward Island about the year 1889 or 1890, when a pair of foxes were obtained by Benjamin Haywood of Fignish, P. E. Island from James Lamb of Kildare Capes. These foxes were housed in a shed attached to his carriage house, and though the animals bred, they were so disturbed by curious visitors that they never raised any pups worthy.

From this time to 1905, may be said to have been the real hard, stormy, pioneer days in fox ranching. During this period the pioneers, whose names are household words wherever the fox business is known, struggled with the various problems of raising these wild and sensitive animals in captivity.

The big six, as they are still known, were:—Charles Dalton and R. T. Oulton; J. S. Gordon and Robert Tuplin; and, B. I. and Silas Rayner. These pioneers worked together in groups as their names are coupled, and through them this conservative movement, today world wide in its recognition and scope, was established on Prince Edward Island, now known as the home of the fox breeding industry.

It is impossible, within the confines of this booklet, to give a complete and accurate history of the development of the business. It is sufficient to say that the attention of outsiders was first drawn to fox breeding, by the enormous prices secured for pelts at the London fur sales. And it is the prices received for fine silver fox skins in the great market of the world today, that determine the sound, profitable basis of the enterprise. A pair of high-class breeding foxes, producing four to seven pups a year, net their owners from \$1000.00 to \$3000.00 per annum from the fur of their off-spring; and, when the pups are sold for breeding purposes, profits are considerably above amounts named.

Like any other live stock industry, the raising of foxes is subject to losses and discouragements; and we have no desire or intention to persuade any man to consider any fox breeding enterprise with the idea that everything is rosy and that he will not meet with difficulties and losses that he must strive to overcome. We do claim, however, with-

THE SILVER FOX INDUSTRY

out fear of successful contradiction, that the silver fox breeding industry is the most profitable live stock industry in the world today; and there are few enterprises in which farmers, hunters, trappers and keen business men have such an opportunity of marked success.

As a fur buyer, I paid one farmer \$9,000.00 for twenty-one skins in January, 1920; and this was only part of his year's output the remainder having been sold at higher prices for breeding purposes. Numerous instances might be cited where men mortgaged their farms to go into the industry, and today are worth from 20,000 to \$200,000. This is not always accomplished without difficulties and discouragements, and the loss of some foxes and their offspring; but beginning with from three to ten pairs of foxes, the law of average protects the rancher, and if he raises only one litter from the three pairs, his first year's operation will show him good profits, besides the experience acquired.

I know of no man, with ordinary ability, perseverance and sound common sense, who has not succeeded in the fox business. And the opportunities for profit to day, when high-class animals can be purchased at from \$1,000 to \$5,000 per pair, were never better. Read the report of the auction sales in London, where P. E. Island fox skins recently netted the owners as high as \$1,000.00 each; St Louis, where P. E. Island skins fetched as high as \$960.00 each; Montreal, where they were bid up to \$2,450.00 for a pair; and New York, where I have known of numbers of skins being sold at from \$800.00 to \$1,000.00 each, within the past four months; and you can grasp some idea of what is being accomplished in raising Silver Foxes for their fur. On the other hand, bear in mind that because of poor handling, lack of proper food, and consequent poor and unmarketable fur, many Silver Fox skins sell from \$25.00 to \$150.00 each. The highest prices and biggest profits, as in all other industries, go to the man who produces the finest article.

And get this: Success in fox breeding, from the standpoint of the market for both high-class breeding stock and fine furs, can only be accomplished by acquiring the best foxes obtainable, with a record behind them of good average production of off-spring and fur that brings the best price on the market.

THE SILVER FOX INDUSTRY

RANCH CONSTRUCTION

(a) LOCATION.

The first consideration in locating a fox ranch (provided climatic conditions are suitable for the production of fur) is a desirable growth of mixed hardwood and fir, with a Southern exposure; the land, preferably, having a gentle slope to the South where possible.

This permits of having:—

- 1st—Natural surroundings for the foxes, who inhabit and roam through the woods in their wild state.
- 2nd—Mixed hardwood allows the sun to enter the ranch in the spring when it is most desirable that the snow should be melted away from the ranch and the ground dry up early. When young pups first come out, they have the benefit of the warm sun and protection from the cold North and Northeast winds. As the weather grows warmer, trees but forth leaves that furnish shade from hot sun, and at the same time, permit circulation of air through the ranch.
- 3rd—The reason for sloping ground is that it affords drainage when the snow begins to melt. If the ground is too flat, the water collects in the middle of the pen where the snow is tramped down hardest by the foxes. With the proper slope, drains may be cut through the snow to permit of drainage from the early freshets.
- 4th—A good growth of wood affords the foxes protection from prying eyes of curious persons and should be sufficiently removed from highways of travel so that the foxes will not be disturbed by the noise of traffic and the sound of strange voices. This is particularly desirable on account of the highly sensitive nature of female foxes at the time of giving birth to their off-spring. Strange and unusual sounds sometimes throw the female into a panic which results in the loss of her litter, through her efforts to carry her pups to a place of seclusion.

(b) SUITABLE SPACE.

The size of pens constructed by different fox ranchers varies considerably; one of the chief consideration being, in the case of building

THE SILVER FOX INDUSTRY

small pens, the cost of wire and material. It is false economy to build too small an enclosure to afford sufficient room for exercise and sanitation, a policy which must adversely effect valuable animals to which the owner looks for profits on his investment.

I build my breeding pens thirty-seven and one-half feet square, which requires a roll of 150 feet wire to encircle the pen. This pen allows sufficient room for exercise and permits of the necessary sanitation that is impossible in a much smaller place. It is also convenient in pen construction as it obviates the necessity of cutting the rolls of wire and lacing the pieces together. A larger pen may be used if the breeder can afford the expense, but the great majority of foxes are kept in pens of this size. Where topographical conditions make it necessary, this pen may be built longer and narrower instead of square, the necessary space being the main consideration.

(c) HEIGHT, WIRE, ETC.

The height of the pen is largely a question of snowfall in locality where the ranch is being built. In my own experience with the snowfall of Prince Edward Island, I find that a wall nine feet high is sufficient. But where the snow accumulates to a depth of from four to four and one-half feet in the woods, the wall should be at least ten feet to prevent the foxes from jumping out.

The following are the specifications used in building my own pens:—

After laying a line for the pen, I dig a trench 30 inches deep, care being exercised to keep the inside of the trench exactly on the line laid out for the pen. I put in a 30 inch, 14 gauge wire, 2 inch mesh, so that the upper surface comes barely to the level of the ground. This wire should be laid close to the inside wall of the trench, and posts should be set in so that the outside of the posts comes on a line with the inside of the trench. This permits of the wire being laid straight and regular. I use above this, a roll of wire 3 feet wide, 15 gauge, 1½ inch mesh, which prevents young pups from crawling through when they first begin to run around in the pen. Above this, I use a roll of 6 ft. wire, 16 gauge, 2 inch mesh, which completes the wall of the pen.

After the ground wire is put in place, the trench may be filled in





PHOTOGRAPH FROM INSIDE OF PEN SHOWING DOOR, OVERHANG AND WIRE WALL

THE SILVER FOX INDUSTRY

and earth and stones packed closely around the posts. Care should be exercised that the posts are kept on a line; and when solidly packed around with earth and stones, a belt of one-inch boards, 4 or 5 inches wide, should be nailed to the posts around the entire pen, allowing the upper edge of the board to come flush with the top of the posts at the required height. This serves to steady the posts and as a support to which the top of the wall wire may be stapled as well as the outside of the overhang wire. Braces should also be nailed to the top of the posts inside, and upon them a roll of wire 18 inch 16 gauge, 2 inch mesh should be laid as an overhang to prevent foxes from climbing out of the pen. The accompanying photograph shows the appearance of pen when built.

A door may be constructed by placing a "2x4" the necessary distance from one of the posts, with one end on the ground, the other extending to the top of the wall and being nailed to the top board. Sufficient rigidity may be obtained by stapling the wire to the "2x4". The door may be built as large as the rancher may deem necessary. The wire cut out of the opening may be tacked to a board frame, which serve as a door for the pen, or the door can be hinged to the post or, where the post is rough, to a piece of "2x4" spiked to the post. The bottom of the door should be 15 inches from the ground.

The wire should be stapled to the posts after the rolls have been laced together with lacing wire. Inside the pen, I lay a roll of 2 foot, 15 or 16 gauge wire, 2 inch mesh, to prevent foxes from digging the earth away from the posts and wall. Some foxes will dig under the mat wire, but it is up to the keeper to stop it.

GUARD FENCES

A guard fence should be built around the main enclosure, and where the ranch is exposed to the winds, it should be built of boards, on the north and west sides particularly; and on the east, if exposed to winds and storms from that quarter. Where the ranch is built in the woods, the guard fence may be made of wire, eight feet high and put up the same as the fox pens, except that no wire is put in the ground.

The guard fence serves to keep dogs and other animals away from the breeding pens; and in case of a fox escaping from the pens or dog

THE SILVER FOX INDUSTRY

houses, he may be captured in the main enclosure, where otherwise he would escape.

A large door should be put in the main enclosure, wide enough to admit a horse and cart for hauling the necessary material to and from the ranch.

WATCH HOUSE

A watch house or tower should be constructed in the center of the ranch, from which the caretaker may watch the foxes during the breeding season. In this way dates may be secured in breeding and whelping of pups, and the actions of the animals may be studied with a view to ascertaining their habits. This is one of the important matters in connection with fox raising, as without such a place the keeper is handicapped in his study of the foxes who do not act normally when conscious of observing eyes.

A small heating stove may be put in the watch house, and the house may be so constructed that the floor room may be used for keeping tools, pans and other utensils used around the ranch, and in winter as a place for skinning foxes. A sufficient height to give the keeper a good survey of the ranch is all that is required.

HOUSING

(a) THE DEN OR KENNEL.

Without discussing the different kinds of dens used by different ranchers, I am going to describe briefly the den I am using with the greatest satisfaction, and which I designed for my own ranch. The accompanying photographs will show, more clearly than I can describe the character and arrangement of the two boxes and chutes which constitute my kennels.

The boxes are built from 1½ inch matched boards, planed on one side, and I treat the covers with a tar preparation such as is used for the decks of vessels. A partition is made in the larger box and in this a short chute is built connecting with the inner box or nest, where the female has her young. This inner box is constructed of planed and matched boards, and is made 18 inches long, 15 inches wide and 15 inches high, (inside measurements). A hinged cover is also put on



THE KENNEL AS IT APPEARS WITH COVERS DOWN.

Small box 36x20 inches. Height, front 11 inches, rear 17 inches.
Main box 48x26 inches. Height, front 8 inches, rear 23 inches.
Legs 15 inches. Outside measurements.



THE KENNEL WITH COVERS OPEN.

Showing arrangement of main box and inner box where fox has her puppies.

THE SILVER FOX INDUSTRY

this box, large enough to allow room for putting in and taking out adult foxes. The inside box or nest is so set in the right hand section of the main box that there is a two inch space underneath the nest, and at least, a three inch space around the walls. This space should be filled in with oat hulls, obtainable from any roller mill where oat-meal is produced, and which serve as a protection against cold and dampness in the nest. I find oat hulls to be the best material for this purpose, but ground cork or sawdust may be used.

A bevel edged piece of plained board should be put around the buttom of the inside box or nest, so that the young pups cannot roll into the corners of the box. A corner casing of $1\frac{1}{2}$ x3 inch board should be put on the outside of the boxes, and should be left long enough to serve as legs for boxes. The kennel should be placed in about the middle of the pen on a little knoll, if possible; and the legs of the box should be long enough to bring the bottom of the box at least 12 to 18 inches off the ground. Chutes should be 7x9, inside measurement, to accommodate big foxes.

An opening should be cut, near the end of the short chute connecting the nest with the left hand section of main box, in which a slide may be dropped when the outside cover is raised, so that the foxes cannot get out of the nest and may be caught for handling. A similar opening is made in the chute connecting the main box with the smaller one; so a slide may be dropped before the main cover is lifted. This prevents the foxes from leaving the main box, as sometimes happens when the cover is lifted, before slide can be dropped in the inner chute.

The smaller box to which the outside chute is attached, facing the south, is hooked to the larger box and an opening in the outside chute is also made into which a slide may be dropped, so that the foxes may be fastened into the smaller box when cleaning out, or spraying the main box and nest. In case of fire, the foxes may be driven into the smaller box, the slides dropped into the main and connecting chutes, and the entire box containing the foxes may be carried out of the ranch to a safe place. Other use of the small box will be shown under articles on feeding, treating for worms, etc.

A suitable house for male foxes should be constructed at some dis-

THE SILVER FOX INDUSTRY

tance from the pens and within the main enclosure. Practises are different in the construction of dog-pens or houses, and the rancher may adapt them to local conditions and the space available. A long low house may be constructed with board partitions, allowing rooms 6x10 or 12 ft. A space of three feet should be left in the North and South walls which should be covered with 14 gauge wire to allow proper circulation of air throughout the hot summer months. A shelf or table should be put in each room, high enough so that the fox may jump up and lie where he can get the benefit of the air circulation through the wire.

Another very satisfactory arrangement is to build small wire pens similar to the breeding pens already described, but about half the size. These smaller pens are not only suitable for male foxes, but may be used, when desired, for pups that the rancher wishes to take from the mother when they are two months old. When this is done, the dog may be put back into the breeding pen with his mate and the pups put into the dog pen. Care should be exercised at any time of the year, when the pups are taken away and the male put back with his mate, as she will sometimes attack him viciously and only the presence of the keeper will prevent trouble. The slide should be dropped into the outer chute so that the foxes cannot get into the boxes, and plenty of food should be thrown into the different parts of the pen. There is rarely any trouble after the male has been back with his mate one day.

CARE AND FEEDING

(a) TENDING FOXES.

Like human beings, foxes have different dispositions and temperments, and a study of these are of prime importance to the success of the caretaker. In most mated pairs, one fox is tamer than the other, and care should be exercised to see that the shy one gets his or her share of the food. It will be found frequently one fox stays out all day where it can be seen by the keeper, while the other sticks to the den throughout the day. Sometimes the tame fox is a hog and will gather up all the food put into the pen, will eat what it can, and guard or bury the rest. When the shy one comes out looking for food, there

THE SILVER FOX INDUSTRY

is apt to be a fight. Until the foxes are thoroughly acquainted, it is a good plan to put food for the shy one into the small box.

Space does not permit of our going into all conditions that may arise, but it is up to the caretaker to get acquainted with the disposition, food requirements, and individual habits of the foxes under his care, and to govern himself accordingly. It will be found that one fox (usually the male) requires more food than another, and the caretaker should see that he gets it. When foxes are mated and put in a breeding pen in the fall, it is a good plan to fasten them back out for a few days so that they can be seen by the keeper any time he goes through the ranch. This may be practised throughout the winter and early spring months, and helps to tame the foxes of unmanageable wild and dispositions.

The more time the keeper spends with his foxes, the more tame they will become, and many of them may be taught to come to the hand. It is well to name the different animals as they are taken to call them when feeding or walking through the ranch.

(b) FEEDING.

Judicious feeding of foxes is a matter of great importance. Foxes consume and thrive on a large variety of food. The kinds fed in different sections of the country is largely a matter of local conditions available in different localities, at the most reasonable prices. Because most ranches are started in the fall of the year, the feeding of September 1st pups may be fed practically the same as the adult foxes, I am beginning with September 1st and continuing for a period of twelve months.

1. September 1st to February 1st :—

All foxes in good health and in thrifty condition may be fed with biscuit, bread and milk, porridge, or whole wheat bread for the morning meal on different days. Different brands of biscuit are advertised by manufacturers; the most satisfactory of which, in my experience, are Spratts and Old Gristmill Codliver Oil Biscuit.

Any of these should be followed by a feed at night, consisting of horse meat, beef, tripe, hearts, heads or any scrap meat procurable. I

THE SILVER FOX INDUSTRY

feed my adult foxes on good meat of some kind, at least once a day throughout the year. During the fall months, the above may be supplemented by feeding ripe apples, quartered; and any raw vegetables the foxes will eat. Small pieces of turnips and carrots may be tried occasionally.

Varieties of fish used on Prince Edward Island are:—mummy-chugs, small smelts; herring salted or fresh; tommycods; kalpin, etc. Fish that soften quickly after being taken from the water should be used with great discretion, and fed as fresh as possible and only in small quantities. The above varieties of food may be used for adult male foxes throughout the year, with addition of such other varieties as the rancher may obtain in his locality.

2. February 1st till pups are one month old:—

Under this heading, we have to deal with feeding foxes for breeding, and later, with feeding the female carrying and nursing her young.

The caretaker should be careful up to this point that his breeding foxes are not too fat; and where this is apparent, a reduction in the amount of food given should be made in January, so that the foxes may be lively and vigorous during the mating period; otherwise the litters will be small, or the females will fail to produce at all. On the other hand, young foxes, from which the rancher hopes to raise pups the first year, should be fed extra food, such as, fresh eggs in the morning, and scraps of fat pork with the meat ration at night. Most of the mating occurs in February, although a good many foxes breed the last half of January, and some in March.

When it is known that a female is with pup, the dog may be removed to his quarters in the dog house; and the female thereafter becomes a subject of special care and attention. A fresh egg with the morning meal, two or three times a week, until within ten days of the time that pups are to be whelped, and an egg a day thereafter, fed preferably at midday, should be given. The ration of horse meat should be cut down, and beef, rabbits, and small quantities of beef offal should form the principal meat diet. Caution must be exercised, during the pregnancy of the fox, in feeding tripe, liver, and any food of laxative nature, as too large a feed of this kind is apt to cause abortion. Feed half a salt herring occasionally the last week of pregnancy.

THE SILVER FOX INDUSTRY

Beginning at least ten days before the pups are due to arrive, I feed my females the morning meal in the smaller outer box of the kennel and likewise a fresh egg at noon. This serves the purpose of keeping the milk from freezing before a shy female would come out to eat; and, also accustomes the fox to having part of the kennel open every day.

After the pups are whelped I continue feeding the milk and egg in the box and when the pups are three days old, after putting the food in the outer box and closing down the cover, I step around in front of the main box and wait until I hear the female go through to eat, then I quietly and quickly open the main cover and lift the cover of the inside nest and see at a glance how many pups the fox has and if they are all living. I then close the cover down quietly and walk away and in no single case have I ever had a female become so disturbed that she would carry out her pups, and I have often saved trouble by removing a stillborn puppy from the den. Gloves used in feeding should be worn on the hands when the box is thus opened, so that no fresh scent is left on the cover.

If the date is known, mildly laxative foods should be fed two or three days before the pups are due to arrive; and the female kept in a proper condition will rarely have trouble during parturition. If the keeper finds the female lying in, he should remove any food not taken and leave the female alone until she appears out looking for food. Fresh water should be put in the pan; and when the fox begins to eat, bits of beef liver, good meat scraps, or a bit of salt herring soaked in water for twenty-four hours, may be given in small quantities. A raw egg may be given the second day and if the fox shows signs of hunger, a small piece of meat.

If female has done well and comes out looking for food at feeding time, some bread soaked in a small quantity of milk may be given, and the meat diet gradually increased as the evidence of the keen appetite becomes apparent. Only in rare cases should food be given within twenty-four hours after the pups are whelped. When they are three days old, the mother fox can tell a keen observer whether her litter is large or small. If the female does not begin to eat well, the caretaker may be sure that the litter is not large; and, on the other

THE SILVER FOX INDUSTRY

hand, a fox with a litter of five to seven pups develops an amazing appetite within a week.

I look into the nest between three and seven days after the pups arrive, to ascertain the number of young pups and if there are any dead; but do not advise this practise to beginners, unless there is evidence of something wrong and the female fox appears to be very sick or in distress. If the mother fox is behaving well and eating very heartily at the end of the week, I begin to feed three times a day. It is important that she should have plenty of nourishing food so that she may have plenty of milk for her young. Bread and new milk in the morning, an egg at noon, and one-half pound to one pound of good meat at night will be found a very satisfactory ration for the mother fox until her pups begin to come out and take milk.

Most females will begin to carry meat into the pups when they are about one month old; and it is often necessary to go into the pen and take out meat carried into the den by the fox. It is not good for the pups and the little rascals will fight over it very savagely, and occasionally some are seriously injured. Warm new milk from fresh cows may be fed the pups morning and night, the quantity gradually being increased until they are six weeks old, when small quantities of bread may be added to the milk. Calf meat, beef scraps (with meat attached to the bone as far as possible) may be fed at noon.

As the pups grow older, the amount of food should be increased, care always being exercised that they do not get sufficient food to cause indigestion and diarrhoea. At two months old they may be taken from their mother and put by themselves, though this is not at all necessary, if they can be handled satisfactorily in the pen with their mother. It will be found that shy females will give a warning to the pups, and rush into the den at the approach of the keeper. This keeps the young pups very wild; and, under such circumstances, it is better to remove them to a pen by themselves, where they soon become accustomed to the keeper and will run all over his feet when he comes to feed them.

When separated from their mothers, the pups should be put into their new quarters and allowed to come out of the den themselves. The keeper should see also that they all go into the box after feeding

THE SILVER FOX INDUSTRY

at night. Whether the pups are left with their mother or put in a place by themselves must be left to the judgement of the caretaker, as conditions may arise. After the pups are two months old limewater should be added to the milk, in the ratio of about one teaspoonful to each pup fed. Fresh trout, where obtainable, or other small sized fish with firm flesh will be found an excellent diet for pups and should be fed in small quantities with bones and scraps of meat. At three months old, puppy biscuit may be fed, beginning with small quantities, and may be fed dry after a drink of milk in the morning. I fed salt herring soaked thirty-six hours in fresh water, two or three times a week and find it a very satisfactory diet for growing pups. A few eggs may be beaten up and stirred into the milk, occasionally; and the number may be increased after the pups are four months old and upward.

As a change from bread and milk or milk and biscuit in the morning, some breeders are using successfully, soup made from boiled beef bones, rice and a few vegetables. Generally speaking, any food upon which the house cat or dog will flourish, may be fed to young foxes, and the greater variety obtainable the better.

I continue the diet as set out until the first of September, after which time milk may be cut down to three feeds a week or discontinued altogether. In the case of young foxes that have not grown and do not thrive well, I advise a continuation of the milk or soup feed once a day, to which may be added one egg for each fox. I find an egg a day, fed to foxes in poor condition, one of the best conditioners, obtainable.

When a pup shows dry hair and signs of indigestion, it should receive a teaspoonful of castor oil, at intervals of one week, until it appears better. In the case of adult foxes off their feed and out of condition, one teaspoonful may be given occasionally with very satisfactory results.

We have now completed the cycle of twelve months in feeding, and from the suggestions made, a careful man should have no trouble in selecting a suitable diet for the foxes and pups in his care.

THE SILVER FOX INDUSTRY

DISEASES AND PARASITES

(a) WORMS.

The first enemies to be watched for and overcome in the life of the puppy fox are stomach and intestinal worms. In ranches where worms are prevalent, puppies should be treated at about three weeks old with some standard worm medicine. In my own experience, I rarely give treatment until puppies are five or six weeks old, and if they show no signs of worms, not until two months old. "An ounce of prevention is worth a pound of cure", and if the keeper is in doubt, it is best to treat for worms anyhow; as, if properly administered, the medicine is not harmful. I usually give my puppies a small dose of castor oil twenty-four hours after the worm medicine has been given, and I recommend its use. I use English Worm Capsules and Glover's Vermifuge. I find the latter strong and very effective, and prefer it in treating pups after two months old and adult foxes.

ADMINISTERING THE DOSE

In dosing pups for worms my kennel plan again works out to good advantage. To get the best results from any worm medicine the dose should be given on an empty stomach and to accomplish this the pups should be shut off from their mother early in the morning. This may be done by dropping the slide in the outside shoot and then opening the main box when the female will go out into the smaller box; then drop the slide in the shoot connecting the main and smaller boxes and leave the female in the smaller box where she may be given her breakfast.

At 10 o'clock I start dosing my pups. Opening the main cover I drop the slide into the short shoot connecting the nest with the left-hand partition of the main box, and each pup after the dose is administered may be put down in the outer section of the main box. By handling in this way there is no danger of any pup getting an extra dose or one getting no medicine at all. When the pups are all treated the slide may be lifted allowing them to go back into the nest where they should be left for at least two hours before being allowed with their mother or given any food.

THE SILVER FOX INDUSTRY

By handling foxes in this way a great deal of confusion is prevented, as many females, if let run outside while the pups are being treated will cry and bark and set the whole ranch in great excitement and terror. If the pups are allowed to run out after the dose is administered they will often climb the wire to the top and a broken leg or neck is often the result of their falling to the ground.

(b) FLEAS.

The second enemies to fur growth are fleas. The control of these pests are, in my experience, just a matter of sanitation. If the dens are sprayed once a month, beginning June 1st, with some disinfectant and insecticide, such as standard creosote or coal tar preparation, fleas will not bother the foxes to any extent. For the fall and winter use, Keatings Insect Powder is the best thing I know of. In eight years experience, I have only been bothered with fleas to any extent, one season; and consider them practically exterminated from my ranch. I have never dipped foxes, but I have sprayed them with a preparation known as Dr. Williams Fly Killer. This I find very effective and does not injure the fur of the foxes. When animals are sprayed, either pups or adults, the spraying should be done when the pups are shedding their puppy fur and when adults have shed their coat, which happens every season in July or August.

(c) DISTEMPER

Without posing as an authority on the treatment of distemper, I will simply state that, in my own judgment, it is caused by feeding too much meat to foxes in the summer months. Where foxes are properly fed, I do not believe distemper will occur; but when a fox shows roughness and dryness of fur, is late shedding its winter coat, and has a debilitated appearance, I recommend a tablespoonful of castor oil, on alternate days, until two or three doses have been given. Feed on new milk, fresh eggs, and fresh fish if obtainable. In my experience this has proven very satisfactory; but should distemper appear in the ranch, the most competent veterinary service available should be secured.

TEETH

The keeper should watch carefully to see that young foxes (from three to four months old) shed their milk teeth properly and get their

THE SILVER FOX INDUSTRY

permanent teeth; and, in case of ulceration which develops "big head," teeth should be extracted and the gums sponged out with Peroxide of Hydrogen. This may be accomplished by winding a bit of absorbent cotton on to a smooth stick, and after being saturated with peroxide, rubbing the gums and affected parts thoroughly. If hard biscuit and plenty of bones are fed the pups, they will rarely have trouble in shedding their teeth—the most difficulty occurring when they are fed entirely on soft food.

SANITATION

"Cleanliness is next to Godliness" and this approach to Godliness on the part of the caretaker brings sure reward. Reference has already been made to the spraying of the boxes. In all cases before spraying, the boxes should be thoroughly cleaned and the excreta carried from the pens. All bones should be carried from the ranch, when they have been cleaned off by the foxes; and in the spring, refuse and excreta should be removed from the pens; after which, a light sprinkling of air slaked lime should be applied to the pens. Spraying the pens with a solution of Formaldehyde is recommended where there has been any epidemic of sickness among the foxes.

I have never had mange in my ranch, and know nothing about its treatment. If the disease occurs among the foxes, a veterinary should be consulted. The Department of Agriculture is now studying diseases of foxes, and fox breeders in Canada will undoubtedly derive much benefit in future from information to be had from the Department from time to time.

HANDLING FOXES

A certain amount of danger from being bitten goes with the handling of foxes; especially where adult foxes are to be given any form of medicine.

Iron tongs are made which may be slipped over the neck of a fox and fastened, and the fox may then be taken by the hind legs and carried; or, may be put into a small box for transportation. Giving castor oil to adult foxes requires two men. When the tongs are put on the neck of the fox and he is lifted out of the box, his forepaws are

THE SILVER FOX INDUSTRY

allowed to rest on the ground. I run my hand down over the back carefully and catch the fox by the back of the neck close to the ears. Having secured a firm hold on the neck with one hand, and holding his hind legs with the other, my assistant loosens the tongs; and, the oil being previously poured into a long handled spoon, a small round stick is held up to the fox's mouth which he will immediately grab and hold on to. The head is bent back and the oil poured into its mouth; but it should not be poured too fast as the fox will sometimes refuse to swallow and the oil will run out of its mouth. An attempt to remove the stick will sometimes cause the fox to swallow; but when they will not swallow, it is necessary to put the fingers over the nostrils and prevent its breathing. In most cases a dose may be administered in this way.

Occasionally foxes who have not gone completely off their feed, may be induced, after a day's fasting, to drink castor oil in new warm milk and is worth trying. A good motto in treating adult foxes is:—
"Keep calm and self-possessed, watch, and hasten slowly."

FURRING FOXES

The matter of furring foxes is of secondary importance only to the raising of them. A fox may be raised to maturity, attain good size, and a good physical conformation; but unless he is covered at pelting time with a rich glossy coat of black and silver fur, he is a failure and a loss to his owner.

When foxes are set aside that are to be killed for fur, they should be placed in a pen in which there are some low spruce or fir bushes to afford shade from the sun and shelter from storms; and should be shut out from any house or box. Foxes thus handled are not so apt to rub, will take more exercise than if they could lie in a hidden spot, and will develop fuller, finer coats than if they were allowed to go in.

Plenty of food should be given, consisting of bread or biscuit and milk, mornings, two or three times a week, varied with fresh fish and bread made as follows:—To a pan of whole wheat flour made from wheat run through a grain crusher, add three cups molasses, a small handful salt, about 5 teaspoonfuls baking soda, and sour milk or

THE SILVER FOX INDUSTRY

butterraik to make a stiff dough. Bake in a slow oven until well done. Bread of this kind is very valuable as fox food, and may be fed in the mornings three or four times a week. A good feed of horse meat, beef, or scraps of meat may be fed at night. Foxes should grow fat and have fine lustrous coats on the food specified. Too much horse meat will give the foxes a dry rough coat that will turn brown early in the season and lose 50% of its value.

Fur on adult foxes will usually be prime around the middle or latter part of December, though some are prime earlier. It depends on the conditions of the foxes, and what time the old coat was shed in the summer. If the foxes are kept in good condition in the summer months and shed their coats early, the fur will be prime proportionately early.

Be careful to take the fur when it is at its best. It is better to kill a little too early than too late, as the fur begins to deteriorate when it is past its prime a couple of weeks.



ADMONITIONS

Don't expect the impossible—it rarely happens.

Set a standard of production and quality of fur and work toward it.

Use your eyes and your judgment. No one knows all about raising foxes yet.

Learn the disposition of each animal, and keep your own disposition sweet.

Don't take chances with the foxes' teeth—they are sharp.

Don't be discouraged at small losses. They occur among all breeders of live stock.

Don't let your foxes run down until their fur is no good, and then when they are put on the market, blame the short price on the man who sold them to you.

Don't have your foxes too fat at mating time, unless you want fat foxes instead of big litters of pups.

Don't expect your breeding foxes to be extra large if you breed them the first year. It is against the law of nature.

Keep the pens and dens clean, and the foxes free from worms, fleas, etc., and you may look for healthy animals and good fur.

Don't forget to wash the foxes' dishes after feeding.

Don't be a quitter. Stick, and you will win.

GLOVER'S

VERMIFUGE

OR

WORM CAPSULE

Will positively and safely remove worms in Foxes. The Vermifuge can be given, if necessary, in 5 to 10 drop doses to very young puppies. Used now with great success by the majority of

FOX BREEDERS

Insist on your local druggist getting same for you, or write direct for prices.

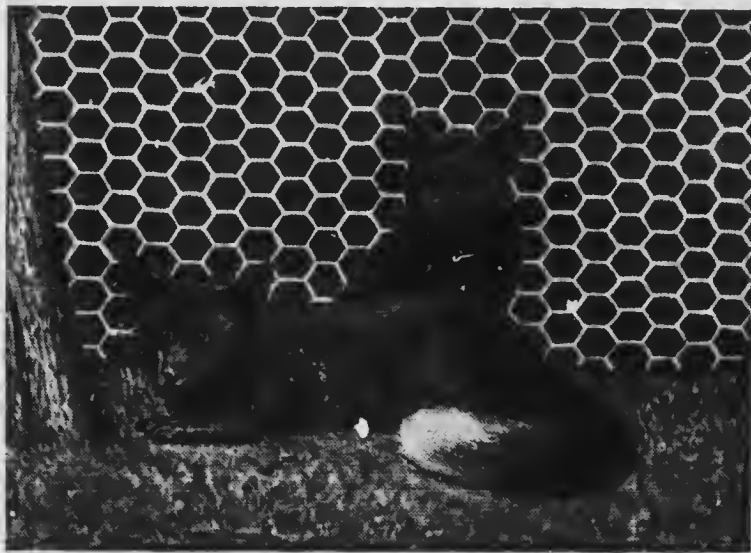
H. CLAY GLOVER CO., INC.

118 W. 31ST STREET.

NEW YORK CITY, U. S. A.

BUY BRACE'S FOX NETTING

Extra heavy galvanized after woven Fox Netting, made to withstand the northern climate of rain and frost.



Netting unrolls flat and hangs without bagging or sagging. All rolls full width and length. If you want the **BEST** ask for **BRACE'S FOX NETTING.**

Write, telephone or wire , our orders to

Brace McKay & Co. Ltd.

SUMMERSIDE, P. E. ISLAND

OLD GRIST MILL



COD LIVER OIL BREAD

Recognised as **BEST FOOD** for
SILVER FOXES

Used regularly by best breeders.

MANUFACTURED BY

POTTER & WRIGHTINGTON

BOSTON, MASS.

FRED L. ROGERS, ALBERTON, P. E. I.

AGENT FOR

PRINCE EDWARD ISLAND

