



Muskrats IN THE CORN

*Damage in Fields Tends to Look Worse Than It Is
And to Be Less Than Value of the Muskrat Pelts*

By PAUL L. ERRINGTON

If you happen to be one of the Iowa farmers who in recent years has had some trouble with muskrat damage in your cornfield along a creek, dredge ditch or the like and had asked Dr. Paul L. Errington of Iowa State College to come out and look over the situation to help you, the following story might be about what he would say to you. Dr. Errington had in mind just such a situation when writing this story so that he might talk to you in a natural way.

—Editor.

YOU CAN SEE that muskrats have been working in this field, all right. There are ears of corn scattered along the trails on the way to the creek and more in the water. In front of that main set of burrows must be a half bushel, or so, counting old cobs

and chewed up roasting ears as well as the freshly carried ripe ones. The burrow entrances are those shadows below the surface, near the places where the trails over the bank are plastered with mud.

Here, some cutting of corn plants was done about July, when the stalks were tender and tasty. Many of the outer stalks were broken by turning of the cultivator, but these—gnawed off at a slant, from a few inches to a foot above ground—were cut by muskrats. Altogether, several hundred stalks have doubtless been cut in parts of the field adjacent to the stream.

Most of the summer cutting appears to be localized and to represent the work of individuals rather than the general population, and it may be suspected that whatever raiding of the field for unripe ears occurred was also a local and an individual matter. On the other hand, almost any Iowa muskrats that are situated as these are—with corn rows extending practic-

ally to the edge of the banks—may be expected to utilize the ripe ears as a chief food and to lay in a supply for cold weather.

Measuring Damage

The actual loss of corn chargeable to muskrats is hard to appraise on short notice. Figures from detailed investigations carried on in past years should, however, provide something of a yardstick for comparisons. We measured from spring to early winter, 1937, very conspicuous muskrat damage in the cornfields bordering a half mile of a Story County drainage ditch; the reduction in yield we found to be about 20 bushels. You may say that's plenty, but it looked far greater, with one corner of a field virtually denuded for 5 or 6 rods inward.

Indeed, damage of this sort is easy to overestimate. It seldom exceeds a couple of bushels for particular fields, even for those more or less regularly visited by muskrats. Then, too, the majority of Iowa cornfields lying within convenient reach of water courses frequented by muskrats are subject to light if any foraging, and those surrounding natural marshes are not often resorted to. As a rule, these animals do not habitually leave the safety of water farther than a few rods behind them.

Wandering muskrats may, to be sure, go almost anywhere. They may live in corn shocks, under cribs, or in dry land nests or lodges constructed of dirt, weeds and corn-stalks, but they rarely stay long in such places. Nevertheless, permanent quarters may be established in wet culverts and tiles in or next to cornfields, in which case a thriving family group can destroy as much corn as any muskrat family living in a stream or ditch environment.

Damage to Profit

There are measures you might take to protect your corn from the muskrats, though you are hardly suffering enough loss to justify going to much trouble. It would make a difference if they were undermining road grades or earth dams of reservoirs, and the like, but here, as on most Iowa

land, the problem isn't really serious.

Have you considered trying a modest experiment in what could be called a form of diversified farming? The raw skins of muskrats taken in this region during the trapping seasons of late years have usually brought trappers between \$0.50 and \$1.00 each. On parts of the creek that you control, you should easily be able to harvest one pelt when the fur is "prime" and legally available for less than each quarter-bushel of corn lost, the latter of which might then be regarded as a small investment in "livestock" feeding. This wouldn't make you rich, but the income from the furs could, quite conceivably, be as much as your wife gets from her fruit trees.

You wouldn't have to do the trapping yourself. There should be a reliable trapper in the neighborhood willing to catch muskrats on shares. Or maybe your boy could do it before and after school hours. That would be a way for him to earn the camping outfit he has been teasing for. It would

"Most of the summer cutting appears to be localized . . . and the work of individuals . . . " (Right) and raiding for roasting ears may also be a local and individual matter (Below)

probably be a good idea to show him first how to set the traps so that the animals drown and hence do not suffer needlessly—and also to insist that he tend his traps on schedule and take them all up when he is through. And don't neglect to give him a little coaching at the start on proper handling of the skins.

Suppose someone else cleans out the muskrats that grew up on your corn, or suppose the year is a poor one for the animals, or they die

off or leave, or are generally too scarce (despite local concentrations) to justify an open season? What if the market price goes way down? These are possibilities you would have to accept as you do the uncertainties of many farm ventures, but you wouldn't be risking much in this type of project.

Good Muskrat Food

Corn is splendid food for muskrats, and stream-side corn-



fields are an important reason why a creek like yours may be so popular with them. Studies have shown that not only may the breeding stock of muskrats be about twice as numerous in food-rich surroundings but also that a breeding female may raise about twice as many offspring to winter pelting stages—for well-fed populations have less tendency to fight and kill the young. On a superior diet, the immature likewise grow more rapidly, are healthier and produce better furs.

The net increase by early winter—which is a more important practical consideration than size of litters or numbers of litters per season—should amount to around a dozen young for each of the four to six adult females probably liv-

ing along the length of creek that runs through your 160 acres. We have learned from marking of hundreds of young muskrats that they commonly spend their first winter close to their birthplaces; and it therefore seems likely that you could harvest 40 or 50 high grade skins a year on something of a sustained yield basis.

Leaving it to Nature

If you don't want to trap or don't want any trapping done on your property, the muskrats won't necessarily become a worse nuisance. Although drouths and exploitation have kept down the animals in various parts of the state, they may still be nearly as abundant in a number of communities as they are apt to be. For all of their prolific reproduction, they do not multiply indefinitely, and the intolerance they are capable of displaying toward their own kind seems to be the final check on increase of populations past certain levels.

One other point, quite aside from economics. The appeal of the out-of-doors for most of us may be to no small extent bound up with the variety of native wildlife that remains. We may feel that the meadowlarks and quail and the big oaks in the woodlot behind the house belong in our lives in the sense that nothing could fully take their place; those who have watched muskrats feeding, swimming and floating in quiet waters at sunset may be aware of similar thoughts.

And, after all, getting back to business again, if at times the muskrats prove to be a liability, you may yet have one recourse—that of literally “taking it out of their hides!”

COW'S “LIFE EXPECTANCY”

A study of about 147,500 cows in Iowa testing associations over a 7-year period was made at the Iowa Station.

The “life expectancy” of a 2-year-old is barely over 4 years. The 3 to 4-year-olds actually had a slightly longer life expectancy, a 5 to 6-year-old was barely under 4 years and a 7 to 8-year-old could be expected to remain in the herd 3.1 years.

With Lights--More Eggs

By
R. E. PHILLIPS

THE INSTALLATION of electricity on many Iowa farms the last few years is going to make it possible to get a lot of poultry flocks to lay during the fall and early winter months when eggs are scarce and the price highest.

Farm flocks in Iowa usually lay the fewest eggs in November when the price often is highest. The most eggs then are laid in the spring months when the price is low. By proper use of lights in the laying house, this situation can be improved.

Many commercial poultrymen have told me that their laying flocks produce most satisfactorily when the hens have a 13 to 14-hour working day, and during the winter months there is no way to obtain that long a “day” without using artificial lights.

We are now conducting here at the Iowa Station an experiment to determine the optimum illumination necessary for egg production. The hens are kept in total darkness except for the period the electric lights are on. The work has not progressed far enough to make any extended report, but indications are that when hens are kept in total darkness in small pens the illumination from a 50-watt light is not sufficient for optimum egg production.

In the first trial there was little difference in the total number of eggs produced between a pen receiving 100 watts of illumination for 14 hours per day as compared to another pen receiving 200 watts of light. The control pen which received morning lights and then daylight throughout the day produced the greatest number of eggs. At least one more duplicate trial must be run before any definite conclusions can be drawn about this extreme method of lighting.

We know that when the laying hen's working day is shortened, she lays fewer eggs and eats less feed. Research work has gone further and proved that it is not the reduction in the feeding time

that causes lower egg production as much as it is the absence of the rays of light which indirectly activate the reproductive organs.

One should not conclude that merely “turning on the lights” will solve the egg producing problem. How the hens are fed, watered, housed and managed in general are quite as important. But the primary cause of increased egg production from the use of artificial lights is the rays of light, while the secondary stimulus is increased or normal feed consumption.

Several methods of lighting are used. Some poultrymen prefer to use lights only in the morning. Others use only evening lights, while a third group uses a combination of both morning and evening lights. A few poultrymen are using all night lighting, but personally I think this is a dangerous management practice.

Electric lights should be suspended from the roof or ceiling so as to give the maximum amount of light on the floor and a small amount of light on the roosts. A 40 or 50-watt bulb covered by a reflector is needed for each 200 square feet of floor space.

One should start using lights for pullets in September or October and continue lighting until March. The shifting of the flocks' working hours should be done gradually. If the plan of using only morning lights is adopted the lights should be turned on about 4 a.m. and off at daylight. If a fixed time of turning the lights on has been established, no change should be made unless it is done very gradually.

If lights are not properly used, many failures will occur. One of the most common mistakes made is that the lights are not turned on each morning at the same time, and the birds go into a molt which is accompanied by a drop in egg production. Many poultrymen are solving the problem of turning the lights on regularly by connecting an alarm clock with the light switch in such a way that when the alarm goes off it throws the switch and the lights come on.