

Soils and Crops

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FOUR WAYS TO GET EGGS WHEN PRICES ARE HIGHER

I suppose we all think sometimes that our hens are determined to lay all the eggs they can when eggs are cheap, and out of contrariness take vacations when eggs are high.

It is true that hens do lay more eggs when hen fruit is cheap, and fewer when it is high. But the reason is that when everybody's hens are shelling out eggs the price goes down because there are lots of eggs. And when production slows up, naturally the price becomes greater.

I am not going to promise that you can make hens lay more heavily when prices are high and less when eggs are low. But I will say that it is wholly possible by careful, sensible management to get more eggs than usual during the later summer months, when eggs are always higher. I am going to mention four plans that I have found by experience will bring more eggs during those months.

Four reasons for the usual summer slackening of egg production are:

1. Broodiness.
2. Parasites.
3. Poorly balanced rations, during the spring as well as in the summer.
4. Heavy laying in spring that lowers the hen's vitality.

So, if we are going to get more higher priced eggs in July and August, these are our problems. The solutions may not be exactly easy, but my experience has shown me that enough can be accomplished to make the effort very profitable indeed.

The slump in egg prices, which usually continues through April and May, by July generally changes to an upward tendency, with higher prices from then on. It is not until June that it pays to try to manage the flock so that the laying season is lengthened out. Here are the methods I have used to accomplish the purpose:

1. Prevent broodiness.

If checked at the very start, broodiness will affect the egg production but little. But if your hens are allowed to sit a few days and get heated up, it is not only hard to break them, but they are also apt to be through with laying for a long period.

The best and simplest way to make a hen decide she doesn't want to raise a family is to put her in a small crate with a wire or slat bottom. This ventilated bottom allows air to circulate under the hen. She is kept uncomfortable. Still better, hang the crate up by wires so it will swing. Two or three days of this will usually break the most determined hen.

Feed in the crate the regular egg mash, plenty of green food and water. This will tend to keep the hens laying and prevent them from drying up. It is well to go through the hen house every night or so during the laying and early summer, lifting the hens off the nest and taking them to the crate. After roosting is the best time.

I find this plan far superior to starving hens, which in itself checks production, or by wetting them, or any other commonly practiced plan.

2. Destroy parasites.

Warm weather means more active lice and mites. They sap vitality. Lice and mites are often confused. They are different, and require different treatment. Lice are always on the fowl. They can't live unless they are on the bird, where they breed, hatch, and grow. There are several different kinds of lice, some feeding on the head, others on the neck, some on the back, since their feeding habits are alike, all can be fought alike.

Investigators a few years ago found that sodium fluoride powder was an absolute specific against chicken lice. For about 50 cents a pound your druggist will supply the commercial grade—it need not be chemically pure—and a pound will dust at least 200 hens.

I use it this way. I hold the hen by the legs, head down. I rub a pinch of fluoride, held between thumb and index finger, along the base of the tail feathers, around the vent, under each wing, down the back, up the back of the neck, and on the back of the head. I usually take three or four pinches for each hen.

Within three or four days it will be gone over every bird. Within a week the lice will be gone. All that hatch from eggs present during the dusting will be killed. In fact, your hens may not be bothered with lice for a year or more.

The mite is a different "critter." It is seldom on the hen except at night, or when she is on her nest. He hides in cracks and corners. Since he does not chew, as does the louse, but sucks blood from the hen by thrusting his bill through the skin, surface poison does not affect him. You have to make it hot for him.

The best method is to clean out all the dirt you possibly can, especially from the corners of nests and roosts, and spray or paint thoroughly with some strong disinfecting solution, usually one with a coal-tar base. A spray or paint that goes into the cracks and lasts for months is best. Especial success often follows application of disinfectants while they are hot.

A good plan to get the internal parasites which are apt to be active at this period, is to feed the hens two per cent. by weight of finely ground tobacco stems or leaves—leaves preferred—in the mash feed for ten days. A pound of Epsom salts to every 100 birds, every three days, should be fed while the hens are getting tobacco.

3. Keep the rations right.

Sometimes the flock's yards and ranges get bare and dry in late summer. The hens continue to enjoy a taste for juicy and succulent food. I like to see an arrangement that will keep for the hens a continual growth of green food after the early spring supply is exhausted.

Experiments I have studied convince me that, while a wide variation of formulas for mash feed is possible, it is absolutely essential to maintain the proper proportions of the cardinal factors, such as mineral protein, fibre, and mineral food. Mineral food is extremely important. Whether you use a commercial or a home-mixed mash, the elements of phosphorus, sulphur, and calcium must be present.

It is not the exception to find good hens that have stopped laying because of a lack of mineral foods.

4. Regulate the rate of production so as to extend the laying period. This sounds like a formidable task, but it is simpler than it seems. A hen that lays heavily during the spring may exhaust her vitality and literally "lay herself out." She likely has the capacity to lay a certain number of eggs in a year. If allowed to lay all these eggs in the spring months, little more can be expected of her later. By turning a bucket upside down you can pour out all the "eggs" at once. By tipping it gradually, you can take a much longer time to empty it. To an extent you can do the same thing with a hen.

Once hens stop laying it is a hard task to bring them back. It is not uncommon for farm flocks to lay as high as 80 per cent. for short periods. This is dangerous, except perhaps for a highly skilled poultryman. When the flock production begins to reach 50 per cent., 50 eggs a day per 100 hens, it is well to slow them up.

The most effective way I know to do this is to reduce the amount of mash, especially the animal protein element in it, and to increase in direct proportion the scratch feed and the proportion of starch in it. This should be done gradually when production goes over 40 per cent. If the flock will feed between 45 per cent. and 55 per cent. with a heavy feeding of scratch feed, you may be very certain the hens will not lose weight. It is a well-known fact that when a hen begins to lose weight her egg production will quickly begin to drop.

The scratch feed will tend to maintain weight. If production starts to drop below 40 per cent. again, it is time gradually to decrease the scratch feed and to feed more of the mash with animal protein and other egg-building elements.

By following this policy carefully it is possible to extend the egg-laying period so that more eggs will be laid later in the year, when prices get better. It may mean a substantial difference in the year's income from the farm flock. Heavy winter production,

Salvaging a Tuberculous Dairy Herd

Successful Operation of the "Bang System" at the Central Experimental Farm.

About six years ago, the Central Experimental Farm, Ottawa introduced the Bang System in connection with its dairy herd, which was then undergoing the process of "accreditation." Under this "accredited" system, a herd is tested for tuberculosis every six months, the reacting animals being removed from the herd. When reactors cease to appear under the test, the herd is accredited by certificate as tuberculosis free. Under the Bang System such reactors are segregated and isolated from all contact with other animals, their progeny being added to the main herd. The length of time during which the reactors are retained depends on their age, period of gestation, producing ability and the progress of the disease; but gradually they are eliminated, and in the course of time the Bang herd ceases to exist.

The object in establishing a Bang herd at the Central Experimental Farm was twofold: first, to preserve for breeding purposes a number of exceptionally valuable cows, and second, to demonstrate the value of the Bang System. The segregated animals were isolated in comfortable, well ventilated and properly appointed premises on an adjoining farm some two miles distant from the Central Farm. The cattle were in charge of a skillful herdman, and were treated in a normal manner in all respects. The maximum number of animals in the Bang herd at any one time was 23 head, while the total number isolated during the whole period was 66 head, and included Holsteins, Ayrshires and Jerseys. All of the cows were of high individual merit and record. Some of them remained in the Bang herd throughout the whole period, others were retained for a short time only.

During the winter the segregated animals were kept inside, but in the summer they were allowed to graze. The milk was thoroughly pasteurized and separated, the skim-milk being used for feeding hogs and the cream being made into butter. The cows were for the most part bred to reacting sires. When a reacting sire was not available they were bred to another on neutral ground.

The milk was removed from the herd and placed in isolated pens until tested before being allowed to mix with the calves from the healthy herd on the main farm. Of the sixty-six head isolated, 49 gave birth to 80 calves. Of this number 18 died previous to six months of age; 17 at the age of six months or soon after birth, and the remainder, some of which infection undoubtedly occurred in the main herd, it not yet having been cleaned up; 45 remaining free from the disease. Of the latter, 19 have been sold and 26 retained in the breeding herd.

During the period under review, 51 Bang cows were slaughtered. The majority of these were removed to make room for other and more valuable reactors and comparatively few on account of clinical symptoms of advanced tuberculosis. In the latter class there were not more than six cases. On the other hand, there were a number of cows that had outlived their usefulness but were still in excellent condition, which, upon slaughter and examination, proved to be highly generalized and advanced cases. This goes to prove what has been repeatedly observed, namely, that a cow may be in an advanced stage of tuberculosis and still not show any outward symptoms of the disease. Furthermore, the experience with this herd has shown that a cow may be in an advanced stage of tuberculosis and still produce milk quite heavily and profitably. Another outstanding observation as regards the health of the herd was that quite a large percentage of the cows when slaughtered showed only old calcified lesions, while a few showed two distinct sets of lesions, one old and calcified and the other recent and open. This would go to show that in many cases, nature, assisted by a rugged constitution in the animal, had isolated the infection and thus put the animal in the non-spreader class. The presence of a secondary set of open

lesions in some animals points to re-infection, through being stabled with spreader cases.

Some cows that were in the Bang herd for two, three, and even four years, when slaughtered, proved to be but slightly infected, indicating that an animal may be some time developing the disease even when amongst diseased animals and, when eventually infected, may show considerable resistance to the ravages of the disease. On the other hand, among cows in the main herd that reacted and were slaughtered immediately, numerous generalized open cases were found, which goes to show that infection may take place rapidly and run a rapid course. It may be inferred that the rapidity of infection depends on the virulence of the strain of bacteria introduced and on the power of resistance in the animal itself.

Milk and butterfat records were kept of the Bang herd during the entire period. Eight of the cows qualified in the Record of Merit test; and 13 in the test for the Record of Performance. Of the latter, eight records from mature cows averaged 461 pounds of butterfat, nearly all being made in less than 365 days. One Ayrshire cow, Marjorie 8th of Ottawa, during the four years that she was in quarantine, gave 32,987 pounds of milk containing 1,214.74 pounds of fat. This animal when slaughtered proved to be badly infected in the lungs and bronchials. These and other creditable records would indicate that tuberculosis, up to a certain stage, does not necessarily reduce the milk production of some cows, in fact, the production of the Bang herd varied but little from that of the main herd.

An accurate account was kept by the Experimental Farms Branch of the expense incurred in operating the Bang system from December 1, 1916, to November 1, 1921. The results for milk, calves and manure amounted to \$22,108.06. The expenses, which included feed, bedding, rent of building and labor, amounted to \$15,930.63, leaving a profit of \$6,177.43.

CONCLUSIONS.

In the light of the experience of the Central Experimental Farm, it is concluded that the Bang system is both feasible and practicable where direct circumstances favor its operation. According to the views of the Experimental Farm officials, these circumstances would be (1) The existence of a herd or herds of purebred cattle of sufficient size and high quality to make the isolation of reactors and the reclaiming of their progeny profitable; (2) A sufficient number of reactors of high quality within the herd to ensure returns on the overhead charges that must be met in maintaining a Bang herd, which overhead charges might be so great as to exceed the returns from only a few reactors.

In view of the rapid adoption of the Accredited Herd System, now taking place, and particularly since the reduction of the compensation on reacting animals, there are undoubtedly many herds that might adopt the Bang system and at the same time fulfill the Accredited Herd conditions. In some cases, where the individual herds are not sufficiently large or the reactors within the herd not so numerous as to warrant the introduction of the Bang system, a group of breeders might unite in maintaining a joint herd under the Bang system.

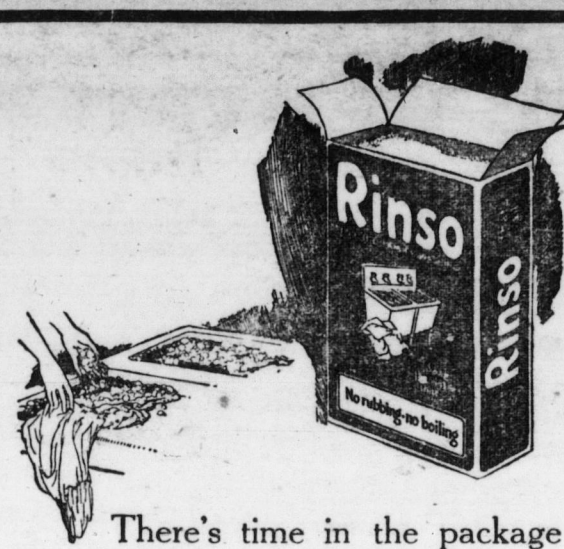
A conclusion which should not escape attention is that if a Bang herd is to justify its existence at all, it must be established simultaneously with the entry of a herd into the Accredited Herd System, for the reason that it is at this time that the greatest number and often the highest quality reactors will be found. As each successive test proceeds, the number of reactors naturally decreases, so that, in the course of a few years at most, the herd should have a clean sheet and the Bang herd would be gradually eliminated. It is when the herd has this clean bill of health that the owner who has omitted to establish a Bang herd may wish that he had done so and thus have retained some of his favorite individuals and strains.

\$10 to \$15 each, with others, considered too young by the buyers, sold as low as \$5 each. The week following, four loads of Western lambs brought \$15.25 per hundred while poor spring lambs from nearer points brought only \$5 each. Really good calves, sold around May 10th, brought as high as \$12, while common to medium, commanded prices ranging from \$9 down to \$5. Hogs were slightly higher than week than during the previous week, but there was the same discrepancy in prices between the good and the ordinary, selects selling on the average for \$12.47 and extra heavies for \$9.87. In developing trade, quality is a first essential, and therefore is a strong selling factor, while the live stock or so other product in which we do business for export. Increased domestic consumption and satisfied customers can only be obtained on the basis of a palatable article.

Lesson of the Live Stock Markets.

A survey of the current market reports issued by the Live Stock Branch, indicates an unusually wide difference in the prices for good cattle as compared with those for common. Those offering fairly well finished stock are realizing satisfactory prices, a good steer, in keeping the market in good tone.

At Toronto, during the week ending May 10th, choice steers, animals well bred and properly fed, brought \$7.75 per hundred pounds, while common kinds sold as low as \$5.25 per hundred. This means that a good steer, weighing 1,200 pounds, would bring \$93, while a poor thin steer, weighing say 800 pounds, would fetch only \$42, a difference of \$51. In the report of the week previous, it is shown that good quality spring lambs sold from



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Why I Keep My Mower Sharp.

BY WALTER S. ERLING.

As a boy on the farm did you learn to mow hay with the scythe? You were careful of what became of the blade, for it was harder to swing when the edge became dulled.

But when one sits on the mower with the horses furnishing the power, it is more easy to forget that worn cutting parts make the work harder. We have learned that the power of three horses may actually be required to pull effectively a two-horse mower when it is very dull and some of the parts are badly worn.

The knife is only half the problem of keeping the mower sharp. A mower cut like a pair of shears. No matter how sharp the blades of a pair of shears may be, they will not cut properly unless firmly held together.

The knife can readily be sharpened, but the ledger plates when worn must be replaced, either by putting new ones into the guards or by replacing the knife guard. As the guard is usually bent or worn by the time the ledger plate becomes dulled, it is often better to replace the whole guard rather than merely the plate.

If the sections no longer fit down closely upon the ledger plates, there are usually two causes for the play—wear of the clips which hold the knife down, and wear of the steel wearing plates which support the knife in the rear. The clips can be hammered down and the wearing plates may be taken out and turned over, so that the unworn under side comes into use, or they may be replaced by new ones.

With a few dollars' worth of new parts and a few hours of work I have seen smooth-running, clean-cutting mowers made out of machines that at first appeared to be ready for the junk pile. The life of the mower is in the cutting parts—the gears and truck do not readily wear out.

Seven points to be considered in keeping the mower in good cutting shape are:

1. Keep the knife sharp and the sections tight.
2. Keep sharp ledger plates in the guards. These do not wear very rapidly.
3. Keep all the guards level by bending or shimming between the bar and guards. Test them by laying the edge of a carpenter's square on the ledger plates.
4. Replace the wearing plates when they become worn so as to cause the tips of the sections to raise from the ledger plates.
5. Replace the knife head guide or shim it for adjustment when it becomes worn.
6. Keep the clips hammered down just tight enough to eliminate play but not to bind.
7. The sections should centre at least approximately in the guards at the extreme end of the pitman stroke when the pole is held about 30 inches from the ground.

Cranberry Culture.

Cranberries, in the opinion of Mr. M. B. Davis, Chief Assistant to the Dominion Horticulturist, and author of the bulletin "Cranberry Industry and its Possibilities in Canada," could be profitably grown a good deal more extensively in this country than they are. At present cranberries are cultivated in Canada only on a few bogs in Nova Scotia, Prince Edward Island,

THE CHILDREN'S HOUR

OUR FEATHERED FRIENDS—THE BLUEBIRD.

BY LEBERNE BALLANTYNE.

One of the first arrivals among our feathered friends is the Bluebird. He comes with the Robin and the Meadow-lark. Sometimes he is the first of the three to greet us, so that apart from his other virtues, he should be welcomed each year for the glad herald that we know him to be.

The bluebirds are brave little fellows, and very confident. That they trust us is evident from the fact that they build in orchard trees, birdboxes, and sometimes the nests abandoned by woodpeckers.

The bluebird wears a pretty coat of light blue with a vest the color of brick-clay—a sort of reddish brown. This brilliant coloration, together with its gentle ways and murmuring notes, make this bird quite a prized addition to any garden or place in which it cares to make its home.

Because it feeds mainly upon injurious insects, it is highly beneficial, and can in one season work a tremendous amount of good in one locality. Weed seeds also form an important part of its food, and though it eats a small percentage of soft fruit, practically no cultivated kinds are taken by it. We can therefore regard it as a consistently useful bird.

How lovely it would be if we could attract a few of these pretty feathered friends to our homes. If they could be persuaded to use our bird boxes, would it not be a charming sight to see the little flashes of blue darting among our trees, and when we consider the number of insects those bright little eyes can detect as they go up and down each branch, would we not find them valuable little friends to have around the lawn or orchard.

THE SWIMMING HOLE.

When the sun rides high in a summer sky

And your shadow is short as your nose,

On the country road where the earth, dust-dry,

Puffs up through your naked toes;

When the grasshopper scrapes his monotonous drone

Half asleep in the withering grass,

When the thirsty leaves scarce turn their leaves

In the listless breeze that pass;

When the heat waves quake and shiver and shake

On the crest of the sun-baked knoll—

Come away with me to the willow tree

That shelters the swimming hole!

Come away with me where the willow tree

Dapples the water cool,

Where the skate-bugs dash and the shiners flash

In the depths of the magic pool;

Where the lilies float at the mossy brink,

Where the thrushes bathe, where the robins drink!

Come away with me where the waters free

Dance merrily over the shoal,

Come away with me to the willow tree

That shelters the swimming hole!

—Cave Scout.

Sales From My Garden.

My experience in marketing crops right around home last season taught me that the way to sell is to let people know what you have to sell.

I had planted more peas, beets, turnips, and cabbages than I needed for home consumption. Always before, I had found it necessary to haul the stuff twelve miles to market or let it waste. This time I tried different tactics. Many of my neighbors did not have the same kind of produce, so I resolved to see what a little advertising would do. First, I told a few whom I knew had no early garden. The result was that all my produce was sold out in short order. I charged the regular city market price, and my patrons were more than satisfied. You would not think such things as beet greens, turnips, beets, and carrots would sell in a farming community. I sold them last year. Cabbage and peas came on the last of June and I did not have half enough. This year I am planting more.

When sweet corn was ready for market, I put a notice in the entrance of a small shoe factory, in a village two miles away. I sold several hundred dozen ears in a week. I sold my early potatoes and all my garden crops, the customers often coming to the door. In other cases I delivered within a radius of two miles from the farm. It paid me to develop the home market.—C. H.

A New Food.

One thousand reindeer carcasses recently arrived in Vancouver, British Columbia, from Alaska and Northern Canada. They are being shipped to New York and other eastern cities. There are more than 100,000 reindeer in Alaska and similar shipments will be made in the future.

The idea has been developed in this country that whatever has been done in the guise of clearing land for new settlers was, and is, excusable. This idea, together with general carelessness and lack of interest in the public property, has resulted in the destruction of an incalculable quantity of timber through fire started from brush-burning and land-clearing.

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