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CHOOSING THE DAIRY HERD SIRE

The choosing of the sire is undoubtedly the most important factor in a constructive breeding policy. It is the sire with his influence over the whole herd rather than the female with her limited sphere of influence that raises the standard of the herd when the choice is good, or lowers it when the choice is a poor one. Not only is the sire the most important factor in a constructive breeding policy but he is, in addition, the most economical one. More rapid improvement in a herd could be made by the addition of high class females, but such a method requires much more capital than the average farmer has at his disposal these days.

In choosing a herd sire, pure-bred, long, size, type, character, individuality, quality, record backing and if possible, proven breeding ability are the main requirements that must be kept in mind. The successful buyer is the one who has the ability to know an animal with the proper combination of the above requirements, and the courage of his convictions to pay what such an animal is worth.

It is the experience of the Central Experimental Farm and no doubt of many breeders that individuals inquiring re-bred bulls often stipulate that the animal must embody some specific character such as a specified color, regardless of his merits otherwise. In other words, they are following a fad. Color is not important so long as it is within the requirements for the registration of the breed. Pure breeding, size, conformation, quality and record backing should be given first consideration. The desirability of pure breeding lies in the fact that a bull whose ancestors have been bred for many generations for one purpose (milk production) is more certain to transmit that character than one whose ancestry is mixed. Size for age is important, for other things being equal, the larger the animal the more economical the production. Size without the recognized ideal dairy conformation for the breed is not desirable. There are too many misfits as regards conformation in most breeds at present without perpetuating them. Size without quality is even less desirable than size without desirable conformation, for the big, rough, coarse animal is rarely a good producer.

While an animal embodying the above characteristics in high degree is to be preferred to one with these characteristics in lesser degree, nevertheless he is not to be compared with an animal that has both individuality and milk record backing. In sizing up the milk record of a pedigree, it should be remembered that the important records are those close up. Too many animals are bought and sold on the strength of the record of some individual three or four generations removed. The influence of such an individual on the value of the animal bought is so small that it hardly merits consideration. Insist on high production records in the dam and the two grand dams. If such records can be obtained for individuals further back in the pedigree as well, so much the better. In the case of the sires in the pedigree, some stress should be laid on their breeding qualities as represented by the number of qualified daughters they have sired. Such information is now available for practically all the dairy breeds of cattle. It may be possible in some cases to purchase a proven sire, that is, one that has proven his ability to get calves, and possibly old enough to have daughters that have proved themselves heavy producers. When such a bull goes on the market, it is usually because it can no longer be used in its own herd, and he, knowing the value of the bull, offers it for sale for breeding purposes rather than for beef. Many buyers are diffident about buying such bulls on account of their being vicious and diffi-

cult to provide accommodation for. Wherever these factors can be overcome, the purchase of such a proven sire is undoubtedly a move in the right direction, for, apart from his desirability as a proven sire, there is the added desirability of breeding from a mature bull which undoubtedly has its advantages. An important point to keep in mind is that improvement in the herd is to take place, then the herd sire must be of better quality than any of the other animals in the herd. Similarly, if improvement in the herd is to continue each successive sire must be at least equal and preferably superior in all points to his immediate predecessor.

CULLING THE LAYERS.

Culling, generally speaking, should be continued throughout the year and should include the elimination of hens that are non-productive, sick, thin, or poor vitality. At some one time, however, the whole flock should be given a careful and systematic culling. Each hen should be gone over carefully with the object of picking out and retaining the better producers and marketing the others. At this time it is advisable to select hens that will be needed for breeders the following spring. These should be leg-banded and their eggs saved for hatching. The poor producers should be marketed as soon as possible.

The best time to cull is during the latter part of August or the first part of September. Hens that show indications of laying at this time have as a rule been the better producers for the year. Hens that have been good layers during their first laying year are generally the ones that will be the better producers in the second and third years. Good producers throughout the year should be retained for the next year regardless of age. Relatively few hens, however, will prove profitable producers beyond their second laying year, if they are of the heavier breeds such as the Plymouth Rock or Wyandotte, or beyond their third laying year, if they are of the lighter breeds, such as Leghorns. It is also advisable to cull thoroughly during July in order to eliminate hens which have started to molt and have stopped laying.

Hens possessing the following characteristics or a combination of such characteristics should be culled as poor producers: sick, weak, lacking vigor, inactive, poor eaters, those that have molted or started to molt early, those with small, dry, puckered vents, those with small, shriveled, hard, dull colored combs, with thick, rigid pelvic bones and rear end keel, and small hard abdomen. In yellow-skinned breeds, poor producers also should show yellow or medium yellow shanks, yellow beaks and vents.

In a good producer, when laying, the abdomen is soft and flexible, owing to its increased size, and there is less tendency at this time to put on fat. As laying ceases, the abdomen becomes smaller, feels harder. When the egg is laid, the abdomen should be firm and elastic. In the case of the sires in the pedigree, some stress should be laid on their breeding qualities as represented by the number of qualified daughters they have sired. Such information is now available for practically all the dairy breeds of cattle.

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POULTRY.

Weak and stunted goslings often result from the efforts of the owner to keep them in small fenced enclosures where they will not be harmed by other farm animals. They often do well on limited range until a week or ten days old, and then some will stand humped up with drooping wings. Exposure to the hot sun may cause the same result.

An orchard where there is plenty of shade and fresh clover sod makes a fine range for goslings. A field protected by an evergreen windbreak will help induce them to range in the early spring when the days may be windy.

When the goslings become weak and throw their heads back and die in a short time it is probably due to congestion of the brain caused by intestinal worms or indigestion. If the droppings indicate the presence of worms, try giving each gosling a half-teaspoonful of turpentine. This can be placed rather deep in the young bird's throat with a medicine dropper.

Two teaspoonfuls of castor oil will sometimes improve the digestive system of a weak gosling and cause it to return to normal. When a large number of goslings require treatment for worms add one-fourth pound of sulphur and two ounces of powdered copper to twenty-five pounds of their mash. The mash containing the medicine can be given once each day, when the birds are quite hungry.

Bacteria From Flies.

House flies and stable flies are great carriers of putrefactive and other contaminating bacteria. Hundreds of thousands of these bacteria may be found on one leg of a fly. Flies breed and feed on manure and filth of all kinds, and from these sources they get heavily contaminated with the putrefying bacteria present in such substances. Unfortunately, flies will also feed on good human and animal foods, and when they settle on or fall into such material they naturally contaminate it with the bacteria that they have picked up from manure or filth on which they have previously been. In the summer time they are present in great numbers around stables and manure piles and milk houses, and it is very common for a number of them to get into milk. Hence, as each fly is liable to have hundreds of thousands of bacteria on its legs, mouth and body, when a number of flies get into milk during the milking or handling process, the milk becomes badly contaminated. So every care should be taken to keep

flies out of the milk. Manure piles, the breeding place of flies, should not be allowed near the milk house. Windows and doors of milk houses and stables should be screened, milk cans should be kept covered and every other precaution necessary to prevent flies getting into the milk should be taken, so says the Department of Bacteriology, Ontario Agricultural College. Consult Bulletin 265.

Eat More Canadian Fruit and Vegetables.

"Eat Canadian fruits and vegetables while they are in season, and can, dry, and store the surplus for winter use," is the sound advice given in a book of recipes issued by the Dominion Fruit Branch. It also points out that Canadian-grown fruits and vegetables are conducive to health, and that greater and more regular use of them throughout the year would have a positive beneficial effect. It is further pointed out that Canada produces, and preserves more than enough of these garden and field commodities, unexcelled in quality, flavor, and attractiveness, to supply all the possible demand, such an orchard might still be put to profitable use and be less unsightly. First cleaned of dead trees, brush and trash, it makes a fine place for a few ewes and lambs. Not every farm child will be in attractive home surroundings, many of the problems of life would be solved, and we would be facing the question of keeping the boys and girls on the farm.

The influence of farm environment has a subconscious but potent effect on children. Even while the farm is only a playground to the children, here may be taught orderliness and thrift, as also in woodlot, orchard, meadow and field, all giving one grand example in living object lessons of good farming. The orchards, while not primarily intended to serve as an aesthetic purpose, may form the most beautiful part of the farm. An orchard of standard apples could profitably be planted near the farm home.

Sheep in Orchards.

Many a once fine old orchard is now a pitiful sight of dead trees, tangled brush and weeds. Beyond redemption in so far as fruit is concerned, such an orchard might still be put to profitable use and be less unsightly. First cleaned of dead trees, brush and trash, it makes a fine place for a few ewes and lambs. Not every farm child will be in attractive home surroundings, many of the problems of life would be solved, and we would be facing the question of keeping the boys and girls on the farm.

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Home Education

"The Child's First School is the Family"—Frederick

Co-Operative Training—By Margaret Conn Rhoades

I was somewhat astonished at the poise of a young child who visited in my home. She had been unexpectedly left by her mother who had been called away suddenly. She had all the earmarks of an experienced visitor, although to my knowledge she had never been out of town before. When her mother returned I asked if it had been home training that had made her so careful, so observant, so much a model visitor.

"Oh, that is a result of our neighborhood co-operative training," the mother replied. "You see there will be some things children learn better in another home, so a few neighbors in our locality decided to co-operate. Occasionally one of us would invite week-end guests; these guests were the neighborhood children. They were required to pack their own bags, see that their clothes were in shape, and be prepared to visit for a day or two. We were formal in our table service during the stay of these little people and planned special entertainment for them. In fact they were treated throughout their stay as real company."

"And you know children delight in living up to an ideal. The training was splendid for them and the sight-seeing trips we took about the town were instructive. There was no letting down of the company attitude."

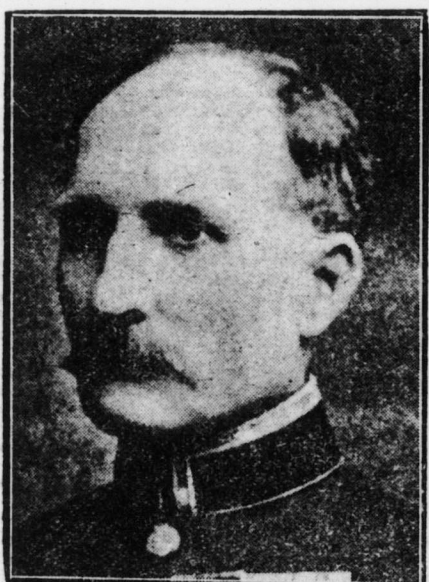
with them and to-day we feel sure these little folks understand wonderfully well all the simple rules for model visitors.

"The co-operative plan did not stop with visiting either, but we had sewing classes where each child demonstrated the making of a simple garment. This idea of learning something first and then teaching the method was very inspiring to them. They did this in cookery too. We found that the group idea worked out well, and one mother's idea stimulated others mothers' children to real endeavor."

"Many things are made possible through the co-operative training plan. A cheerful little group of children who meet in a neighborhood living room to study the Sunday School lesson on Saturday night will put renewed zeal into the heart of a Sunday School teacher the next day when she realizes that home effort is uniting with hers in teaching spiritual truths."

"The talent of one mother often finds a quicker response when shared with the child of another. Co-operation in child training is a worth while experiment as we have proved."

I felt sure she was right. As my little guest bade me a cordial good-bye she told me she had enjoyed her visit "besides learning a new dessert."



A photograph of Sir Thomas Ward, who has arrived in Irak, with a technical staff, to commence work to stem the flow of the Diala River, so as to form a lake 400 miles square to aid irrigation.

THE FARM HOME ATTRACTIVE

Much Can Be Done Without Great Cost to Improve the Farm Surroundings.

By EARLE W. GAGE.

The possession of attractive home surroundings is not beyond the reach of any farmer who owns his home, while several tenants have made their stay enjoyable by a few bushes here and there about the yard. There is little relation between the size, costliness, or simplicity of a home and its surroundings as compared with its attractiveness that may be given by proper arrangement and careful upkeep. Beauty is not to be measured by expense, and ornament of any kind is not needed so much as a neat and well-kept appearance.

Farm folks are coming more and more to appreciate the value of home-like and inviting surroundings as a background for family life. The ideal home is the reward for which we are all striving. Then, there is that pleasure which comes to the family having home surroundings to be proud of. It is an obligation which every citizen owes his community to have his home as attractive as possible. One little farm mother put the truth in a sentence: "Let the home beauty be its sole duty."

This is the proper spirit. The farm home may be made beautiful by simple means. Neatness and orderliness come first; these combined with a good greensward about the house, a sheltering growth of trees and shrubs, a veritable garden may soon be developed. The farm home is a combined residence and business headquarters. As the farm business is but a means to the home life, it is of first importance that the farm as a whole should make for pleasant home life. If children are the most important crop the modern farmer raises, then it follows that the most important function of a farm is to support a good home. If every farm child were in attractive home surroundings, many of the problems of life would be solved, and we would be facing the question of keeping the boys and girls on the farm.

The influence of farm environment has a subconscious but potent effect on children. Even while the farm is only a playground to the children, here may be taught orderliness and thrift, as also in woodlot, orchard, meadow and field, all giving one grand example in living object lessons of good farming. The orchards, while not primarily intended to serve as an aesthetic purpose, may form the most beautiful part of the farm. An orchard of standard apples could profitably be planted near the farm home.

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Goldie Bumblebee and the Blue Flower

Goldie Bumblebee sat rocking in the breeze on the end of a spray of goldenrod. It was a warm day, and he did not feel at all like gathering honey, for it was such sticky, hot weather. His mother, Mrs. Busy Bumblebee, flew by with a load of honey and saw him there idling.

"Why, Goldie Bumblebee!" she cried. "What do you mean by sitting there doing nothing? Who ever heard of a lazy bee in the Bumblebee family? If you do not bring home your share of honey to-night, you shall have no supper."

"Yes, mother," said Goldie and stretched his wings slowly as he prepared for flight. "I go to work at once. Where do you think I can find the most honey?"

"I should think there was enough right under your nose," she replied and hastened away to the clover field. Goldie worked steadily for a time and then began to grow tired. "I think I shall make a trip over to the pasture yonder," he said to himself. "I believe a piece of sky has dropped out, or maybe there's a little pond there, for I can see a big patch of blue."

Goldie sailed away in the direction of the patch of blue, and when he reached it he found that it was neither sky nor water, but made up of countless blue flowers, such as he had never seen. They stood up very straight and stiff in little groups, and the heart of every flower was protected by dark blue petals with silky blue fringes.

"My, Goldie thought, 'doesn't it look cool and pleasant down in the depths of those flowers! I think I shall crawl into the biggest one I can find and have a little nap. Then I shall feel more like work, and I can finish filling my honey-pot before supper."

It was even better in the depths of the blue flower than he had thought. The lovely silken petals protected him from the sun and shed a soft light like a faint twilight.

"This is pleasant!" breathed Goldie softly, and fell asleep.

When he woke up he did not find it so pleasant. The sun must have gone down, for it was very dark and he could not find any way to get out of the flower. The silken fringes had twisted themselves together tightly and Master Goldie Bumblebee was a prisoner. He buzzed and scolded and buzzed, but it was of no use. He could not get out of the flower.

How he wished he had kept busy and filled his honey-pot as his mother had told him to do! If he had he would now have been safe and snug at home with the rest of his family. They could never find him away off in this pasture shut up in the heart of a flower.

He stopped buzzing and scolding at last and lay very quiet and even went to sleep again.

When he woke up the second time it was no longer dark in the flower. The sun had risen, and its light penetrated the blue walls of his prison. The blue fringes above his head began slowly to unfold, and soon he saw a tiny opening no bigger than the head of a pin. It grew larger and a little larger until, with a great jump, Master Goldie pushed his head through the opening and found himself free.

Was there ever a happier young bee? He did not delay an instant, but flew home as fast as his gauzy wings could carry him.

You may be sure his family were glad to see him, for they had begun to be afraid that he was lost.

His brothers and sisters did not believe him when he told them of the flower with fringes that folded itself up at night, but Mrs. Bumblebee said, "He is right. I know the flower well. It is called the fringed gentian."

"I shall never go there again," promised Goldie. "Next time I will fill my honey-pot in the clover field and come right home with it!"—Rose D. Nealley, in Youth's Companion.

Dehorning Calves.

The caustic potash method of dehorning calves not only is the most humane but perhaps the easiest and may be practiced without danger to the animal. The proper time to dehorn is when the calf is from five to seven days old, at which time the buttons are easily located.

Older calves, having small horns, may also be dehorned by this method, but the operation is slightly more difficult and less likely to be as effective. The hair should first be clipped from around the buttons or small horns and vasoline smeared over this clipped area to prevent burning of the skin.

In case of the animal being only in the button stage, scrape the button very lightly with a knife until the blood oozes very little, moisten the clipped area with water and rub the horn with a stick of caustic potash until it becomes white.

If the animal has small horns the coverings or caps of them must be removed before the potash is applied. The caustic stick should be wrapped in paper or cloth to prevent burning the fingers.

Curing Tuberculosis At Home

No doubt the long absence from home is the chief objection to taking treatment at a tuberculosis sanatorium, from the patient's viewpoint. A letter lies before me now in which a young wife asks for my "honest opinion" whether her husband "can stay at home and follow rules carefully and conquer the disease." There is much more in the letter, which convinces me that she does not want my honest opinion, but wants some justification for keeping her husband at home. My honest opinion is that any patient with tuberculosis who can get sanatorium treatment should take it. His chances for getting well are much greater than if he stays at home. It is not that home surroundings keep him from getting well, but home indulgences do. The sick man is not reasonable. He wants to do things that are not good for him. The home folks yield "just for this time," and so it goes.

But it is quite possible to win the fight against tuberculosis in your own home if you have the intelligence—plus backbone. A Wisconsin man named J. E. Stocker, who accomplished this end, has written a booklet about it. Mr. Stocker made the great discovery about winning the fight—that it must be won, not by action, but by rest. Read what he says:

"Early in October, 1916, I went to bed again. I took all my meals in bed; I did not as much as move a finger unnecessarily; meats were cut for me into small pieces to avoid the exertion of my cutting them. I was as careful not to make any quick or sudden movement as I would be if I were using a broken limb. Newspapers were cut for me, so I need not take up more than one sheet at a time. I did not bend down to pick up any objects from the floor, or reach up for things that were above my head. I did not put on or take off a shirt or bathrobe without assistance."

"I avoided all reading and unnecessary talking; when friends called I let them do the talking, explaining to them the reason. Whenever it happened that I was alone in the house and a doorbell rang, I paid no attention to it. Under no circumstances would I get out of bed to answer a telephone call."

A patient who will give such conscientious attention to getting well as this, can get well at home as readily as at a sanatorium.—Dr. C. H. Lerrigo.

Wire Braces for Trees.

Every commercial orchard suffers some injury from broken branches each time there is a heavy crop of fruit.

Wire braces are getting to be more and more popular each year and many large orchardmen make a regular practice of wiring the trees that show a tendency to form weak crotches.

If the weak crotch is noticed while the tree is still small one can often brace it by twisting two small twigs from opposite branches. Sometimes the twigs will have to be tied together to keep them from untwisting, but eventually they grow together, forming a rigid living brace that will support all the load that the tree may ever put upon it.

As a rule the weak crotch is overlooked until it is too late to develop a live brace and one must resort to wire. The best wire for the purpose is No. 9 galvanized.

There are a number of ways of fastening the wires in place. Some growers use a screw eye, some use ordinary fence staples, some use quarter-inch iron eye bolts that extend through the branch, and others attach the wire by boring two holes through the tree and twisting the wire through these holes.

All of these methods are practical. The last mentioned makes the strongest, neatest job, but it also takes the most time. After boring two holes in each of two opposite branches that are to be braced, a wire is threaded through the holes and twisted together so that a double line of wire extends from one branch to the other. The holes should be placed about two inches apart in the branch. After the loose ends of the wire are securely twisted, a stout stick is inserted between them and by twisting they are made as tight as is desired.

Mineral Mixtures.

Minerals for live stock are important. The particular kind of mineral mixture, however, is not so important. It is the certain fundamental ingredients that the body requires for normal growth and the building of healthy tissue that should be supplied. They are (1) sodium; found in common salt; (2) calcium, found in ashes, lime, or ground limestone; (3) phosphorus, found in bone meal, raw phosphate rock or acid phosphate; and (4) iodine, found in potassium iodide.

Crops grown on land rich in these elements, especially fresh leafy leguminous forage, may supply the animal's most insistent demands. They will get some minerals also from direct contact with the soil. In winter when the ground is frozen and forage dry, the mixture of minerals is most important.—P.

One of the most useful jewels in the fine mechanism that takes us through our daily toil day after day, is happiness in the performance of our duties.