Soils and Crops

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GOOD VERSUS POOR REARING OF HEIFERS.

What may be affected by feed—Is a superior or inferior cow born or made? To answer the question definitely has required and will require a deal of careful and well conceived investigational work. The matter is by no means settled yet, but it is advisable to give out some of the information now available. Feed is supposed to affect size, type and production; and though it would take a whole book to cover all these points, a few words may not be amiss here.

Feed as affecting size—There is no doubt that a heifer fed a heavy grain ration will develop into a larger cow than one reared on roughages alone; but the difference in size is much more marked during the first few years and less so at maturity. Experiments conducted in Missouri showed the height at the withers of an eighteen-months-old, heavy-fed heifer to be 3.5 inches more than for the poorly fed one, whilst at maturity the difference was only an inch.

Feed as affecting type—Liberal feeding may affect type temporarily in that heifers so fed will be heavier and show beefiness of form instead of the angular conformation looked for in the good dairy cow. If, however, the heifer has inherited from her parents the factor of heavy milk production, she will usually milk off this extra fat during her first lactation period and ultimately develop into as good a producer as her more scantily fed mate.

Feed as affecting production—A few years ago an experiment was conducted at Cap Rouge with twins, so as to minimize the chance of error due to breeding. One of them was well fed, produced 11,392 pounds of milk testing 5.75 during her first two periods of lactation, and qualified for Record of Performance; her sister was not well fed, produced 3,767 pounds of milk testing 4.45 during the two first periods of lactation, and could not, of course, qualify for Record of Performance. But experiments conducted in the United States have shown that "the milking tendency of a cow when mature is not influenced to any appreciable extent by any ordinary variations in the ration fed during the growing period."

What course to follow—Under certain conditions, such as preparing pure bred stock for sale or exhibition, or when it is desirable to increase size somewhat, it might pay to feed very heavily on grain, and it must be said that there is no fear of hurting heifers in doing so, for if the cows are bred right they will lose the surplus body fat soon after calving. But, in general, the most profitable course to follow will be an intermediate one, between the two extremes; on very good pasture, no concentrate, and at other times, all the clover hay they will consume, with silage and roots when available, and a grain allowance of from 2 to 3 pounds per animal, per day, according to age.

SELF-FEEDING MY HENS PAYS ME.

For efficient poultry-feeding I find the self-serve method pays best. It can be used for every item in the ration except the scratch grain. Fowls need the exercise they get from hunting in the loose straw for the grain.

By far the most important element in the ration is the balanced dry mash. I have used both commercial and home-made mashes. The dry mashes recommended by the experiment stations are first class, but it is difficult sometimes to obtain all of the materials from local dealers. The use of a good commercial mash also saves time in mixing, and guarantees that the birds will obtain the elements necessary for egg production.

Hens will not gorge themselves on dry mash just because the supply is always available. Instead, after a few bites they need a drink to wash it down. Then they will scratch in the litter or peck at green food. Many farmers have neglected to feed a dry mash, believing that their hens would stand by the hopper and choke down many pounds of expensive feed. Such is not the case; a dry mash tends to make the hen seek a diversified ration.

Considering its cost, I find oyster shells about the best possible investment for use in our self-serve hoppers. The lime supplied by the shells enables the hens to place firm shells on every egg. They can't get enough lime from other feeds during periods of heavy laying. Strong shells mean few eggs broken in the nest or in transit. They also help to prevent the egg-eating habit. The saving of one four-cent egg will buy four pounds of shells.

I like plenty of sour milk in my chicken cafeteria. It should be placed in crocks on low stands to keep litter from being scratched into it. Sour milk has more than mere food value for hens. It seems also to be a preventive of digestive troubles, and helps to keep the hens vigorous. Hens that get plenty of milk seem to produce eggs with a high degree of fertility, that produce healthy chicks. The sour-milk crocks and pails need frequent scaldings to prevent bowel trouble.

Green feed furnishes the bulk that our hens need when on a concentrated ration. I find that mangels are the cheapest form of green feed; they can be sliced and fed in troughs, or whole mangels may be hung on nails. Cabbages are also greatly relished by the birds, and can be fed whole or sliced. If the sliced cabbages are fed in moderate amounts, none will be wasted; every bird will have a better chance at the green food if it is scattered around.

Sprouted oats are very appetizing to hens under winter conditions, and help to bring range conditions to the poultry-house floor. But it takes more time to sprout oats than to feed mangels, and so I believe mangels are more economical, especially if the flock is large.

I never neglect the water supply in my chicken self-serve. It is not heated, but given in galvanized pails just as it somes from the well. At noon the pails are emptied and refilled; they are always emptied at night to prevent freezing.

Grit is another item that the hens will look for in their self-serve. I have seen hens eat grit like corn after a neglected supply has been replenished; they cannot thrive without it. I find that the commercial grit is economical; a few hundred pounds will supply many hens. For small flocks, a few bags of fine gravel will do.

The old method of feeding poultry consisted largely in shoveling out grain on the bare ground whenever the hens looked as if they needed feed. The new method is based on a study of the hen's requirements for health and egg production. I often study my hens on the range, noting how they balance their own rations; first a bug or a worm, then a weed seed, followed perhaps by a few pecks at something green for a salad course. For profitable production it is necessary to provide these natural conditions in winter. This can be done by carefully managing the chicken cafeteria.

SHEEP

Every flock owner undoubtedly has observed at weaning time that some lambs in the flock have made more rapid growth than others. These lambs are always the pride of the owner and he wishes that all the lambs were as large and fine as the best.

The business of breeding ewes, apart from growing a profitable crop of wool, is to produce strong healthy lambs and keep them growing until weaning time.

Breeding ewes vary decidedly in their capacity to produce a large flow of milk. Subsequently at weaning time there is a lack of uniformity in the lamb crop despite the fact that the lambs were all dropped about the same time and the ewes given equal attention throughout the suckling period.

This variation in the growth and development of the lamb crop is in a large measure due to the milking capacity of the ewes. Dairymen long ago recognized the variation in the milk production of individuals in the herd. Flock owners must profit thereby and direct attention to the selection of breeding stock of large milk production.

Physical conformation, as in the dairy cow, may in a measure direct the flock owner in the upgrading of his flock, but the test of a ewe's milking capacity is best evidenced in the growth and development of her offspring. Ewes' lambs retained to replenish the flock should be selected from deep milking ewes that have suckled their lambs well and encouraged large bone and flesh growth.

Illustration Station Work.

At present there are in all eighty-nine Illustration Stations in operation under the Illustration Station system, adopted in connection with the Dominion Experimental Farms some years ago. Of these ten are in New Brunswick, of which the Superintendent at Fredericton Experimental Station has general supervision, eleven in Nova Scotia, of which the Superintendent at Kentville Experimental Station has general supervision, and thirty-one in the Province of Quebec, fourteen of which the Superintendent at St. Anne de la Pocatiere has general supervision and seventeen are supervised from the Central Experimental Farm, Ottawa. A report has recently been issued covering the work of last year which should be of special interest to farmers in the three provinces named. In carrying on the work it is the practice to select land facing on the main travelled highways so that the methods of growing and handling the crops come under the public eye. Not only is the work noticeable from the highways, but discussions attended by farmers in the vicinity are held at the Stations during the growing season. Experimental and practical work is thus brought close to the farmers in the different districts. The report can be had free from the Publications Branch, of the Department of Agriculture, Ottawa.

"A man who cannot save his first dollar cannot save the last."

To Lecture in States

The Earl of Birkenhead, who has arrived in this country en route to the Canadian Bar Association meeting in Montreal early in September, will also tour the States lecturing on conditions in Europe.

Why Are Cows Poor Producers.

Here are some reasons; choose the one that suits your case: They may lack breeding, or are underfed; or it may be because they were bred too young, because they lack care and management, because of disease, especially abortion, or because they are not persistent milkers. Any one of or all these factors will make small milk cheques. The following are things that will make the cheques larger: Good breeding (good sires), proper development of their heifers, not breeding heifers too young, liberal and proper feeding, accurate records, good care and healthy cows.

Cow testing associations offer the best chance to find out whether your cows are paying for their board. If there are twenty-six farmers in your neighborhood who have several cows apiece, talk up an association. 'Twill pay.

A queer and unknown fish, with a monkey-like face, and [illegible] is seven inches long, bearing fins, [illegible] been captured at the Semaphore, Adelaide.

This is the age of science. Before we believed many things; now we know many, and are learning more every day.

Flax Production in Canada.

Like wool and other products of the farm, flax is now being graded. During the world war, after the manner of everything else that could be produced, flax sold freely at good prices, "even though of an inferior quality," as Mr. R. J. Hutchinson, Chief of the Fibre Division at Ottawa, says in his report for the year 1922. With the conclusion of active hostilities, conditions greatly changed, and until recently it was found difficult to sell any but the best grades of fibre. At the end of 1921 many growers had stocks on hand which they could not dispose of. With a view to securing a market Mr. Hutchinson paid a visit to Europe, but conditions were such that only small quantities could be sold at remunerative figures. Towards the fall of last year prices showed some improvement and a selling agent was appointed with headquarters at Forest, Ontario. Under the supervision of the Fibre Division, samples were assembled at that place, and as a result, approximately four hundred tons of flax were disposed of at prices ranging from twenty to twenty-five cents a pound. The selection of these samples was so difficult, owing to the mixed nature of the flax submitted, that the necessity of grading was brought prominently into notice, and a grader was appointed by the Division whose duty it is to visit the scutch mills and supervise this work.

Nor is it only by grading that the work and usefulness of the Fibre Division have been extended. Experiments with varieties of seed are being conducted, not only at the Central Experimental Farm, Ottawa, but at branch Farms and Stations in seven of the nine provinces of the Dominion, and in 1921 a flax mill was established at Clinton, Ont., and upwards of 150 acres secured on which every branch of flax cultivation and tests of machinery are possible. The movement in the last mentioned direction was accelerated, it might be mentioned, by the destruction by fire of the scutch mill at Ottawa.

The Man Who's Afraid.

I've paid close heed to the ways of men,
I've observed what the world calls luck,
I have silently marveled, now and then,
At the potent power of pluck;
And this is a bit of truth I hail,
A sentence that's worth one's heed;
The man who is always afraid he'll fail
Doesn't stand much show to succeed!

—Roy Greene.

Give the other fellow a chance to talk; he will appreciate the courtesy, and you may learn something.

To cover an acre of ground with an inch of rain, 100 tons of water would be required.

A man can't half work and half play; he must either be a hard worker and a success, or a poor worker and a failure.—E. W. Howe, publicist and philosopher.

How About the "Air" in Fair?

Or Why Some People Do and Others Do Not Attend These Annual Events.

Why do folks keep on going to fairs? This is a momentous question for fair managements as well as a reasonable one for the people who attend, and also for those who do not.

Let us be charitable and say that the first reason for folks attending fairs is to gain information. It must be remembered that the demonstration method of education has long been the method used by our fairs. In fact, here is where this approved method of gaining first-class knowledge was introduced to the world.

As an illustration of how this plan is now used to improve our intellectual equipment, we might refer to the old farmers' institutes. The general scheme of these institutes was to exchange knowledge by word of mouth. To-day, however, extension men are using the demonstration method almost entirely. They find the eye a far better medium through which to carry intelligence to the brain than the old institute workers found the ear to be.

A second general reason for folks going to fairs is to be amused or entertained. This is no small reason. In fact, if we could poll the uncolored reasons why all our folks go to these annual events, the writer is not certain but what the idea of being amused or entertained would bring the majority of votes.

We should not depricate this phase of the fair business. Healthful amusement is important in the well-rounded life and no place can be better adapted for providing a reasonable amount of good amusement than are our fairs.

Finally, a good reason for attending is to take the children. Often the question as to who is to have the privilege of doing this works no little disturbance in our domestic relations. However, the reason is a valid one, for the fair is a great storehouse of things which every child in every home should have the opportunity of seeing.

WHY DO FOLKS STAY AWAY FROM FAIRS?

Let us now review briefly a few of the reasons why some folks do not attend these annual events. In the first place, many find it impossible to do so. Their duties are so arranged that they cannot leave when their particular fair is on. Again, many of our people lack the necessary funds to permit them to attend. Or at least, they think they cannot afford what they get out of it. Also, there are a few who, no matter how broad may be the policy of a fair management, cannot be appealed to. They are either subnormal or abnormal and are too far away from the limits of the average person to be impressed with the public fairs. Their religious principles or indifferent notions are a barrier to the encrouchment of such institutions.

SHOULD BE INTERESTED IN MANY THINGS.

Psychologists hold that a wise conduct of life is made far easier through the possession of a wide circle of permanent interests. They hold that our world of living can be no wider than the number of objects to which we can attend with interest. We may move among many other things; but only those parts of our surrounding to which we can give attention measures the world in which we move. In other words, our experience is what really gives life its deepest significance.

It would appear, therefore, that the leading managers of our fairs have worked out in a practical way the discoveries of these psychologists. Certainly there is no institution making a more all-around appeal to human interest than does the up-to-date fair association.

All are too well acquainted with the virtues of the stock, dairy and poultry shows to review them here. The same can be said of the fruits, grains, and floral departments of our Ontario fairs. Patrons are also well informed on the apiary work and the efforts which have been put forth to interest the women folks. However, those interested in educational work and fine arts are often appealed to. Then, too, the plans for the boys and girls increases the interests of the great majority of our families. Furthermore, the educational work coming from the better babies contest, carries the interest still another step toward including the entire family in the fair scheme. The dog and cat shows and the extensive exhibits of machinery all add to the distinctive educational phases of the fall fairs.

THE SUNDAY SCHOOL LESSON

SEPTEMBER 16

Luke, the Beloved Physician. Luke 1: 1-14; Acts 1: 1-5; 16: 9-18; Col. 4: 14; 2 Tim. 4: 11. Golden Text—A friend loveth at all times, and a brother is born for adversity.—Prov. 17: 17.

LESSON FOREWORD—To-day we study the life of Luke. Although he is one of the outstanding personalities of the New Testament, the details of his life are very meagre. He is said to have been born in Antioch in Syria. His writings show him to be a person of education, both literary and medical, while tradition credits him with being a painter of no mean skill. He shows in his writing not only a trained mind, but a great heart. His Gospel is called the Gospel of God's wide open heart and all enclosing arms. It is the universal Saviour that Luke brings before us. Luke was evidently a person of means, which were also, like mind and heart, dedicated to God, and so he becomes the ministering companion of Paul in his missionary labors and experiences.

I. LUKE, THE WRITER OF THE GOSPEL, LUKE 1: 1-4.

Vs. 1, 2. *Forasmuch as many have taken in hand.* Luke is giving the reason that prompts him to write his Gospel. The apostles had communicated, by word of mouth, the story of Christ's deeds, words, death and resurrection. This word of mouth story had been, in turn, set out in written order by many. It was too precious to be allowed to merely pass from mouth to mouth. *A declaration . . things . . most surely believed;* "a narrative of the established facts in our religion." *Even as they delivered;* the written narrative found its sole source in the story of Christ as it came from the apostles. *Eyewitnesses, and ministers.* The reason why the apostles should be the sole authorities was twofold. First, they were intimate friends and eyewitnesses. Second, after the ascension of Christ, they were his spirit-filled and spirit-guided stewards and representatives.

Vs. 3, 4. *It seemed good to me also.* The writer, therefore, is not doing a presumptuous thing, but only following a practice already established. *Having had perfect understanding of all things;* "inasmuch as I have gone carefully over them all myself from the beginning." Luke has made a personal, a detailed, a complete study of Christ's life. A reference to Luke's Gospel will show how this Gentile writer has given us much not found in the other Gospels, such as the stories of the birth and infancy of Jesus. *Most excellent Theophilus.* All we know of Theophilus is that he is a Christian and also a man of high rank, as is indicated by the title of address, "most excellent."

II. LUKE, THE WRITER OF THE ACTS, ACTS 1: 1; 16: 9-15.

Acts 1: 1. *The former treatise;* the Gospel of Luke. The object of this second treatise is not to tell the whole story of the acts of the apostles, but rather to show how the gospel of Jesus was brought to the Gentile world in accordance with the whole spirit of Christ's ministry and teaching.

Vs. 9, 10. *There stood a man of Macedonia.* After Paul had been prevented from preaching the gospel in Asia and Bithynia, a new and greater opens before him. It is at this point that Luke seems to have become the companion of Paul, v. 12. *We endeavored.* Luke stayed behind in Philippi. Five years later Paul and Luke meet again, almost certainly in Philippi, Acts 20: 3-5. Some think, therefore, that Luke was a native of Philippi, and that Paul's vision of the man of Macedonia was preceded by a visit from Luke, who urged Paul to come to Philippi.

Vs. 11.13. *Neapolis;* the port of Philippi. *A colony.* Philippi was a Roman possession and the civil magistrates and military authorities were Romans, appointed from Rome. *Where prayer was . . made;* a place where the Jews met for prayer and for the observance of the Jewish ceremonial washings. Hence, it was by the river side.

Vs. 14-16. *A seller of purple.* She came from Thyatira, a city of Asia Minor, of which dyeing was a staple trade. It was here Lydia got her purple for sale in Philippi. *Which worshipped God.* This Gentile woman was a convert to the Jewish faith. *Whose heart the Lord opened;* for the greater light of the gospel. The first convert in Europe is a woman. *Her household.* Lydia was a woman of means, and had servants. They share in her spiritual blessing. *Come . . abide . . she constrained.* Lydia's purse and home are also opened to God, and his servants. She insists on giving hospitality.

III. LUKE, THE BELOVED FRIEND OF PAUL, COL. 4: 14; 2 TIM. 4: 11.

Col. 4: 14. This Epistle was written by Paul during his first imprisonment in Rome. *Luke, the beloved physician.* After the second meeting in Philippi, referred to, Luke seems to have been continuously in the company of Paul. The description of Luke as beloved shows the bond between the two friends.

2 Tim. 4: 11. This letter was written during Paul's second and last imprisonment in Rome. In the first imprisonment. Paul had comparatively good treatment, being allowed to live in his own hired house, under guard. Now his treatment is more rigorous. He is in a real prison. *Only Luke is with me.* Paul needs friends more than ever. The end is near, but Demas, who was with him, has forsaken him, having loved the world better than Christ. *Take Mark.* This is the Mark about whom Barnabas and Paul had a contention. Now Paul has recognized the worth of Mark. Mark had overcome himself and proved himself worthy of the friendship of the great apostle.

APPLICATION.

The Doctor. There is a rather uncomplimentary reference to the doctors in St. Mark. "A certain woman . . "had suffered many things of many physicians, and had spent all what she had, and was nothing better, but rather grew worse." It is well that there can be set over against that Paul's gracious tribute to Luke, the beloved physician. Because of the ethics and proprieties of the profession, not only ideally but also generally observed, people think of the physician in much the same way that Paul did. Without going into specific detail, perhaps it is generally conceded that the physician's is the most altruistic of the professions. Doctors do more work without fee or reward than any other, unless we except the Christian ministry.

The Medical Missionary. Dr. J. D. Jones says that Luke is "the first Christian medical missionary." It is easy to believe that this is very literally true; that Luke, traveling with Paul, both preached and used his skill in healing people of their sicknesses. About twelve years ago an honored medical missionary, who has since died, wrote: "The long-drawn, never-ending cry of physical suffering, and of the hopeless misery of spiritual darkness, rising from the millions of stricken men, helpless women, and perishing children of China, is beginning to reach the ear of the Christian Church; while at the same time the wise and loving example of the Christman in preaching, teaching and *healing,* points the way to quickest and surest relief." "Too long," he said, "have the churches and missionary societies ignored or neglected the powerful 'medical arm' of Christian missions."

The Doctor as a Literary Man. There is a remarkable work by Dr. Hobart, on "The Medical Language of St. Luke," in which the author makes a minute comparison of words used in the third Gospel and Acts, with words employed by Galen, Hippocrates, and other medical writers of antiquity; the result is that many of Luke's favorite words, and many of the words used exclusively by him among New Testament writers, are found to be characteristic of these writers. He writes like a doctor.

Three medical men of our own time have made notable contributions to literature, all of them with a distinctively Christian message. Sir William Osler, a Canadian, of Toronto University, and finally as professor of medicine at Oxford; Dr. R. C. Cabot, with his commendation of work, play, love, and worship as the things by which men live; and that intrepid Labrador doctor, missionary, and author, Dr. Wilfred T. Grenfell.

THE TIMELY STITCH

Stopping the clock does not save time. Neither does one gain time by delaying the thing which should be done without delay.

There is a class of work that needs attention during August and September. We refer to getting the buildings and equipment in shape for the coming winter months. There are excuses galore for not tackling these things, but that does not in the least overcome the fact that the jobs should be looked after.

A nail in time often saves nine. Little jobs of repairing grow into big jobs surprisingly rapid. A leaky barn or granary roof will allow a portion of the harvests stored below to spoil. And then fixing up a roof and doing other outside repair work cannot be done in every sort of weather.

The peculiar thing is that the type of man who needs these reminders is usually the man who uses more energy in thinking about the reasons why he should put off a job that is worrying him, than the accomplishment of the task itself would ordinarily require.

"I'll do this thing now," has not only enabled many men to accomplish a particular job, but often it has been the beginning of a new life. In other words, bringing oneself to take the timely stitch; particularly when there are many excuses for not doing it, often helps one to get started on the road to success.

Ten Commandments for the Sheepmen.

Use a good purebred ram.
Discard all inferior ewes.
Raise early lambs.
Feed some legume hay in winter.
Change pastures often.
Treat for stomach worms.
Keep the wool clean.
Tie wool with paper twine.
Produce early top lambs and wool.
Sell product on its merits.

Have You Tried It?

"How do you make your wife pay attention to what you have to say?"
"Talk in my sleep."