Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto

SUMMER FEED FOR COWS.

Tiding the cows over the dry period of summer is a difficult and important matter for us dairymen. Cows which freshen late in winter and in the spring produce well for a short time and then fall off heavily in the milk flow, due very largely to the decline of pasture and the lack of some early maturing succulent feed.

Oats and peas make an excellent combination for summer feeding. I have grown them heretofore for forage with excellent results. The crop may be cut green and fed as a soiling crop or matured and stored. I would sow one and one-half bushels of oats and one bushel of peas to the acre as early in the spring as the soil can be made ready.

Where a large acreage of clover hay is grown, some of it can be cut early and used for feeding. I have done this as early as the fifteenth of June. Alfalfa can be used in the same manner. A neighbor has been feeding alfalfa as a soiling crop and likes it very much for the purpose.

For summer and early fall feeding, I have been growing a small acreage of sweet corn for my cows. It is ready at a time when pasture begins to decline in quality and aids materially in keeping up the milk flow. Sweet corn is highly palatable and produces a large tonnage of fodder. I sow the corn as early as possible after the early spring crops are in, upon good clover sod which has received a covering of manure during the winter. About twelve quarts of seed per acre are required.—Leo C. Reynolds.

HOW I RAISE BETTER OATS.

From experience covering over twenty years, I find that most inferior oat crops are due to inferior seed. I do not mean that farmers intentionally sow inferior seed, but rather that many farmers sow inferior seed without being aware of the fact.

I find that the cost of improved seed is very low, considering the good results that are sure to follow its use. Nor does good seed necessarily mean high-priced seed. Good seed will make a rapid early growth, which is very essential to a good crop of oats; a good crop is rarely seen from a field that makes a slow growth in the spring. Just as much labor is required to sow poor seed and harvest a small crop as to sow first class seed and harvest a good crop; hence, the balance is all in favor of the better seed.

A good way to secure good seed oats is to take a good variety of native oats and run it through the fanning mill three or four times, until only the largest and plumpest kernels remain. We fan out about 40 per cent. of our oats, leaving only the strongest and best-filled kernels. This seed will germinate quickly, sending forth strong, hardy shoots.

By following this plan year after year, the same strain of oats will increase in weight as well as in yield. Since we adopted this plan, we raise from 25 to 30 per cent. more oats than we were able to raise before. There is no waste in this method, as the light oats are used for feed; whereas, if the oats are sowed without cleaning, a large percentage of the light kernels will not germinate, and will therefore be wasted.

Smut in oats will reduce the yield to a large extent. However, this is easily prevented by the formalin treatment. I find that the amount of seed to sow per acre varies greatly according to the condition of the ground. In sowing grass or clover seed with oats, it is not safe to sow the oats too thick. We have raised our best crops by sowing from 2½ to 3 bushels of oats to the acre. This leaves room for a good seeding for the next year's hay crop. When grass or clover are not sown in connection with the oats, 3 to 3½ bushels to the acre is a safe amount to sow on well-prepared ground containing plenty of fertility.

When farmers are annoyed by oats lodging, most generally it is supposed that the land is too rich. This is not always the case, however; it is often because the soil lacks some essential element. The soil may lack potash, which gives strength to the stalk. If fertilizer, containing a goodly amount of potash, is applied, this trouble may often be overcome.—L. M. D.

APPLE APHIDS EASILY CONTROLLED.

Aphids on apple trees are quite easily controlled by the use of a spray containing lime-sulphur and nicotine applied just as the insects are hatching out in the spring.

There are two kinds of aphids commonly found on buds of apple trees in the spring, one known as the rosy aphis and the other as the green apple aphis. The feeding of these insects results in dwarfed, mis-shapen fruit unfit for market and is frequently a serious loss to growers.

Experiments have demonstrated that thorough spraying with a mixture containing two and one-half gallons of lime-sulphur, three-quarters of a pint of nicotine sulphate, and water to make 100 gallons at the time that the tips of the leaves of the fruit buds protrude from one-fourth to one-half inch will control the pests most effectively.

Careful spraying from the ground and under the tree rather than from the top of the spray tank is regarded as an important factor in the control of these pests.

HORSE

Horse stalls so arranged that a heavy inch rope, stretching across each stall behind the horses, saves the necessity of halters. The attachments for each rope are made in a blacksmith shop and must be reasonably heavy and bolted firmly to the stall. One end of the rope is fastened to a ring and bolted to the stall. The other end has a heavy hook to drop into a ring when fastened. Arrange that the stalls are high at the front end so horses cannot reach each other's heads. This method of fastening prevents the horses backing up and kicking at each other. Horses that attempt to kick at another while passing behind soon learn that the rope is there and is effective. Horses are easily cared for and apparently enpoy the greater freedom of their bodies when not tied by the head. The halter headstalls are hung up in case of need, but are rarely used.

Weedless Farms.

To keep farms free from weeds, few methods give such good results as a systematic short ration of crops, with regular seeding down to grass or clover at short intervals, remarks the Dominion Seed Commissioner in his bulletin on "Weeds and Weed Seeds." Weeds are most in evidence in districts where the production of cereal grains predominates and where the systematic alternation of crops is not generally practiced. Thorough cultivation with a systematic rotation of crops, combined with the maintenance of as many sheep as can be kept to advantage, is a certain and profitable means of keeping weeds under control. But superior to all suppression methods is precaution in the sowing of clean seed—that is seed that has been as perfectly purified as possible and which comes off clean land. In many cases proper sieves in the fanning mill will remove most of the weed seeds.

When Calves Can be Slaughtered for Food.

N. E. Ontario county—What is the age at which calves may be slaughtered?

Regulations adopted under the Meat and Canned Foods Act provide that no animal under three weeks of age may be slaughtered for food.

The more interest we give to our work, the less interest it is likely that we will have to pay for borrowed money.

Building Up the Poultry Flock

In this bulletin on "Poultry Keeping in Town and Country," Mr. F. C. Elford, Dominion Poultry Husbandman, gives some invaluable advice on how to get pure breeds. He points out that the old theory that mongrel stock gave the best results has not proved true in experiments. The foundation stock, he says, should be pure, but there should be a continuous selection year after year. Only birds of the best type and strongest constitution should be bred. It is advisable for a poultry keeper who does no trap-nesting to purchase a cockerel each year from a good laying strain and use him rather than one of his own breeding. In buying cockerels it is wise to get them, if possible, from the same breeder as the original stock came from.

One way to obtain pure-bred stock is to buy eggs, breeding stock, or day-old chicks. Another way is to buy pure-bred males and grade up the flock already on the plant. The latter way is recommended to increase the egg yield, but is not advised for the purpose of changing a mongrel flock into a pure bred.

Eggs for hatching should be obtained from hardy stock known to be good winter layers and conforming to the general breed type. The nearer home the eggs can be purchased, other things being equal, the better. It should be remembered in exchanging eggs with neighbors that breeding eggs are worth more than market eggs. Never, advises Mr. Elford, because they are cheap, buy eggs for breeding purposes late in the season. In a climate like that of Canada, chicks hatched before the middle of May give the best results, though with good care they may be hatched several weeks later; but if pullets are not well developed before winter comes they should never be used for breeding. Late hatched chicks are seldom worth the trouble it costs to raise them.

Breeding stock can best be bought in the fall, but if the buying has been left to spring then wait until the breeding season is over. It is wise to stick to the same variety and buy, if possible, from the same source each year. In selecting a male bird choose a bird that is strong in the points in which the hens are weak. If the practice of buying a new male bird each year is followed, the male bird should be taken from the flock as soon as the breeding season is over, and the cockerels disposed of, or separated from the flock, before they become troublesome.

The Granary Converted Into An Elevator.

The average farm granary with bins eight feet or more in height, with a store-away attic, is usually not economic. A granary elevated on piers four feet or more and the bins extended to the eaves doubles the carrying contents at small cost. An elevator shaft with cups is a comparatively cheap equipment. A four to six-horse power gasoline engine is used for driving the belt to elevate the grain. Grain arriving at the elevator can be scooped into the grain dump at a rapid rate.

Reloading grain from bins by gravity into the alleyway in bags or otherwise, leaves only a few hundred bushels to be scooped out of the bottom. Reloading can also be accomplished through the elevator's operation and spouted into the grain tank. The examination of any grain elevator in your market town will give the basic ideas for remodeling a granary into a farm elevator for storage. A grain tank and the elevator reduce the bags necessary on the farm to the minimum. These fixtures are permanent, while bags are in a constant condition of deterioration.

A roof over the end of the granary elevator used for the dump for unloading, makes a good place for the grain tank to stand when not in use. A four-foot alleyway running through the building at right angles to the dump gives access to all the four bins. This economy of space necessitates an outside stairway. All the windows of the granary are removed except in the alleyway.

Grain which may be wet and inclined to heat can be changed to other bins through the elevator with comparative ease and given quite a good aeration.—J. McBride.

Approved Poultry Flocks.

With a view to improving the farm poultry in the Province of Manitoba, the Department of Agriculture at Ottawa has set about the establishing of approved flocks of Barred Plymouth Rocks. These flocks are intended to provide the source of improved breeding stock and hatching eggs for the use of farmers. This work is in charge of the Manitoba Poultry Promoter of the Live Stock Branch, who enters into agreement with farmers wishing to take it up. Under the agreement the breeder places his flock in the hands of the promoter who sees to it that only approved hens and cocks are kept for breeding purposes, and that only eggs from approved parentage and up to a required standard are incubated. Laying records are to be kept, and during the season the flock is to be culled by an official of the Department. These and other requirements are to be observed for a period of three years. The Poultry Promoter, during this period and afterwards, will assist in securing a market for the produce of the flock and render such other assistance as will enable the breeder to keep his flock up to a high state of quality and profit. The details of the scheme are published in Pamphlet No. 25 of the Department of Agriculture, which is available from the Publications Branch of the Department at Ottawa. This pamphlet also explains the principles and requirements of the Record of Performance "A" for poultry by which certificates of production are granted for trapnested hens that lay the required number of eggs in a year.

The Live Stock Market.

Top prices for steers were a shade lower in the week ending April 12 at Montreal and Toronto, when compared with the same date last year, but at Winnipeg there was no change and at Calgary and Edmonton they were 65 cents and 50 cents respectively, better, according to Dominion Live Stock Branch reports. Calves showed no change at Toronto, were a trifle lower at Montreal and at Winnipeg, although ahead of the previous week, but manifested an improvement at both Calgary and Edmonton. Hogs were steady at the previous week's prices at Toronto and Montreal, but were weaker at the three Western points. Lambs were up $1.00 in all the markets, compared with last year and unchanged as regards the previous week. Sales numerically all along the line were greater than last year, excepting calves, which showed a slight falling off. Up to date this year, the cattle billed through have been 34,103 against 20,517 for the same period of 1922, hogs 56,150 against 18,760, and sheep 15,755 against 18,559.

Use of Yellow in Flower Beds.

The following points should be borne in mind in using yellow in the garden:

1. Use the pale straw and maize tints anywhere, just as you would white.

2. Clear yellow with most blues, using cream white freely in the group; creamy yellow of any depth with any blue, white not being necessary.

3. Bright yellow with deep blue and deep violet (not the red-purples). Clear yellow very sparingly with pale blue-violet, and not at all with pink.

4. Remember that yellow "carries" farther than other colors, so it is best to have the other color in a combination in greater quantity than the yellow—"picked out," as the dressmakers would say—with touches of the fairy gold.

In this backward spring, doing the right thing at the right time is what counts.

Promises of easy money are so alluring that we usually pay our hard-earned money for them. And all we get is promises.

Home Education

"The Child's First School is the Family"—Froebel.

An Old Fashioned Quality—Respect—By Carrie A. Ritter

"Mother had a hen-party yesterday," gleefully exclaims a young girl of sweet sixteen. "Mother had seven old hens here and you ought to have heard them cackle and seen them eat ice cream."

Many people might call this a cute up-to-date speech, but the mother of this same girl complains, "Mary is not respectful to me. She thinks I'm old, too, and I'll not be fifty-six until September. I don't see why she talks so about my age."

Casually observing these cases we wonder how much of this is training or rather lack of it. We notice the same attitude in the parents not infrequently in speaking of, or to, elderly relatives. Children are often allowed to be saucy to their grandparents or to their elders.

So it comes to us that the atmosphere in which a child is reared is responsible for his respect or disrespect for those older or in authority. Sometimes it is not the words so much as the tone in which the parent speaks of an elderly person that conveys disrespect.

There has always seemed to me to be a natural bond between children and very elderly persons. The little ones love stories which the older ones can tell delightfully. I know of a case in which a grandmother and her only granddaughter are chums. They camped together for a month when the rest of the family did not care to go. "Grandma had the time of her life," explained the girl, "only we did eat such a lot, both of us, it kept her busy. The young folks used to come over too. Grandma let us have all kinds of fun, and invited them to meals. She seemed to enjoy it as much as I did."

It was the same girl who said of her grandmother, "Grandma does not hear very well over the phone, in fact she does not hear it ring unless she is in the room with it, but don't hesitate to call up, there are some persons she can understand so she will answer if possible."

Does not this sound better than, "She's deaf as a post, what's the good of her trying to understand anything? No use your telephoning unless mother is home, or I am."

We wonder, yes, we wonder very much if the attitude of sons and daughters-in-law to aging widowed mothers has anything to do with the way young people speak of "Grandma."

"Old folks aren't wanted." You hear it often. Perhaps they are not, but sometimes it may be their own fault because years before they allowed themselves to speak carelessly of other elderly persons, forgetful of the law of suggestion. Let us be thankful for the mothers who taught us that filial respect and consideration were their due, that members of the generation older than themselves were to be treated with deference, loving care, and gentle thoughtfulness for their comfort, and that selfishness and disrespect for our seniors are neither more uplifting nor ennobling to our own characters than they are pleasant to the elderly people.

THE WEST FOR ANOTHER CROP.

The western farmer is always optimistic in the spring, and in spite of the talk of limited markets and other adverse conditions, Canadian farmers are preparing for a big crop again this year.

Fresh air and
BOVRIL
—or, as the Report of the Ministry of Health of Great Britain said; "a sanitary environment and sound nutrition"—
are the great safeguards of Health.

THE SUNDAY SCHOOL LESSON

MAY 20

Elijah, the Brave Reformer. 1 Kings 17: 1 to 19: 21; 21: 1 to 29; 2 Kings 1: 1 to 2: 12. Golden Text—Choose you this day whom ye will serve.—Josh. 24: 15.

LESSON FOREWORD—Ahab, king of Israel, had married Jezebel, a princess of Tyre and a worshipper of the Tyrian Baal. In such a marriage it was usual to allow the foreign queen to worship her native god along with the God of her adopted country. Not content with this, however, Jezebel, who was a remarkably forceful personality, attempted to displace the worship of Jehovah with that of the Tyrian Baal. Not only was the worship of the Tyrian Baal in direct contravention to the religion of Israel, but it sanctioned some grossly licentious practices. The people of Israel appear to have wavered between the two rival religions when Elijah came out as the champion of the God of Israel. He proposed that a trial by fire on Mount Carmel should demonstrate which was the true God.—Jehovah or Baal. The prophets of Baal were to prepare a victim on the altar consecrated to Jehovah; fire coming down from heaven and consuming the sacrifice would prove which was the true God.

I. CAREFUL PREPARATIONS, 30-35.

V. 30. *Come near*, etc. The people had been standing about the altar of Baal and watching the prophets of Baal who had all day been trying by the most frenzied methods to induce their god to send fire upon his altar. Elijah summoned the people over to the altar of Jehovah to see what he would do. *He repaired the altar of the Lord.* The worship of the Baal must have been fairly extensive, for this sanctuary of Jehovah had fallen into disuse and the altar required repairs.

V. 31. *Twelve stones.* Elijah chose twelve stones in accordance with the view that the children of Israel consisted of twelve tribes. Similarly Joshua took twelve stones out of the river Jordan to commemorate the safe passage of the twelve tribes over the river, Josh. 4:1-9. When Israel first entered Canaan the tribes were very loosely connected, but later when Solomon divided the country into twelve departments for purposes of administration, the tribal nation became very prominent. *Jacob.* The patriarch's name, which was originally Jacob, was changed to Israel, Gen. 32:28.

V. 32. *He built an altar.* In earliest times the altar was simply a large natural rock, Judges 6:20, 21 and 1 Sam. 6:14; later it was artificially built of stones but the law directed that the stones should be unhewn, Deut. 27: 5, 6. An iron instrument used in hewing the stones would destroy the sanctity of the altar. The altar, thus built, formed a sort of raised platform which separated the sacrifice laid on it from common things. *In the name of the Lord.* After the altar had been built, Elijah pronounced over it God's name "Jehovah" to signify that this altar was consecrated to Jehovah. *A trench.* At the base of the altar which Solomon built in the temple there was also a gutter which was intended for the reception of the sacrificial blood. The blood would run down the altar into the trench. The gutter dug by Elijah, however, was built to hold the water poured over the altar and not to receive the blood of the victim. *As great as would contain*, etc. Our English translation obscures the correct meaning of this passage. The Hebrew text says, "about as much as would be sown with two seahs." The writer is clearly employing a land measure familiar to the Hebrews, and indicating the length of the trench to the amount of land which it enclosed. The Mishnah states that two measures or seahs would sow about 1,195 square yards, or not quite a quarter of an acre. This gives an idea of the measurement of the trench.

V. 33. *Put the wood*, etc.; for the burning of the sacrifice. *Cut the bullock in pieces.* It was to be a whole-burnt offering, that is, the whole of the victim was to be consumed on the altar. The whole-burnt offering was made on very important occasions. *Fill four barrels*, etc. Elijah took elaborate precautions to ensure against any possible charge of fraud. He wished to show the people that fire kindling spontaneously on an altar, so thoroughly drenched with water could only happen by a divine miracle.

II. THE UNMISTAKABLE PROOF, 36-39.

V. 36. The contents of Elijah's prayer are worth noting. He began his prayer by calling to God's remembrance his covenanted relations to the fathers of Israel. Jehovah was the God of Abraham, Isaac and Jacob, and therefore surely of their children. Then follow the petitions of the prayer. First, that Jehovah would reveal Himself to the people as God. This would be demonstrated by fire on his altar. Second, that God would vindicate Elijah as a true prophet. Thereafter the people would follow after and trust Elijah.

V. 37. Finally, Elijah prayed that the heart of the people might be turned back to Jehovah. It would have been futile for God to have revealed Himself and vindicated Elijah unless the people had it in their hearts to willingly accept such attestations.

V. 38. *The fire of the Lord;* probably coming as lightning from heaven. See Gen. 19:24. The author clearly regards it as a miracle.

V. 39. *Fell on their faces;* terror-stricken at such an unusual demonstration of Jehovah's reality and power as well as their own stupid mistake in not previously recognizing him as God. *The Lord, He is the God.* Jehovah, not Baal, is the true God. Once again, as often happened in the history of Israel, the religion of Jehovah was saved from a serious attack upon its very existence.

APPLICATION.

1. *Elijah,—a zealous, uncompromising religious reformer.* We cannot hope to understand Elijah unless we transport ourselves by imagination to his age. Of course, he approved politics that are repulsive to us with our Christian enlightenment, but that is just the point; Elijah lived centuries before Christ, and the light that fell on his path was correspondingly dim. Nevertheless he exhibits some features of the leader who helps a great cause forward, at any stage of the world's history. He was fearless, zealous, filled with one idea, and bent on realizing it at any cost to himself.

2. *Elijah was the first to formulate the judgment that Jehovah is a "jealous"* God.. Apparently he had not reached the view that other gods had no rights at all; that, for example, Baal should not rule in Phoenicia. His contention was that Jehovah *alone* had the right of worship on the soil of Israel.

3. *The story of Elijah serves us today in this way,—it shows us the vital importance of seeing the issue that is most worth while.* Dr. Harry Emerson Fosdick says that he was brought up in a church which argued much about the proper amount of water necessary to baptism. "One wonders jealously," he goes on to say, "what might have happened if all that consecrated thoughtfulness had been expended on something that really mattered."

To Distinguish Pullets and Hens.

"I have difficulty at times in distinguishing pullets from young hens; what is the best plan to pursue?" writes a Northumberland county poultry raiser. A good way is that advised by the Dominion Poultry Husbandman, namely, to leg-band the pullets each fall, using, year about, the right leg and the left leg. When the pullets are being selected for keeping, put a band on the right leg of each pullet. In the next year put the band on the left leg. You will then know that the right-legged banded birds are hens. If preferred, the leg-band may be used only every other year, and the distinguishing marks would be the birds without and those with a band. The leg-bands are made of aluminum or other substance that can be fastened around the birds leg without trouble.

Work that is not finished is not work at all; it is merely a botch, an abortion.—The Watchman.

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