



Effect of Alfalfa on Soil

The unqualified recommendation as a soil improver that is continually being given alfalfa, is responsible for the very common belief that this crop is one which should be grown extensively on poor or unproductive soils. No greater mistake could be made than to sow alfalfa on land which is not in a good condition of fertility.

It is true that, being a legume, it benefits the soil through the addition of nitrogen fixed by organisms forming nodules on its roots, and through its root it not only supplies considerable quantity of humus but greatly improves the mechanical condition of the soil.

In producing profitable yields of hay alfalfa utilizes large quantities of phosphorus and potassium, which must be obtained either directly from the soil or from added fertilizer.

Whether alfalfa is a soil improver is a question which cannot be answered without some explanation. In the sense in which the term is commonly used, alfalfa is not a soil improving crop, since it cannot be utilized in the same manner as cowpeas, soy beans, crimson clover or hairy vetch for the building up of worn out or depleted lands. On the other hand, it enriches the good soils through the nitrogen and humus added to the soil by its roots and crowns when the old field of alfalfa is broken up and also by the mechanical action of its roots upon the soil. Furthermore, the preparation of the land prior to seeding the alfalfa and the treatment in the way of top dressing and fertilizing which follow during the few years of its existence doubtless have a very beneficial effect on the crops succeeding it.

In actual practice then, alfalfa improves good land, but cannot be considered in connection with poor land, as it is not a profitable crop to grow on unproductive soils.

The Run-Down Farm

Was there ever a more dispirited prospect than a weedy, delapidated, run-down farm? As one drives through the country and passes by such a place, his estimate of the value of that locality suffers a decided slump.

On such a farm the owner is usually as many looking as the land he calls his home. The farmer is sure that farming is not what it used to be. In that last statement is wrapped up the whole of such a farmer's philosophy. "He is sure farming is not what it used to be." No, it certainly is not for him. The world has moved forward while he has slept. He has no part in the present day thought about farming.

He keeps a scrub bull, the bull may have a pedigree but is a scrub nevertheless. His cows lack quality and type. His fields are weedy and his fences look tired. Just such a farm was seen a few days ago. The herd of cows were worth only as much as they would bring as canners, and yet this farmer had the ancestors of that herd on the place for many, many years. The cows on this farm a generation ago could not have been any poorer than the present herd, they were fit all probability better.

The house was hid away in a thicket of brush and weeds and had not known paint for years. The barns were decrepit and the place strewn with relics of the past. The farmer couldn't keep help. His idea was that hired men had degenerated and were wholly untrustworthy.

The evidence of this man's philosophy, that things were not what they used to be, was shown on every hand. The farm was a picture of the man's mental process, and yet he was absolutely impotent to understand his condition. To him his dairy was good his barns and premises good enough. The trouble from his standpoint was in the times, the hired men, the high

Two and a Half Hours on Operating Table

Specialist Could Not Remove Stone in The Bladder

GIN PILLS PASSED IT

JOLIMONT, P. Q.

"During August last, I went to Montreal to consult a specialist as I had been suffering terribly with Stone in the Bladder.

He decided to operate but said the stone was too large to remove and too hard to crush. I returned home and was recommended by a friend to try GIN PILLS.

They relieved the pain. I took two boxes and went back to the specialist. He said the stone was smaller but he could not remove it although he tried for two hours and a half. I returned home and continued to take GIN PILLS, and to my great surprise and joy, I passed the stone.

GIN PILLS are the best medicine in the world and because they did me so much good, I will recommend them to the rest of my life."

J. ALBERT LESSARD, got a box—6 for \$2.50—at all dealers, and money back if they fail to give relief. Sample free. National Drug & Chem. Co. of Canada, Limited, Toronto.

Do not Neglect the Dry Cow

One of the greatest mistakes made in the dairy generally is that of neglecting the cow while dry. Often it seems that this animal is expected to simply exist, without feed, throughout this period, though, of course, she is entirely to blame if her offspring is born weakly and does not develop rapidly, says Farmer's Digest. Both the production of milk and the production of the offspring must be considered as work, and anyone who has tried working continuously on poor or insufficient food will agree that it is unpleasant to say the least.

The period during which the animal is dry should not only be considered a rest period for her, as is generally held, but also should be considered a building-up period. She must not only develop a strong and useful offspring, but should also build up her own body in strength, and, to a certain extent, fat, as this will be needed in the heavy production period after calving.

Fattening feeds are not of special value to the animal at this time and would prove expensive if fed in large quantities, as a large percentage of the feed would probably be wasted. Bore and muscle producing feeds are of especial value in that they aid in the production of the strong and healthy offspring. For this purpose, alfalfa is of especial value as it is strong in both muscle and bone building material. Cowpeas or other leguminous plants are also valuable in this respect.

The cow neglected while dry cannot come to her best when she freshens. The good dairy animal is deserving of attention from the first of January to the thirty-first of December. Give the dry animal plenty of cooling and muscle and bone building feeds and you will get your way in the milk pail.

Milk Must be Kept Cold

It is no news that milk will sour unless it is kept cold, but probably few persons realize the necessity of keeping its temperature low during all the processes of handling between dairy and consumer. Milk may be on the point of souring, and may swarm with germs, when it is still fairly sweet to the taste, and consumers who are in daily receipt of this "sweet" milk must exercise treble caution to prevent the processes of deterioration from proceeding further. This is clearly indicated by simple tests reported in the thirty-first annual report of the Health Department of Springfield, Mass., just issued in pamphlet form.

Two quarts of milk purchased from different dealers were examined. The milk was about twenty-seven hours old when purchased. The bacterial content of the samples was found to be No. 1, 286,000 colonies and No. 2, 16,800 colonies per cubic centimeter. The small content of the second sample indicated immediate cooling after milking and subsequent careful handling. Each sample was divided into four parts and maintained at temperatures of 100 degrees F., 75 degrees F., 55 degrees F., and 40 degrees F. The increase in the bacterial content of milk between the time it leaves the farm and the time it

reaches the consumer was also made the subject of experiment. It was found that on an average there were about 20,000 bacteria to the quart at the farm, 53,000 at the dealers, and 360,000 at the consumers; the temperatures varying at the farm 47 degrees, at the dealers, 44 degrees, and at the consumers, 58 degrees. These figures show how small an increase in temperature may be responsible for very great increase in the bacterial content. All this indicates that milk should be kept ice-cold during the process of delivery, as well as before delivery.

Mixed Farming in the West

A mixed farming scheme entirely separate from that of experimental farms has been inaugurated by the agricultural department of the C. P. R. In the west and bids fair to be successful. At present there are twelve of these farms in operation, three in Manitoba, four in Saskatchewan, and five in Alberta. The majority of them are quarter sections and the balance half sections.

Dr. J. G. Rutherford who is superintending the operations states that the farms are properly fixed up, in the way of a house, barns, fencing stock, in short they have everything required. A practical farmer is their secured and placed on each farm and he is paid a salary, while the company charges interest on the capital and chattels. The farmer is called upon to make monthly reports so that a close watch can be kept on the business. Then at the end of the year, if there is any profit, after all expenses have been met, it goes into the farmer's pocket. Further than this it has been so arranged that if at the end of the contract time, the farmer wishes to buy the place, an independent valuator is to be called in, and it can be purchased at the price he names.

At the present time, the farms have not been in operation for more than a few months.

A Living From Poultry

A correspondent wrote James Dryden, Professor of Poultry Husbandry at the Oregon Agricultural College, as follows: "Please send facts about the seven acre and three-acre successes. We are beginners and want to succeed." Prof. Dryden replied as follows:

"It is possible to make a living or money on a small tract of that size under favorable conditions. I do not recommend the place as small as 3 or even 5 acres for poultry keeping, if the purpose is to make a living for a family by selling the product at so much a dozen for the eggs, and so much a pound for the chickens, but if the poultryman can work up some special live in breeding stock, that is if he can get more than market prices for the product, he can make a living on a few acres with fowls alone. Where you sell the eggs by the dozen you can hardly keep enough chickens on 3 acres, or even 5, to make a permanent success of it.

"That is, you can, probably, on most kinds of soils, keep 100 hens to the acre, and they will bring in a profit, with good management, of about \$1.50 a hen above the cost of feed. That is, after paying for all the feed they eat there should be about \$1.50 left to pay for labor, etc.

"If the soil is of light nature, that is rather porous and light, you can keep more than 100 to the acre. The trouble in over-crowding the ground is, in a few years the soil becomes contaminated with the droppings, and it sooner or later results in unhealthy stock, decrease in vitality and greater difficulty in hatching and raising the chickens.

By keeping 100 hens to the acre and then growing other stuff with the chickens, using half the ground each year for growing some kind of crop and rotating the chickens and crop, it is possible to keep the ground in a better sanitary condition and to continue the business successfully. The 3 acre place I mentioned from which I got \$6,000 worth of poultry and eggs were sold in a year, had very light soil and was in a climate where there wasn't as much rain as here. The owner made additional revenue by selling brood stock and eggs for hatching.

Why Eggs Don't Keep

The United States department of agriculture has issued a bulletin telling the world why there are so many rotten eggs. The department conducted a series of tests in Kansas in which eggs were kept in very comfortable place from the ice box to a stolen nest under the barn. The tests emphasized the fact that infertile eggs keep better than fertile. One-third of the annual loss in eggs is due to "blood rings." A blood ring is caused by the development and subsequent death of the embryo of the fertile egg subjected to heat. No embryo can develop in an infertile egg, no matter how long it may be subjected to heat. Unless cooled at once, a hot weather almost as quickly as raw milk.

Among the results of the tests it was found that:

Eggs kept in the cyclone cage proved much better in quality than those kept under other conditions.

Taking the whole season as a whole an unheated room in a dwelling is not conducive for good quality in eggs.

During the hot summer months the conditions surrounding the weed nest, the nest in the straw stack, or under the corn crib, and the stolen nest, as well as the keeping of eggs in the house, favor the production of spots, blood rings and rots.

Two-thirds of the total loss in fertile and infertile eggs takes place on the farm. The basic factors responsible for this condition are the hazardous methods of poultry management on the farm.

The results of all the experimental work point to the fact that the production of the infertile egg is the greatest asset in the attempt to produce high-quality market eggs during hot weather.

To assure a high quality of product and prevent in a large measure the loss now experienced in the value of the country's egg production producers are urged to observe the following five simple rules:

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- 1 Give the hens clean nests.
- 2 Gather eggs at least once daily.
- 3 Keep eggs in a cool, dry place.
- 4 Market eggs at least twice a week.

Chickens Forced by Electricity

The following is published by the Butchers' Advocate:

A long succession of ingenious experiments has recently been privately made in regard to the effect of electricity upon the growth of plants and animals, and, according to the Daily Mail it is now possible to say that startling results have been reached in one direction.

Beyond all question young poultry respond to electric stimulus applied in a particular way with astonishing rapidity. They surpass the best on record in speed of growth. They keep their health in crowded conditions, and become almost independent of season.

In the South of England on the biggest poultry farm in the world, experi-

ments of this nature have just been completed. Eight hundred chickens in two equal groups were nurtured on the intensive system—that is, in flats about trays, one above the other. One group of 400 was treated by the electric system, and so charged were the chickens with electricity that a shock could be distinctly felt if the finger were put to the beak of a chicken.

The chickens in this 400 grow to marketable size—that is, as "petite poussins"—in five weeks, and of the 400 only six, and those weaklings in the beginning died.

Of the other 400 nearly half died, it being late in the year for healthy growth, and the survivors took three months to reach marketable size.

The experiment was followed by other experiments in which similar, though not as striking results were obtained. Trials on a yet larger scale are being prepared, and there is at any rate a reasonable hope that an instrument of real value in the intensive production of food has been found.

When you feel in a scrappy mood don't try to take a fall out of an airship.

When bathing and drying the face always rub and make the strokes upward as the muscles of the face relax downward.

But even if a man has no axe to grind, he can usually get a job turning the grindstone for some woman who has.

We must change our slipshod grain farming methods, and begin to farm for profits, or not at all.

Of the serious parasitic diseases affecting sheep, stomach worms probably cause the heaviest losses to sheepraisers.

Those who have poultry should raise shadblers. They serve to furnish shade for fowl and growing chicks during the hot days of summer.

Feed the draft colts this coming winter to develop size, bone and muscle, three essentials in all breeds of draft animals.

Eggs should be sold by weight rather than by the dozen. They vary so widely as to size and weight that the seller or the buyer is sure to lose when sold by the count.

Where a farmer has succeeded by years of careful treatment in eliminating, or practically eliminating the smut diseases from his farm, the use of a smut-infected machine will undo the work of years during one single process of threshing.

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Penmans Limited, Paris, Canada
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