

plied to grass either as a top-dressing or when cultivated into the surface soil.

In Maryland we used to apply large quantities of course ground bone which gave good and long-continued results, but it was somewhat slow in action. The bone referred to is fine and it acts promptly, and we can make a very economical application of it.

I saw three fields of wheat to-day, two of them had been boned, and the other heavily manured. All three pieces are excellent, but if any difference, the boned wheat has it; I have never seen better stands of wheat than these. I have often seen the bone in competition with manure, and the bone has always been equal on the wheat, and generally has been ahead on the grass after the wheat. The bone secures the grass crop and consequently a good soil, and gives us a chance to make manure. In view of our own experience and what we have seen, we know that the claims made for this fine, inoffensive bone are not too strong.

Canadian Butter.

BY L. B. ARNOLD, SEC. OF AMERICAN DAIRYMEN'S ASSOCIATION.
(Continued from Sept. No.)

If there is anything like an approximation to this state of things in the Dominion, of which there is no doubt, then the butter interest is of much greater magnitude than that of cheese, and this is doubtless true even in Ontario, in which cheese has its greatest pre-eminence.

Why, then, I ask again, has this branch of the dairy stood comparatively still, while the cheese interest has been advancing with unparalleled strides? The answer, I think, will be anticipated. It is because the cheese dairymen have studied their art. They have formed associations; held conventions for discussion and investigation; printed and circulated matter relating to their calling, in pamphlet reports, in circulars and newspapers; held large and expensive fairs for the exhibition of products, that all might see with their own eyes just what the market requires and learn how to produce it; and they have traveled from factory to factory to pick up items of experience which their fellows had acquired, and in every way posted themselves in their specialty.

They have really been in school for the last decade. Their tuition has been somewhat expensive. It has cost them a great deal of time and labor and money, but it has proved a good investment. They have made money by so doing, and gained a reputation for themselves and their country. An equal success lies within the reach of the butter producers if they will "go and do likewise." Let town, county and provincial Butter Associations be everywhere formed, and discussions and investigations in regard to every future of the butter-making art be carried on thoroughly and often, and progress will at once follow. Private labors are good as far as they go, but they do not tell like associated effort. When each works wholly by himself, others must remain ignorant of any good he may develop, and cannot therefore profit by it. But where public consultations are held, all are the wiser for what each has learned, and hence spring the most rapid advances. One bee can neither fill a hive with honey nor warm it. It is the combined effort of his 100,000 co-laborers that makes the hive a rich and comfortable home for him. So does the associated effort of those engaged in any calling tell on their store of knowledge concerning it. This is no chimera or idle fancy. It is actual fact which is being every day demonstrated in practical results, not only by cheese men, but by fruit growers, wool growers, hop growers, poultry fanciers and apirians, and many other interests whose devotees form organizations to post each other and mutually further each other's interests. The Western N. Y. Dairymen's Associations, whose discussions have related chiefly to butter, have pushed the butter interest further ahead in three years than it had got in half a century before.

The butter-making branch of agriculture has not kept pace with the cognate branch of cheese-making, and many other branches of rural industry are outstripping it. Something needs to be done to arouse butter makers and bring their products also into the front rank, and that something is association. Will not some of the enterprising men in this department move in the matter, and start an Ontario Butter Makers' Association to begin with? There is a field open in this direction for great and lasting usefulness to individuals and to the country, and the most that seems to be wanting in such an enterprise is somebody to lead off in the work.

Thick or Thin Seeding.

The great benefit of sufficient space for the plant to feed from, and of free access of light and air, are well known to every cultivator of the soil. Especially have they been noticed by the gardener, to whom every plant under his care is as well known as each sheep and lamb to the shepherd. Innumerable instances have been met with demonstrating the remarkable fecundity of a place dropped by chance in some waste spot. A single seed or potato, for instance, yields a produce sometimes many fold greater than the average yield of a crop of the same kind would if planted in the same ground as thick as the ordinary seeding. How many pods of peas from one parent in such cases! How many kernels of corn from one! The power is given by nature to multiply greatly wherever the plant food is sufficient for the support, and the various benefits from atmospheric influence. In the cereals this extraordinary increase is from the greater number and size of the grains; by branching from the main stem; and by tillering or stooling. By both names is the production of additional stalks from the seed or root known. The season of '77 furnishes an instance of such increase in the West. An old farmer referring to the corn crop of this year, says that the time for corn-planting was cold and unseasonable; and that as the season advanced the weather became wetter and warmer, and with it an immense swarm of ground squirrels, ants, cut-worms, wire-worms, and birds of every kind, that take up the young and tender stalks, and there were few fields where the growing crop of corn had as thick a stand as usual. Many went to replanting the corn; others let it go just as it came up: the stand of the crop was consequently thin; but in many of these fields the stalks are of an immense growth, many of them having two ears and, in some instances, more, so that farmers have in their fields a prospect of a fine crop of corn. The dozen of hills that had the space and plant food generally occupied by a score bear so much more yield.

We should not, however, suffer ourselves to be influenced by such instances to seed too thin. Thicker sowing than is necessary is a waste of seed, but too thin seeding induces late ripening and a diminution of crops. Whether, taking all circumstances into consideration, a greater or less quantity of seed is better, each farmer must decide for himself. No cast-iron rule will suit alike every variety of soil and every degree of fertility. A good English authority gives the quantity of wheat usually sown as 100 pounds per acre. The number of seeds in one pound averages 10,000. Were all circumstances favorable to germination, it is very plain, this would cause twice too many wheat plants on any soil; but many grains of seed have been dead, some have been covered too deep, some have remained uncovered, and there is an uncertain amount of loss from water, frost, birds, and wire-worms, in some soils a greater loss than in others, so that stinting the seed we look upon as on the whole bad policy. A better rule and one more generally applicable is—AVOID EXTREMES.

Poultry Yard.

Young Stock.

The birds you have hatched this season, are generally half to two-thirds grown. They should be coming on nicely, now. The broods are putting on their winter plumage, also—the down and early feathers disappearing. In September and October, you may cull the flocks to best advantage; since you are now able to determine what are the most promising selections to be made among them, either for future sales, breeding or exhibition. Don't be too grasping, in this process. Select only the best to reserve for your own use, or for sale as breeding stock. Fatten and market the rest, and in November, you can get more for them as dead poultry than the imperfect, indifferent or scrubby individuals of either sex are worth, to carry through the coming winter. It has been very well said of poultry-raisers that "the good breeder is the good killer." If we were to give one secret of success to the novice who aspires to win prizes or sell for high prices, and but one, we would say, breed a great many fowls and kill a great many.

The Whitewash Process.

Is in order this month and next, for fowl-houses and fences—inside and out. The common method of half cleansing the poultry premises, has been in vogue so many years, and farmers are so prone to adhere to the old furrow in doing these things, that they need to be reminded every spring and fall that complete cleanliness of fowl-houses and runs is essential to success. In whitewashing the interior of a poultry house do not leave a spot even as large as the head of a pin untouched anywhere. Plash the whitewash liberally into every nook and corner, crack and crevice. If the henry has a floor of cement, stone brick or boards whitewash that also. The plan of "whitewashing" is a very good and serviceable way to renovate the houses, and to purify the premises. But the use of lime alone, in this work is not so good a method as is the following: Into the whitewash pail, when the liquid is prepared for application to inside work, while the lime-water is still hot, drop a tea-cup full of soft-boiled rice, and mix this thoroughly through the mass. Then pour into a quart pot of cold water, say ten or twelve drops of crude carbolic acid. Mix this into the rest, and swab the interior of your hen-houses with it. For outside work, use rock salt dissolved, instead of boiled rice and dispense with carbolic acid. No other preparation of "whitewash" even equalled this, within our knowledge—and no one who tries this once, will ever be content with any other combination, for poultry buildings.

Hindrances to Poultry Keeping.

One of the most insidious hindrances is overstocking. There is considerable misapprehension in the public mind on this point. The enthusiasts have always recommended heavy stocking, and many persons who did not know any better followed recommendations to their cost. This matter of overstocking is one of degrees, and is modified by circumstances; the amount of room at command is the first subject for consideration. Since poultry keeping has grown to be so popular, thousands of people with very limited areas of ground are trying to "raise their own eggs and chickens." To this circumstance, in itself, there can be no objection; but the trouble arises in overstocking these small yards. I have seen a great many instances where, in room that would save comfortably accommodated a half dozen hens and a cock, twice or thrice this number were attempted, and the investment was always a failure. Possible success might have been attained for a little while but soon feather-eating, egg-eating, and general "cussedness" would follow. The fowls would look bad, and feel bad, they would mope, refuse to eat, and die, while their owner was wondering what was the matter with them. This short and appropriate epitaph over their buried carcasses would have told the whole story: Died of overcrowding.—Poultry Journal.

POULTRY ASSOCIATION.—The fanciers of poultry in Hamilton Ont. held a meeting at the Dominion Hotel for the purpose of arranging a poultry and dog show to be held in that city, and also to form an Association. There were some twenty-five present, all of whom became members of the Association. It was determined to call the Society the Canadian Poultry Association, and to hold annual shows in the city. Another meeting will be held shortly for the purpose of electing officers.