

Good Crop Follows Good Preparation.

1st. Almost the only variety of wheat sown in this neighborhood at present, and the one that is giving the best satisfaction, is the Early Clawson. The only objection farmers have to it is on account of it not weighing as heavily per measured bushel as many of the other varieties.

2nd. The fall wheat is all good this year where the land was in good heart and the grain sown in time to make a good full growth. Much of the land sown last fall was very badly prepared and made a poor start, with the result that there was nothing left to make a crop this summer. Much of the wheat was sown too late, also to make the necessary fall growth that produces strong, vigorous plants for the following spring.

Bruce Co., Ont.

JNO. B. MUIR.

Good Drainage and Rich Soil for Fall Wheat

To the Editor FARMER'S ADVOCATE:

SIR,—To grow fall wheat successfully, there are two prime essentials. First, you must have good drainage, either natural or artificial; and, secondly, you must provide sufficient plant food in the soil to nourish the plant during its babyhood days. Now, there is no doubt whatever that the best crop to precede fall wheat is one of clover, either meadow, pasture or Alsike stubble. Plow early, not later than the middle of July, and plow deep and thorough. I am one of those who have never been convinced that it is all nonsense to get down to the subsoil. I was taught the old maxim in my early days—"To plow thorough and deep while slugs sleep, and you'll have corn to sell or keep," and I always remember this when I go to plow for fall wheat. Keep the land well worked after the plowing with cultivator, harrow and roller, so as to compact it well. As to width of lands, I think you need not be very particular about that, any convenient size will answer where drainage is good. I usually sow about seven pecks of finest quality seed to the acre, about three inches deep, and always up and down the longitudinal slope of the field, be it ever so little. For our latitude I consider the first week of September the best time to sow, and the variety best adapted to this section is undoubtedly Dawson's Golden Chaff, with Genesee Giant a good second. I have noticed a few fields treated as here described in this neighborhood last year, and they are, without exception, the finest crops of fall wheat that have been grown around here for a great many years. It will be no surprise to find when threshed that they will yield forty bushels per acre.

Perth Co., Ont.

JOHN BURNS.

Destruction of Wild Mustard by Sulphate of Copper Solution.

In July 15th issue of the FARMER'S ADVOCATE information is asked by Mr. Eustace Smith regarding the operation of spraying a crop of corn and wild mustard with sulphate of copper solution with a view to destroy the latter. Until recently we have seen very little regarding the treatment, but the *Farmer and Stockbreeder* of a late issue contains references to trials conducted on various crops with sulphate of copper solution at the Technical Laboratories of Chelmsford, Essex, England, from which we quote as follows:

"About the middle of April a field of barley was selected in which an abundance of charlock (wild mustard) was making its appearance. By means of a strawsonizer (sprayer), several strips of this, under varying conditions of weather and at different periods of growth, have been sprayed with 1, 2, 4, and 6 per cent. solutions of sulphate of copper applied in quantities varying between 10 and 100 gallons per acre. A 1-per-cent. solution was found to be too weak to kill all the charlock; a 6 per cent. solution was found to be strong enough to slightly damage the barley. Applied at the rate of 10 gallons an acre, some of the charlock escaped the spraying; 100 gallons was found to be far more than was necessary. A 2-per-cent. solution applied at the rate of 25 to 50 gallons an acre during dry weather, and at an early period of growth, was found to be completely successful in destroying the charlock without injuring the barley. At the time of writing, when the rest of the field is yellow with charlock, the strips thus sprayed are entirely free, and the barley is growing stronger and has a better color than in the rest of the field, there being no charlock to use up the nutriment of the soil.

"Of the crops to which this treatment can be applied, no doubt barley is the most important, but it may be assumed that, if the necessity arises, any other cereal crops may be safely sprayed in the same manner. It has been found that peas, although at first the spraying slightly injures the young leaves, are in the long run quite unaffected, and this method may therefore be used to destroy the charlock in this crop.

"With regard to roots, mangels were found to be uninjured, but swedes and turnips, and some other plants allied to the genus *Brassica*, being of the same nature as charlock, would certainly be destroyed by this treatment. Of other weeds few seem to be effected by the spray, but thistles, though not killed, are blackened and stunted.

"A convenient spraying apparatus is the 'knap-sack strawsonizer.' Two men will be required, one to spray and the other to fill the reservoir when empty, and it will occupy two hours to spray one acre. From this the cost of labor in any locality

can be calculated. The cost of the sulphate of copper is 3d. per pound, and if five pounds are required per acre, the total cost of material is 1s. 3d."

The following specific directions will be found useful:

Procure ground sulphate of copper (bluestone or blue vitriol); dissolve 2 lbs. in every ten gallons of water. Or, procure a saturated solution of the sulphate of copper (about 32 per cent.), and dilute one pint of this solution to two gallons with water.

How to Spray.—When spraying, pump hard enough with the one hand to make the finest possible spray, and with the other direct the spray; walk down the field sufficiently slowly to ensure every leaf receiving some of the liquid. For this, from twenty-five to fifty gallons of the solution will be required per acre. Choose a still day for the spraying, or the fine spray will be blown off. The operation must be carried out in fine weather; a shower of rain falling before the solution has been absorbed is found to wash it from the leaves and leave the charlock uninjured. Spray the field, if possible, when the charlock first appears. At a later stage of growth, the charlock is shielded by the crop, and may partly escape. If sprayed when the charlock is in flower, although the solution does not adhere to the petals, and the bloom is not directly injured, the charlock is sufficiently damaged to prevent it from seeding.

POULTRY.**To Preserve Eggs.**

When it is desired to use a pickle in which to preserve eggs fresh and wholesome the following mixture will give good satisfaction when newly laid, sound shelled stock is put in each day as laid: Place 4 pounds of unslacked lime, 1 pound of salt, and 1 ounce of cream tartar in an earthen jar; then add 3 gallons of boiling water, stir well and allow the mixture to stand for two days, when it is ready to receive the eggs. The vessel should stand in a cool place where it is not likely to be disturbed. There should be quite two inches of the liquid standing above the top layer of eggs. As the water evaporates, add cold water up to where it previously stood in the vessel.

Chickens Dying Suddenly.—Lice the Cause.

In our Questions and Answers Department of July 15th issue, we replied very briefly to G. L. Lamb's enquiry regarding a serious trouble with chickens. We regretted we could not tell just what was wrong and just how to treat the flock successfully. Since then we have met a similar case in which a flock was dying rapidly. The same experience was encountered last year without the trouble being found out, but recently the cause was discovered to be lice on the head. One or two applications of grease on the head stopped the trouble at once, but we would warn those who have charge of poultry against applications of grease beneath the wings, as it is apt to prove fatal to the chickens, but on the head it does no harm.

It seems difficult to understand how lice on chickens' heads can result in sudden, fatal termination, but other results of lice infestation are as difficult to understand as the one we have named. Bowel trouble in summer, drowsiness, refusal to eat, slow growth, sudden death, gradual wasting away, constant crying, loss of feathers on the head, and other remarkable symptoms indicate lice in chickens. Brooder chickens never have lice, and as a rule grow better than those with other poultry. Large lice kill ducks suddenly and cause the death of many young turkeys. Whenever a sick fowl is found dusting itself it should be examined for lice. Many who understand how to get rid of lice do not believe their chickens are infested, and therefore do nothing for them. It is not the little red lice seen in the poultry house that does the great damage, but the large gray body lice which work on the heads, neck and vents, and which never leave the birds, that cause the serious trouble. These are not easily discovered, but require a diligent search to locate them. A single one of these voracious fellows on the head or throat of a young chick will sometimes cause the youngster to droop and die.

A dust bath in a cleanly kept house will enable the hens to keep the little mites down, but the larger lice are not so easily disposed of. An ounce of carbolic acid in a half bushel of dry, fine earth, or finely-sifted coal ashes, makes an excellent dust bath, but under no circumstances should wood ashes be used.

To make a thorough job of getting rid of a bad infestation of lice, the house should be sprayed every day for a week with kerosene emulsion, made as follows: Cut up (slice) half a pound of hard soap in half a gallon of soft water. When the water boils, and the soap is dissolved, remove it from the fire, and add half a gallon of kerosene (coal oil). Agitate it with a spray pump for ten minutes, and a creamy mass will be formed, which becomes a jelly when cold. Add two ounces of crude carbolic acid to the kerosene before mixing with the soap. When you have finished agitating the mixture, add five gallons of water, or soapuds from the family washing, and you have the cheapest and best mixture that can be made. Grease the heads of the chicks every second day until the lice are gone with lard, sweet oil, linseed oil or butter. The nits as well as the lice must be destroyed. Dust freshly-slacked lime freely every

where—in the nests, on the floor, walls, and over the yard. A good dry mixture is: slacked lime, one peck; tobacco dust, two quarts, and carbolate of lime, one pound. Mix thoroughly, and dust liberally into the feathers of the mature fowls, as well as throughout the house.

Unfertilized Eggs.

There seems to be various opinions among poultry breeders as to the merits and demerits of allowing the males to occupy the same pens with the hens, or in keeping males with the flock if the poultry is allowed free range. Some claim that the hens lay better when no male bird is present, as he molests them and disturbs their usual placidity. Some claim that the hens lay better, as they get more exercise, because of the many calls of the male bird to "Come and see what a nice worm I have." Some think there will be no eggs at all unless a male bird is present, and following out this idea to extremes, they keep nearly a dozen males with a small flock of hens. The result is, usually, very few chickens. I might here add that I usually find one male with a flock of thirty or forty hens gives more fertilized eggs than does two or more, provided the flock is not confined in pens. I have come to the conclusion that it is not so much the absence or the presence of males that cause the difference in the number of eggs laid, as it is in the breed of hens kept. Perhaps the advocates of the "no male" plan have active exercisers, while those who approve of numerous males have a lazier breed, which will sit in the shade till called to food. From experience I should favor keeping male birds, for with a large flock of hens laying few eggs when a couple of roosters were present, I found, after killing them, a flock of hens laying "fewer" eggs. But all agree that an unfertilized egg is better than a fertilized; but very few merchants, buyers, grocers or ordinary consumers know this, or, if they do, they do not appreciate the difference. I find they will not pay one cent on a hundred more for guaranteed fresh and unfertilized eggs than they do for a lot of ordinary eggs, which, for all they know, may contain a germ which has already begun to decay. In speaking to a dealer on the question of supplying unfertilized eggs, he asked, "What kind of eggs are they," evidently considering "unfertilized" to be a new variety of hens, or, perhaps, a different kind of fowl. A consumer said to me, "I would like to buy a crate of eggs for winter use when they are cheap, but I am afraid I could not pack them so that they will keep." I replied, "Get them from someone who keeps no male birds with his flock, or unfertilized eggs, and they will keep forever." She enquired, "What difference will that make," and when I explained that where there was no life there could not be death and decay, she said she had never heard of it nor had ever thought of it before. The question then arises, "How shall we educate the dealers and the consumers to know the value of unfertilized eggs?" We know they are much nicer for eating, even when new laid. Some writer has said, "Where no males are kept the hens are not so inclined to hatch, instinct teaching them it is useless." This does not prove true in my experience, as I have had a hen bring out chickens from a stolen nest about six weeks after the male was killed. Of course, that was not an exception, but I have also had them sitting for some time, and on breaking the eggs I have discovered no life germ in any of them. So that the fertilization or lack of it does not seem to be a cause of the propensity to hatch which is exhibited by some hens when they have the slightest encouragement. Another benefit to be derived from unfertilized eggs, where fowls have unlimited range, is the absence of those late flocks of chickens which come unexpectedly in the late summer and autumn, just when we do not want them; yet we hate to have them come out and get our attention, and are of very little value when they are raised.

Middlesex Co., Ont.

GYRA.

Summer Treatment of Chicks.

LOOK OUT FOR LICE.

Now that hot weather is here, and chicks presumably all hatched, it behooves us all to find out the best means of hurrying them along—the cockerels to the block, the pullets to the laying pens. This is more especially true in the west this year on account of scarcity of food supplies and consequent high prices. The first thing to look out for, and keep looking out for, is lice. The direct cost of fighting lice is small; the indirect, if neglected, is very heavy. At present we will consider that chicks have been well looked over; on the heads for large head lice, on necks for lice usually found there, and fluff examined carefully for the lively body lice, and all found clean. But do not be too sure that because you cannot see any lice that none are present. I once knew a man offer a dollar apiece for all lice found upon his chicks—a well-kept small flock of beauties. A mutual friend caught a hen, and astonished the owner by showing him that lice were present in considerable numbers. Lice, I firmly believe, are the cause of the death of one-half of all chicks that die young. For young chickens hatched twenty-four to thirty-six hours I have found nothing to equal stale bread soaked in milk and squeezed nearly dry. I sometimes buy the cheapest grade of flour obtainable, mix equal parts, by measure, of shorts, and make bread of it, but make sure of having it made at least forty-eight hours before it will be required. They relish it and show by their growth that it is