

mend them for general adoption. It is also to be noticed, that it takes less time to lay them than stones, and that the ditch required for their reception is smaller and narrower. The bottom of it need only be wide enough to receive the tiles. The upper part of the earth is taken out with a common spade, and the lower part with one made quite narrow for the purpose, being only about four inches wide at the point. The bottom is finished clean and smooth, with a peculiar hoe or scoop. This is necessary, because the tiles must be laid on an even smooth foundation."

Cultivation of Oats.

OATS are grown more widely, perhaps, than any other grain crop; and on good soil, with fair cultivation, produce good, remunerative crops. It (the oat) has fewer enemies than most of the cereals, and may be raised with less labour than any of them—in fact, so easily are oats raised, that very great negligence prevails in almost all parts of the country where they are grown, in properly preparing and enriching the land. It would seem that a crop which is so universally grown as to exceed the wheat crop of the country by over a million of bushels, according to the census statistics of 1860, would receive better attention; but a notion prevails that the oat has strong assimilative powers, and it is best to use it to extract the little remaining fertility of an almost exhausted soil—at least such might be inferred from the course of culture pursued too often.

SOILS AND THEIR PREPARATION.—Oats thrive the best on a rather moist soil, of a somewhat closer, heavier texture than required for the best crops of corn. The ground should be ploughed as soon after the frost is out as it will admit of working well; plough deep and with a narrow furrow slice; no matter if a small quantity of subsoil is brought up, as the oat will bear it better than most other crops. The frosts of winter have the effect to loosen the soil, and leave it in a favourable condition, so that teams, fresh and strong, will better perform their part in deepening the soil than at any other season of the year. The judicious farmer should ever keep in mind that it is better to add to his farm by deepening the soil than in adding to the acreage. I should have said before that oats should follow some hood crop, properly.

VARIETIES.—Every section has, or is supposed to have, its favourite variety, which has some fancied or real quality better than any other, and that variety is generally cultivated to the exclusion of others. It would therefore be vain to recommend or say that any particular variety was best; but all agree, I believe, that the heavier the grain weighs the better, as a general rule. Oats, long grown on the same soil, unless particular pains are taken in selecting and saving seed, are liable to deteriorate in quality, and an advantage is often derived in obtaining seed from cooler localities.

SELECTING SEED.—A great falling, too common among farmers and cultivators generally, is the want of care in selecting and saving seed for future use. In selecting oats, the heaviest, brightest and plumpest only should be used. Take the best to be had and assort them in one of the following ways: By throwing them across a long floor, retaining only those which go the farthest; the lightest will fall short—by running them through a fanning mill turned rapidly to blow over the lightest; the heaviest and best will run down, and those only should be used. To procure seed at first, this is the best way, but when a crop is grown, the better way is to take from the best part of the field that wanted for seed. Take the bundles and whip them across the head of a barrel, and select therefrom such as will readily shell out, and divide still farther as before. In this way the standard weight may be kept up indefinitely, and an improvement oftentimes made on the original. Were farmers to use similar care in selecting seed of all kinds, there would be less complaint of the products being of poor quality as well as quantity.

SOWING.—The seed should be sown as soon after ploughing as practicable. Drilling in seed, sowing broadcast, harrowing in and ploughing in, are the different ways practiced in different sections and by different cultivators. For several reasons, I give the preference to drilling in the seed, for by so doing the

quantity per acre can be more exactly regulated; the covering is more uniform than by the other methods; the seed is more uniformly distributed than in hand-sowing. Being covered uniformly, it comes up simultaneously, and does not present the spotted appearance which is otherwise often seen. There is also less liability to lodge than hand sown, even when sown on similar soil side by side. It will usually pay to let the land lay long enough to dry sufficiently, and roll it to break down any clods, and fit a good seed-bed, then drill in the seed; the depth to be governed by the soil,—from one to two inches, and finish off with the roll. In sowing broadcast, the seed is put on immediately after ploughing, and harrowed twice over—length and crossways of the field, followed by the roll to finish off—an important item to help keep down the weeds and facilitate in harvesting the crop. Ground liable to have standing water should be underdrained, or, at least, water furrows should be opened after sowing, to conduct the water off; for no kind of grain is expected to thrive where water is allowed to stand upon it, if we except rice. Different cultivators use from two to four bushels of seed per acre. As a general rule, the better and heavier the soil, the more seed it will bear; a safe average amount would be three bushels. The earliest sown produces the best crop, both as to yield and weight; the latest the next, and between, the poorest.

HARVESTING.—Oats, unlike wheat and rye, are better and heavier for not being cut too green, although the straw is less valuable for fodder; being cut green, they pack closer, do not cure as well, and are liable to injure in the mow or stack. The best way of cutting is with the grain cradle, which leaves them spread thin in the swath, and gives an opportunity to dry so as to be gathered, bound, and put in the stack or mow, without danger or injury, as is too apt to be the case when cut with the reaping machine, and thrown off in "gavels." In the former case, if wet, they soon dry out, often without turning; but in the latter, they require to be spread. The straw of the oat will retain wet with much greater tenacity than that of any other grain. The grain is bound in suitable-sized bundles, and set on the butts to sun and dry a few hours, and then either carted to the barn or shocked in the field, where they may remain in perfect safety for some weeks. Lay three or four sheaves in the centre, so that the heads will not come in contact with the ground, which is easily done by weaving them together; build around these in a circle, keeping the heads of the bundles higher than the butts, and in the center; keep the sides perpendicular to the desired height; then draw in evenly, and finish off with a cap sheaf, set and bound on firmly.

THRASHING.—The old mode of thrashing with the flail, and tramping out with horses, have given way to the improved machine driven by horse or other power. An important part is cleaning the grain, as a nice, clean article will always command a ready sale, and a better price, than an equally good article mixed with dirt, chaff, &c. The grain run through the fan-mill twice—first with a coarse meshed riddle, and again through a finer,—will usually expedite the cleaning and do it more satisfactorily.

ROTATION, &c.—Oats are generally esteemed an exhaustive crop; but when they occupy a place in a regular course of rotation, they are no more exhaustive than other straw and grain crops; but when grown, as is sometimes the case, many years in succession on the same ground with only one ploughing, and without fertilizers of any kind, the land is often exhausted of its fertility, and the soil is filled with Canada thistles, dock, and other noxious weeds, thus rendering it unproductive. There is no better grain with which to sow grass seed for stocking down than oats, and for that purpose I would grow them, seldom if ever growing them oftener on the same ground. Oats are benefited by most of the usual fertilizers, except such as contain much nitrogenous matter or lime, they retarding the ripening, or producing a rank growth of straw, causing it to lodge. The preferable way is to enrich the soil through previous crops, getting it into good heart and tilth, not applying any stimulant to the growth of the plant. A cool, moist season usually gives us the heaviest and most prolific crops.—Wm. H. WURTZ, in *Country Gentleman*.

South Windsor, Conn.

Items from the American Institute Farmers' Club.

WE call a few extracts from the report in the *N. Y. Tribune*, of the meeting held March 27:—

QUACK GRASS.—Oliver Payne, Granby, Oswego County, N. Y., inquires how to kill quack grass?

We recommend him to dig it up and burn it, smother it with manure, or kill it with salt or gas lime.

A NEW STRAWBERRY BASKET.—George H. Mellish, Paper-mill Village, N. H., sends the Club specimens of a new strawberry basket. It is a wooden bowl, holding a quart, turned out of a round stick of bass-wood or maple, endwise. These he offers to sell for \$15 per thousand. They are very clean and neat looking, remarkably cheap, and were well approved by some of the largest strawberry growers in this vicinity. For transportation, when filled, they will have to be set in holes cut in the boards between the tiers of the cases, just as they are prepared for carrying earthen bowls. We think this Yankee notion a decided hit, and commend it to the public.

CHURNING.—Mrs. S. Haddock, Babylon, L. I., says: "If young housekeepers will scald the milk directly after straining, this will produce the sweetest kind of butter with half an hour's churning in any churn; the milk should be taken off the stove at the first stage of the scald."

MANUREL SUBSTANCES.—What to use to enrich land, and how to use it, is attracting more attention at this time than ever before. Among a batch of letters upon this subject, the following are briefly discussed:—

A Farmer, North Palms, N. Y.: "An old ashery, near my farm, contains a pile of some 150 loads of thoroughly leached ashes, for they have been exposed about 25 years. Are they good for a young orchard? Or for oats? And should they be put on the surface or ploughed in? Are they worth as much as yard manure for my sandy soil?"

Yes, yes, yes, to all these questions, even the third one, for they may be spread on the surface of grass land, or upon oat ground, or may be lightly ploughed in with any other crop, and be worth as much as an equal quantity of manure.

D. W. NOBLE, Indianapolis, inquires the value of leather shavings for manure, and how to use them?

They are worth, we should say, \$20 a ton, and may be spread upon grass, where in time they will decay, or composted with lime, ashes, muck, or strong manure, till decomposed.

HOW TO KEEP WINTER APPLES.—Dr. J. P. Phillips, New-Haven, Conn., recommends in the highest terms buckwheat chaff for packing apples or other fruit. He says: "Apples packed in it have a better chance of preservation from frost than when packed in the ordinary way. The chaff prevents rot from spreading from one infected apple to others that may be sound, owing to its great power of absorbing moisture."

WEEVIL-PROOF WHEAT.—J. W. Smith, Clarence, Erie Co., N. Y.: "We raise, in this vicinity, wheat that is perfectly weevil-proof—that is, the field-weevil or midge can do it no harm. It yields about 15 to 18 bushels per acre. The color of the straw when ripening, is of a bright yellow orange. It is not bearded—heads rather short, produces good flour. Berry red and plump. It is about the only wheat we can raise here, on account of the destructiveness of the field-weevil or midge. It is, however, subject to smut. Does the Farmers' Club know what causes smut, and what will prevent it?"

Yes, both. Smut is a fungus plant, propagated by seed as much as wheat, to which it adheres, and is sown with it, and thus the product continued. Wash your seed wheat thoroughly in various alkaline substances—in urine, in a solution of copperas, &c., and you will kill the smut seed, and in time get it out of your fields.

Weed History.

FROM a recent issue of the *Gardeners' Chronicle* we extract the following interesting communication.—The introduction of a new plant that takes its rank amongst our own indigenous ones should be carefully noted, or in a few years the generation will have passed away, and sometimes all record of the plant with it. Many of our so-called British plants had doubtless an European origin, and some even came originally from parts of the earth yet more distant. There are many persons still living, who remember the disastrous Walcheren Expedition; but few are aware that to the effect of this it is to be ascribed the introduction of the most troublesome weed to agriculturists, saving Gravel Bine, *Convolvulus arvensis*, for, like it, the new comer dives deeply into the earth, from 8 to 9 feet, and cut it or break it as you will, new buds are formed and shoots developed that in time will find their way to the surface, luxuriate in leaves and flowers, from which, in due time, seeds are produced, and the race extended. All this increase by seed the husbandman can prevent, by cutting off the tops; but how is he to rid the soil of the roots thus deeply seated? Again, when the deeply seated bud has forced up a spindling weakly-looking shoot to the air, the very first effort (in which it is usually