

most common grasses of English natural pastures, on rich, deep, moist soils. It became soon after its introduction into England, an object of special agricultural interest among cattle feeders, having been found to be exceedingly palatable to stock of all kinds. Its rapidity of growth, the luxuriance of its aftermath and its power of enduring the cropping of cattle, commend it highly to the farmer's care, especially as a pasture grass. As it blossoms earlier than Timothy, and about the time of red clover, it makes an admirable mixture with that plant, to cut in the blossom and cure for hay. As a pasture grass it should be fed close, both to prevent its forming thick tufts and to prevent its running to seed, when it loses a large proportion of its nutritive matter, and becomes hard and wiry. All kinds of stock eat it greedily when green.

Judge Buel, distinguished as a man of taste, said of this grass: "I should prefer it to almost every other grass, and cows are very fond of it." Elsewhere he says: "The American Cocksfoot or Orchard Grass is one of the most abiding grasses we have. It is probably better adapted than any other grass to sow with clover and other seeds for permanent pasture or for hay, as it is fit to cut with clover and grows remarkably quick when cropped by cattle. Five or six days growth in summer suffices to give a good bite. Its good properties consist in its early and rapid growth and its resistance of drought; but all agree that it should be closely cropped. Sheep will pass over every other grass to feed upon it. If suffered to grow long without being cropped, it becomes coarse and harsh." Colonel Powell (a late eminent farmer of Pennsylvania), after growing it ten years, declares that it produces more pasturage than any other grass; he has ever seen in America. On being fed very close, it has produced good pasture after remaining five days at rest. It is suited to all arable soils. Two bushels of seed are requisite for an acre when sown alone, or half this quantity when sown with clover. The seed is very light not weighing more than twelve or fourteen pounds to the bushel. It should be cut early for hay.

Mr. Sanders, a well known practical farmer and cattle breeder, of Kentucky, says of it: "My observation and experience have induced me to rely mainly on orchard grass and red clover; indeed, I now sow no other sort of grass seed. These grasses mixed make the best hay of all the grasses for this climate (Kentucky); it is nutritious, and well adapted as food for stock. Orchard grass is ready for grazing in the spring ten or twelve days sooner than any other that affords a full bite. When grazed down and the stock turned off, it will be ready for re-grazing in less than half the time required for Kentucky blue grass. It stands a

severe drought better than any other grass, keeping green and growing when other sorts are dried up; in summer it will grow more in a day than blue grass will in a week. Orchard grass is naturally disposed to form and grow in tussocks. The best preventive is a good preparation of the ground and a sufficiency of seed uniformly sown. The late Judge Peters, of Pennsylvania, who was at the head of agricultural improvements in that State for many years, preferred it to all other grasses.

Orchard grass is less exhausting to the soil than rye grass or timothy. It will endure considerable shade. In a porous subsoil its fibrous roots extend to a great depth. Its habit of growth unfits it for a lawn grass. Its seed weighs twelve pounds to the bushel, and to sow alone, about twenty-four pounds to the acre are required to make sure of a good crop. It should not be sown alone except for the sake of raising the seed. It is worthy of a much more extended cultivation among us.

ONION CULTURE.

It is sometimes thought that by bending down the tops of the onions two or three inches above the bulbs, or rolling the ground hard before sowing, or keeping it entirely away from the bulbs while growing, will prevent them from becoming scallions; but it is now generally believed by our best onion growers that any mechanical means of this kind have little or no influence in changing the form of the onion from that which nature intended to give it. It is, doubtless, better for the bulbs to grow principally out of the ground, but there is danger in removing the soil, especially when they are small, of letting in the sun upon the tender roots. The seeds are so lightly covered that no danger need be feared that the soil about the onion will interfere with the forming of the bulb. There is, however, advantage in rolling or pressing the ground slightly after the seeds have been sown, thus preventing it from drying on the surface, or being blown from the seeds, which might retard or entirely prevent their germination.

RAISING SEEDS.

To keep a variety from deterioration by running to scallions, or becoming imperfect in the shape of the bulb, or too late, the largest and most perfect bulbs should be selected annually for seed.

The qualities most to be desired are early maturity, thin neck, and tops that wither down to the surface of the bulbs, thus avoiding late growing onions and the scallion form as much as possible. By persistence in this course from year to year, early varieties, or late globular forms or flat, may be produced at pleasure.

The onions thus selected for seed, should be planted in drills three feet apart, in well-manured land, in early spring, the distance between the onions in the drill being eight to twelve inches. They should be covered so as to leave the neck about half an inch below the surface, and the ground be pressed gently around them. A stake should be set by the side of each, to which the stalks must be tied for support.

If different varieties are cultivated, they should be set in separate plates, at least twenty rods distant, to prevent cross-breeding, and the consequent deterioration of the varieties. No attendance is necessary, except to draw a little earth around the bulbs, to keep them clear of weeds, and to keep the stalks securely tied to the stakes. Care should be taken in hoeing and tying not to bruise the stalks.

As soon as the seed capsules begin to turn brown and show signs of opening, the heads may be cut off about six inches below the top of the stalks and tied up in small bundles, or spread on a floor or lattice work, in a dry or airy place, till dry enough to be beaten out, after which the seeds should be cleaned and put in small bags or boxes, and be kept in a dry and moderately cold place till wanted for use.

WHAT SEEDS SHOULD BE SOWN.

Only the newest and freshest seeds should be sown. Experienced cultivators of the onion say that the seeds will not retain the power of vigorous growth more than one year. A vigorous plant can be grown only from a healthy seed; hence the necessity of growing seeds of the previous year's growth. Their germinating power should always be tested before sowing. This may be done by planting a few in a hot-bed, or in a box kept in a moderately cool room in the house. If only a short time is allowed, they may be placed in moistened cotton or moss, in which they will begin to grow in three or four days, if of good quality.

The largest and heaviest seeds generally produce the best and largest onions, and should be carefully separated by a sieve from the small ones before sowing. Their weight may be tested by immersion in water, and drying them in the sun as soon as possible. The light seeds will rise to the surface, and the heavy ones, fit for sowing, will sink to the bottom.

These principles are of fundamental importance, and, if adopted and practiced from year to year, will prevent, in great measure, the deterioration of varieties, which is so much complained of, and frequently so little understood.

THE SOIL.

New land is not favorable to the growth of the onion. It should be cultivated at least two years with some other crop, as