

Grasses and Forage Plants.

Sweet-Scented Vernal Grass—*Anthoxanthum Odoratum*.

The Sweet-scented Vernal Grass, figured on the page, derives its botanical name, *Anthoxanthum*, from two Greek words signifying yellow-flowered, and its qualifying adjective, *odoratum*, from the sweetness of its perfume. It is valuable principally on account of its early growth, chemical analysis assigning it but small feeding value. Ordinarily it does not exceed a foot or a foot and a half in height, but it has been found twice that height. It may be identified by its perfume, which it imparts to other grasses with which it is cured. The sheaths are long and rather rough or hairy when felt from below upward. The flowering time is from May to July. Of itself it would not yield above half or three-quarters of a ton per acre. The seeds weigh five or six pounds to the bushel.

Way's analysis gave of a 100 parts:

Water.....	80.85
Protein.....	2.05
Fat.....	0.67
Heat-producing principles.....	8.54
Woody Fibre.....	7.15
Ashes.....	1.24

In the Woburn experiments an acre mown at the time of flowering produced 7,827 pounds, which lost 5,723 pounds in drying, and yielded 122 pounds of nutritive matter. Compared with timothy, the vernal cuts a poor figure. Timothy gives 42.5 pounds of dry hay for 100 pounds of grass, and 3.9 pounds of nutritive matter, more than three times the produce of the vernal. Flint says of this grass: "The aftermath or fall growth of this beautiful grass is said to be richer in nutritive qualities than the growth of the spring. A curious and beautiful peculiarity is exhibited in the seeds of this grass, by which they are prevented from germinating in wet weather, after approaching maturity, and thus becoming abortive. The husks of the blossom adhering to the seed when ripe, and the jointed awn by its spiral contortions, when affected by the alternate moisture and dryness of the atmosphere, act like levers to separate and lift it out from the calyx, even before the grass is bent or lodged, and while the spike is still erect. If the hand is moistened, and the seeds paced in it, they will appear to move like insects, from the uncoiling of the spiral twist of the awns attached to them. There are nine hundred and twenty-three thousand two hundred seeds in a pound, and eight pounds in a bushel. It cannot be said to belong to the grasses useful for general cultivation.

Raising Red Clover for Hay vs. for Seed.

I have known a crop of clover seed exhaust the land more than a crop of wheat. Clover is a great renovating crop when grown for hay, for pasture or for ploughing under, hence clover seed should be sown liberally. On the other hand, raising seed is highly profitable, but so expensive what exhausting to the land. Raise clover seed, but use the money obtained from its sale to enrich the land. A bushel of clover seed will usually buy six or eight bushels of peas or beans, and these fed to stock on the farm will restore to the soil, in the form of manure, six or eight times as much plant-food as the crop of clover seed removed. Do not try to cheat the soil. Do not induce it to give you a good crop of clover seed and then refuse it a share in the profits.

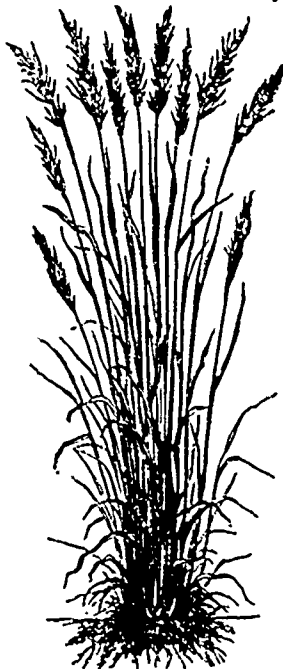
In raising clover seed cut the first crop early—say in this latitude the first or second week of June. A better rule still is to cut the first crop before all the blossoms are unfolded. It is also important that the first crop should be mown as evenly as possible, that the plants may start equally, and the future crop of seed ripen all at the same time. It is desirable to get the seed early—say the first or second week in September. Occasionally a larger crop will ripen in October; but at that season the weather is usually unpropitious, and a large number of the heads, when ripe, are apt to drop off in wet weather, both before and after they are cut.

A large growth of foliage is sometimes obtained by sowing gypsum on the clover after the hay crop is removed, but in a cool growing season the seed in this case is apt to ripen poorly. The largest crops are obtained, other things being equal, from land seeded with nothing but clover, and in this case the seed should be sown pretty thickly—

say six or eight quarts per acre. This thick seeding has a double advantage. You get a finer quality of clover hay, and the plants being thick on the ground, the crop is not so apt to lodge and can be mown more evenly. Six bushels per acre is sometimes grown on good land when clover alone is sown, but three or four bushels is a full average.

Let not the farmer who neglects and starves his land think that he can get rich by growing clover seed. The profits are not for him. There is no better indication of good land and good treatment than luxuriant crops of clover. The land that will produce good clover will produce good wheat or other grain, and the negligent farmer deserves neither one nor the other. Let him give the soil good tillage and liberal treatment, and it will prove grateful. On the contrary, if a farmer starves the soil the returns in light crops will impoverish his pecuniary resources. On a wheat farm it is not easy to grow too much clover, provided it is all consumed on the farm, or ploughed in as a green manure; but it is quite easy to raise too much clover seed.

Clover is, perhaps, all things considered, the best renovating crop that can be grown on a wheat farm. Like peas and beans, clover is a leguminous plant, and draws a considerable quantity of ammonia from the atmosphere, while its deep roots penetrate the subsoil and bring up potash and other ingredients of plant food. It is admirably adapted to our climate, and as yet "clover sickness," which is so troublesome on the light soils of England, is known in but few localities in this country. Whether it



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is best for farmers to raise their own seed, is a question which deserves consideration. It should be borne in mind that the main object of sowing so much clover is to enrich the land, and it is undoubtedly true that letting clover go to seed changes it from a renovating to an exhausting crop. Hence the true system of management is to raise seed only in small quantities, say on half an acre of the best ground, while the remainder should be ploughed under, or be made into hay and ted out on the farm.—*Agricola in New York Herald.*

June Grass and Permanent Pasture.

"It would be a great blessing to the country if the best of these pastures could be saved from being ploughed, for they are to Canada what the blue grass is to Kentucky, and according to the different quality of the soil and climate are in comparison of much more value in grass; for the farmers forget the saving of labor on the old swards, and the time will come when every farmer will wish his land was half in this permanent grass. Wherever the land is kept in grass the owners are more prosperous. They own a deal of live stock, and although sheep, cows and horses are very much lower in price than in the States and the longer and colder winters are unfavorable, yet the raising of animals is more general. Still the French and other old inhabitants work their ploughed land too hard, cropping year after year and renting portions to others till fertility is sadly weakened."

So says an Ontario correspondent of the *Rural New Yorker*. The editor of that journal adds.—"The above needs to be taken with some qualification. In sections where dairying and grazing are leading branches of farming, June and blue grasses and permanent pastures are advisable. In other sections, small as yet, but yearly increasing, where cultivated crops are the rule and pastures the exception, June grass is a weed, and one of the most

difficult to get rid of. In such sections land should be seeded only with clover, or clover and timothy, or orchard grass, and ultimately cattle will be kept by soiling rather than pasturing. Wherever a regular rotation of the farm is observed, and corn, wheat and spring grains come in every third or fourth year, June grass is not admissible. Its sod will not rot as clover will and it does not, when ploughed, benefit the soil as clover does.

Alsike Clover.

Alsike, or hybrid clover, which takes its name from the Alsike district, near Stockholm, we have sowed and tested for five years, and have found it superior to red clover. The root is fibrous and the heads globular. It bears a greater resemblance to the white than to the red clover. The advantage it has over other varieties, are that the frost does not affect it, and consequently can be sown on damp ground with good results. I have sowed some seed in a wet place, and at the same time sowed some red clover seed. I had plenty of Alsike clover but not one plant of red clover. From four to five pounds of seed is required for an acre when sowed clear; and about half that amount when sowed with timothy. This clover makes finer and better hay than either white or red clover, for the stalks are not as thick and woody as those of red clover. It will remain green until after harvest, when it will be as white as timothy, and not turn black like red clover, when cut as late as timothy is, after being left standing until harvest. It can also be threshed with timothy, the seed easily separates, and also imparts a flavor to threshed timothy.

When allowed to ripen its seed, it cannot be cut more than one season, as it bears its seed with the first blossom in each year; but if it is grown for a hay crop, it can be cut again in the fall, and will yield a nice lot of fine hay for calves and sheep. It yields about one-third more seed to the acre.

Among its disadvantages may be reckoned its rank growth, rendering it liable to be lodged.—*Cor. Rural Home.*

CLOVER AND LUCERNE PESTS.—In the south of France, and in Spain, clover and lucerne are severally attacked by a small black insect, called *colaspæ*, which eats the leaves. In the early morning a trough moving on wheels, and putting in motion a light thin board, by means of a connecting belt, is pushed over the field. In its passage this board or fan gently shakes, without breaking them, the leaves and stems, so that the bugs fall into the trough, out of which they are taken and burned, or killed with boiling water.

HUNGARIAN AND HORSES.—A correspondent of the *Southern Cultivator* gives an instance of what has been repeatedly stated in these columns, viz., that if allowed to form seed, Hungarian will injure horses by acting as an irritant upon the kidneys. The correspondent was feeding his horse on Hungarian and he noticed that the horse manifested an almost continual desire to urinate—appeared weak and stiff. He discontinued the grass feed, and the horse became all right. A mule was similarly affected. He let him eat it two days longer than the horse, and the symptoms of kidney affection grew worse. These two were the only stock fed on it. The grass fed was fully ended, but not ripe. He will feed no more after it blooms.

SALTING HAY.—President Hoffman of the Elmira Farmer's Club, wants to enter his protest against salting hay. It will, he says, prevent the barn from burning, but it tannages the hay. Cattle will eat salted hay, but it is not good for them. He would rather use lime if one or the other must be used. He starts with the proposition that the very best feed for cows is grass, but we cannot have grass in winter so we make hay. The true plan is to get that as near like grass as possible. Let us combine bulk and quality as well as we can and we shall be doing as well by ourselves and our cattle as we can. If we were to cut one stalk of timothy at just the right time, we should do it just as it begins to show the blossom; but in the field we have to take into account the time required, so we must begin a little earlier.

MANAGEMENT OF WITCH GRASS.—A few years since, writes some one in the *Maine Farmer*, a gentleman purchased a residence in my neighborhood. The garden attached to the premises had not been cultivated for several years, and was a solid bed of luxuriant witch grass. Passing his premises in the month of September, I found him at work spreading a thick coat of horse manure, from his barn cellar, over his witch grass sod. He informed me that he should not plough his garden till spring, and that the dressing he was applying would kill out all the witch roots during the winter. At the time I supposed he was quizzing—but the next spring I noticed his remedy was successful. He had spread the dressing close up to the fence, but did not plough within two feet of his line, still the witch grass did not spring up, even on the unploughed borders of his garden. Having occasion a year ago to remove a couple of cords of witch grass soil, I stacked it up three feet in depth, making the centre of the heap slightly concave, and covered it with a barrel of salt and several barrels of beef pickle, but even then did not succeed in killing the witch grass roots.