

# Grasses and Forage Plants.

## The Meadow Fescue—*Festuca Pratensis*.

The meadow fescue, *Festuca Pratensis*, is a grass that is highly thought of in England, and that always forms an important one of the many varieties there used for seeding. We are not aware that it is ever sown on this continent, but it is indigenous here, and is found in almost every pasture and meadow. Stock, especially sheep, are fond of this grass, and it has excellent nutritive qualities. Chemical analysis places its constituents at:—Water, 74.8; albuminous matter, 24; fat, 0.8; heat-forming principles, 10.2; woody fibre, 10.1; and ash, 1.7. It grows about two to three and a half foot high; the leaves are broad, flat and rough on the under surface, and about a foot long; the root is perennial and fibrous.

It succeeds best in low-lying moist ground, though it is often found on high lands. It flowers in June, and consequently has lost some of its value for hay, when it is left till the timothy is ripe. Its seeds weigh about fourteen pounds to the bushel.

Its comparative value will be seen at a glance by the following table from the famous Woburn experiments. Mr. George Sinclair examined 1,950 grains of the leaves of each of the following grasses gathered in the early part of April, and found them to contain:

Grains of Nutritive Matter.	
Tall Oat Grass.....	120
Darnel-like Fescue.....	110
Sheep's Fescue.....	102
Burnet.....	100
Meadow Foxtail.....	96
Meadow Fescue.....	95
Tall Fescue.....	94
Crooping Fescue.....	90
Lucerne.....	90
Crested Dogtail.....	88
Smooth Brown Grass.....	84
Timothy or Meadow Catstail.....	80
Broad-leaved Clover.....	86
White or Dutch Clover.....	84
Sweet-scented Vernal Grass.....	82
Crooping Bent or Florn.....	42

## Timothy Meadows—When to Mow Them.

Timothy, all will agree, is the prince of artificial grasses for hays. An examination of the plant and a comparison with other grasses, will show the critical observer that it is the only grass that has a bulb. This will be found just where it springs from the soil into the atmosphere. In this respect timothy may be called a "cousin German" to an onion. Below the soil and partly above it, are found the delicate rootlets branching out in all directions, to seek sustenance for the plant from the nutritious elements in mother earth. When a timothy seed is sown and germinates, it first appears as fine as a cambric needle. In its growth and progress to maturity, it continues a single spire, forming first its joints, and along with each joint its long, pendant leaves, and then its head, and next its variegated bloom, and finally its seed. When the seed have become thoroughly ripe, an examination of the plant at the surface of the earth will show that the bulb has become formed, and is mature, keeping pace in its growth and progress to maturity even with that of the head and seed, thus following the law of nature in the execution of her grand purpose of reproduction, in the perfect and complete execution of which, all that is done is essential, for nature does nothing in vain.

It has been stated that this plant may be called "a cousin German" to the onion. What is the object of the gardener in cultivating the onion? It is to get the bulb as large as he can, and then preserve it as food for man; not for instant use, but for consumption in the future. For this end he does not permit the plant to fulfil entirely the law of its nature and become matured; nor does the grower of oranges, or lemons, or apples, permit them to attain thorough ripeness, but he plucks them when they have attained their full size and before perfect maturity, because when that is attained, decay, in accordance with the law of nature, next ensues, as the means of reproduction. And the gardener, when he finds the seed forming on the head of his onion plant, breaks the stock, in order to check the operation of the law of nature in the progress of the plant to maturity, and to prevent the bulb of the onion from ripening, as it would speedily do if full play were allowed to every force and element that nature has

provided to the plant. If the onion plant be left undisturbed in its growth, we know its reproductive power is not confined to the seed or "buttons" that are found in the head, but the bulb sends forth sprouts all around its circumference, which each in its turn becomes a new plant. So also with the timothy plant; if it be left to attain thorough maturity without molestation by man or beast, its bulbs will send forth sprouts, and these will form the "aftermath," to make the crop in the next season.

After the plant has attained this complete maturity, the grass may be cut and saved without injury to the reproductive power of the bulbs. A practical test of this state is found in the tendency of the head to "shatter," or lose its seed; another in the hardness of the seed. If the hay be cut before the perfect maturity of the plant, that is done for it which the gardener does for the onion, and the reproductive power of the bulb is proportionately diminished, although, if cut at any time after it has blossomed, its reproductive power will not be entirely destroyed. An examination during the succeeding Autumn of plants cut at different stages between the bloom and entire ripeness, will show in the early cut plants two, three, or four shoots springing from its bulb, and six, eight, ten, or twelve sometimes from the thoroughly ripened bulb. What a difference in the yield of the next year's crop! The con-



The Meadow Fescue.

clusion is, that in order to preserve and keep for a succession of years a timothy meadow in full yield, the grass should not be harvested until the plant is perfectly ripe. In conversing upon this matter with my neighbours, I am told by them that it is their practice to let the seed get ripe and shatter the first harvest after seeding the meadows, but after that, as the land has become sufficiently seeded by the shattering, they cut the hay early. This practice is good so far as it goes, but the reasoning, it is submitted, is unsound. The shattered seed may aid in supplying spaces of some size where there was no "take" from the original seeding, but if fresh seed be sowed at or after harvest, amid the yearling plants, the strength of the latter will smother the new spires, even if they sprout, and will prevent them from growing. Experience proves this; and it is not perceived why the shattered seed should do better than that fresh sowed or resowed.

The better theory is that the second year's crop, which my neighbours say will be increased by a late reaping of the first crop, is attributable to the great number of sprouts springing from the thoroughly matured bulbs—so matured by not being molested till the first reproductive power of the bulb is attained. No danger need be apprehended of the grass becoming too thick from the offshoots from the bulbs. If the land be taken to the exclusion of all other growth, whether good or vile, so much the better. No more can grow than the fertility of the soil admits. Another conclusion is that a timothy meadow grazed by stock, whereby the plants are never permitted to attain maturity, must in a few years "run out," and other grasses or weeds supply the place of the timothy plant.

The experience of every grazier will accord with and sustain this proposition.

It is maintained by many (indeed, the opinion is very general) that early-cut timothy hay is much more valuable than that cut at maturity. Accident supplied the writer with the following test: A portion of a lot near the dwelling was mowed when the timothy was in bloom. The hay was cured and stacked. The exigencies of farm work prevented the mowing of the other part of the lot until the hay was so ripe that the manager thought it was only "wooly fibre," and advised turning the stock upon it. This would have left the lot as unsightly as a half-shaven face, and it was ordered to be mowed and the hay stacked with the other. No rain fell upon either mowing. In the following winter, during a severe snow-storm, all the yearlings and two-year-olds were given admittance to this stack-yard, where, contrary to all expectation, they were found to feed upon the stacks of the mature "wooly fibre," and to leave comparatively untouched the sweet-scented bright hay cut when in bloom. "One swallow does not make a summer." It is hoped that other farmers will subject this point to a test.

The writer, for information from practical men interested to arrive at a sound judgment, inquired of a livery stable keeper in a city, what he preferred the early or the late cut timothy hay. His reply was characteristic, viz: "It depends on what I want it for." Of course, it was stated for consumption of horses in your stable. "Well," said he, "for horses that I have to keep in the stable—my boarding horses and my hack horses—I prefer the ripe, late cut hay. It is more nutritious and they eat it more heartily. But for the mass of transient customers that put up for the day only, I buy the early cut. It looks better than the other and gives satisfaction to the customer that examines it, and less of it is consumed." He took me into his stable and showed me how he managed it. The boarding horses and his roadsters were kept in the back part, and over that end he stowed away through a door in the loft their hay, and over the front where the transient customers were accommodated he stowed the bright sweet-scented early cut hays.

These considerations have brought my mind to the conclusion that the preservation of the timothy meadow and the quality of the hay should induce farmers to forbear to harvest timothy until it has become thoroughly ripe. I know the contrary opinion and practice prevails, and although fully appreciating the proposition that what is generally done by persons engaged in a business is apt to be right, because it is usually the result of the experience of those capable of forming a sound judgment, yet I submit these views for the consideration of agriculturalists.—*Can. New York Tribune.*

We fancy that few farmers will be found to assent to the ideas above laid down. Common sense would indicate that, in cutting grass for hay, it should be cut at the time when there is most nutriment in the stalk, and not when the nutritious principles have gathered in the seeds and left the stalk woody and comparatively worthless. The correspondent cites the usages of livery-stable keepers as authoritative on the question. We always thought that the reason those gentlemen preferred ripe hay to that cut in a green state was, not because they thought ripe hay more nutritious, but because it is more filling and because there is nothing in it to tempt the horse to eat largely and thereby diminish the profits.

**THE PRICKLY COMFREY.**—Since our last issue, we have seen in the *London Farmer* a correspondence about the Prickly Comfrey. That journal publishes the following, in reply to a British Columbian enquirer, from K. B. Edwards, Burbage Hall, Hinckley, Leicestershire, the authority on the plant:—"A stiff clay or soil suitable to cabbage tribe suits Comfrey best. A sandy light soil is not nearly so suitable, although it will grow well in any soil. I believe it is raised from seed occasionally, although root cuts are far better. The plant does not require storing for the winter. No doubt the roots could be dug up and stored, if so desired, and planted again in the spring. The leaves only are used, and in a green state. I tried to propagate from seeds a few years ago, but they failed to germinate."

**LUCERNE.**—Mr. Simmers has, at his residence at Yorkville, a patch of Lucerne, about half an acre, seeded last fall, which has been cut twice this year—once at the end of May, and again about the 8th July. Each cutting gave a large quantity of good feed, the Lucerne averaging about two feet high. He has also some Lucerne seeded this spring which is almost ready to cut; and a patch of Lucerne and Hungarian which is in a thriving condition. It was sown broadcast in all cases. In England, and, we believe, in California, it is usually sown in drills, and kept clean by cultivation. Former attempts to grow Lucerne round Toronto have been unsuccessful, but as it succeeds, with care, in New York and Michigan, we see no reason why we cannot grow it.