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#### ADVOCATE. THE FARMER'S

#### **Forage Plants.**

TIMOTHY (Phleum pratense) .- It is but right that in a discussion of our most common grasses we should begin with that which is, perhaps, the most useful and most universally distributed through the whole country.

As a pasture grass it has been known in this country since sometime before 1760, at which time some seed was taken to England; but many authors assert that it is native in Europe, as well as in America. Certain it is that it is found very widely distributed in this continent, for it is found in a condition believed to be native in Alaska, Labrador, the Eastern States, and the Rocky Mountains-a wideness of distribution hardly so surprising when we see that it now grows in pastures and meadows throughout Europe, North Africa, Siberia, and Western Asia. The honor of its introduction and name is disputed, some attributing it to one Timothy Hanson, who cultivated it in Carolina and Virginia ; and again, on the other hand, it was said to have been first found in New Hampshire by Mr. Timothy Herd, and it is true that for many years it was known as Herd's Grass. No date being given to this fact, except that it was only introduced for cultivation into England fifty years later, we must infer that it was found very early in the eighteenth century. At any rate, from one or other of the Timothys it took its name. In Britain it is known quite commonly as Meadow Cat's-Tail, an exact translation of its botanical name, Phleum pratense.

Every reader will of course be acquainted with the appearance of this grass, which grows in compact tufts, has a moderately leafy stem, and a thick, stout head, which may be any length, from one and a half to eight inches, according to the richness of the soil. The flower, which is very minute, gives to the head a peculiar slatyblue color, which, communicated to a whole field, lends a rich accompaniment to the landscape. Botanically two or three varieties can be separated, but the distinction is one of no importance from an economic standpoint. Long cultivation has shown that it is particularly adapted to moist, heavy, loamy soil, and endeavors to grow it on light, sandy soils have been rather unproductive ; but once well situated it will produce annual crops with great vigor, instances being given of thirteen successive crops being raised. But in this connection it should be particularly noted that late mowing exposes the bulbous root to the action of frost. Its value to the farmer is certainly great, especially if it be for sale hay, -perhaps due to its uniformity in appearance, and little waste in handling. As a fodder, it is excellent horse food, but cattle frequently show preference for other grasses; it is stated in this connection, that milch cows dry up quickly if fed on dry timothy alone, and also, that in the overdry state, it tends to constipation, and is, then, not suitable to young stock. To guard against this it should be harvested early. There is a general tendency in this country to cut timothy late, which all farmers should avoid. While there may be more weight, yet early cutting will yield more nutritive value, and in the long run will be more economical. If cut late the stem will be found hard, woody and dry. In having therehich occurs early in July, and wille the later pikes are appearing ; and it should not be eat

be injured. Timothy has a few disadvantages which must be set against its good qualities ; for example, its lateness in spring, and the ease with which the straw becomes hard, besides which it is a crop very exhaustive to the soil. In view of the last quality a good top-dressing of stable manure should be applied and evenly spread in the fall, which protects the roots and gives a stronger growth. It is unsafe to turn sheep on a timothy meadow immediately after cutting, and seems to be injudicious to do so with cattle on account of the injury done to the crown of the plant by its being laid bare. On account of the sparseness of the growth of timothy it is generally advantageous to mix a quantity of red clover, which gives weight to the hay and makes a more even covering for the pasture. It is usually sown at the rate of about ten pounds pure seed to the acre; when sown with fall wheat half this quantity; but when a mixture is used the amount is determined by the quality of the mixture. For temporary grassland 5 per cent. to 20 per cent. timothy is used, but for permanent pastures 10 per cent. is quite high enough, because in a few years it becomes very thin. The seed should be sown on the top, although in some soils a slight covering is often of great advantage. While timothy has a number of disadvantages, yet if cut early and given fair trial, it will uphold the position it has already won as the most generally popular grass of our country. But, on the other hand, we do not wish to be understood to characterize it as the best, necessarily, for we should remember that practically timothy has held undisputed sway in this country as the staple grass; it is only of late years that the true value of many of our grasses has been discovered, and there may be among these, some one which shall unite timothy's good qualities with fewer disadvant-But till such a one shall be discovered timothy bids fair to retain its old prestige.

# A Model Farm System.

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## (Continued from Page 223.)

There are virtually no inside fences excepting those each side the pasture, which are movable. The great advantages gained are the utilizing of every inch of ground, the entire absence of a lodging place for weeds, with no repairs to inside

the highest yield of hay, after which the field passes into pasture, with the green crop growing close beside it, and in readiness to be fed on the pasture field, thus saving the double work of drawing the green feed a distance, and drawing the manure back to the field, the droppings being left on the field in readiness to be ploughed under for the succeeding green crop, the land for which is prepared in the fall, and in the case of the portion allotted to rye is also sown at that season, that part being more early prepared, care being taken in the earlier part of the soiling season to feed on the part of the field that is to be sown to rye. Any manure made or left at barnyard is also now applied for this purpose. The rye being sown early in September of course all cattle have to be removed from this field during this month, but as the corn is removed early, in order to sow wheat, that field is also at liberty, and the cattle are allowed for a short space of time to feed off the new seeds as well as the second crop of clover, which has been mown for hay earlier in the year, the fence being placed between these seeds and clover later on. It has been found that feeding off seeds before the ground gets soft, and for a short period, is a benefit.

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The pasture field is dragged before being broken up, in order to spread the droppings, which of themselves are quite a coat of manure. The field in green crop for soiling is divided into rye, which is ready to cut before the pastures are well up; the rye ground being sown later on to rape and white turnips ; oats and veitches are sown at different periods for soiling. The first of these that are cut are also sown to rape. Southern sweet corn is sown for soiling, and gives an immense weight of fodder for this purpose, and continues to be cut until the end of September, when rape is cut and fed, or white turnips are ready to be fed, this field being prepared for oats to be sown the next spring, which completes the rotation. Labor, which would appear by the whole arrangement the greatest drawback, is easily arranged. Each morning a sufficient quantity of green feed is cut for the use of the day, the largest quantity being fed early in the day, the pasture being counted on to help out the feed ration. Everything on this farm is done systematically, therefore there is no hurrying matters. The best possible use of all the land is brought out. The dry season for grazing is prepared for by crops that do not fail, as the land is strong and each crop is prepared for and duly sown at the right season. The rent of the land that is occupied by fences, and worse than wasted under the ordinary farm system, is of more value than the cost of the removal of one fence of eighty rods per year, while a great saving is effected in fence material on which there is a vast wear and tear through decay each year. The immense quantity of feed for summer and winter thus produced enables the land to carry double the amount of stock ordinarily kept by the all-pasture system. The stock department is kept in the same thorough shape, and, therefore, on this depends most of the resources obtained from the farm. The vast advantage of having large fields with a long furrow for ploughing and general cultivation, and a long stretch for mowing and harvesting by the modern machinery, has to be once practiced to be appreciated, and after working in such fields one would be very loath to return to the short turnings in square fields that are so disadvantageous when finishing with machinery. On too many farms the everlasting patching and changing without any calculation or system keeps the work and workmen in a broil with no show for the labor performed nor any adequate yield for

fences, the division fence between the pasture the only one to move, and this a step forward once a year. By this method the labor is not only reduced to a minimum, but fences are always in shape to turn stock, and yet all the land that can be pastured to any advantage is utilized. Under this system the land is always in the best possible state for each succeeding crop. The manure is put out as it is made, therefore there is no waste-it goes to produce a crop that requires an abundance of rich manure. If it is slightly rank it will yet answer, as corn is a particularly gross feeding crop. The land still retains all that is required to produce a crop of wheat, and a single trial will convince that this treatment is far in advance of applying the manure fresh for wheat, as the corn has removed the superabundance of nitrogen which is so liable to make wheat weak in the straw. We have seen the tallest and heaviest wheat standing erect when grown after a corn crop, while in the other way, of freshly applied manure, the crop would be all lodged, and consequently damaged and difficult to handle. Where fall wheat is not successfully grown spring wheat or barley would then answer the same purpose in the shift, seeding to grass in this case, as is done too close, as by that means the tender root near with fall wheat. Plenty of strength to produce the money invested,