

expensive to be able to secure anything like a good gain, unless we are extra well arranged so that the hogs will not feel the cold. Generally as good a time as we can select to commence feeding to fatten is when the corn is sufficiently ripe to be in good condition to feed without waste. If they have been fed upon some other materials in combination, gradually increase the amount as circumstances seem to demand, in order to keep them gaining.

#### Use Care in Drying off Cows.

There are many who manage their cows in such a way that the most of them go dry in the fall, instead of giving a good supply through the winter, when the returns would be the most profitable. As so many are careless in the way in which they dry off their cows, a word of caution at this time is opportune. It is believed that there are more teats and udders spoiled by bad management in drying cows off their milk than from all other causes put together. When one has got through with milking a cow for the season, he is very apt, unless he is a thoughtful man, to let her run with little care or attention.

He is inclined to anticipate that the pittance of milk which will come into her udder will be too small to be of any consequence, and so she is left to run without attention till it is discovered, perhaps when too late, that her bag is swollen and feverish, and upon examination is found to be filled with a yellowish watery liquid, a serum, and clotted milk, that stops the milk ducts, and has hence become difficult or impossible to remove, and the consequence is that one or more of the teats is spoiled beyond redemption.

In drying cows in the fall or early winter, when the milk is rich and thick, and the cows, perhaps, a little feverish from change of feed and exposure to changes of the weather, there is more need of watchfulness than at some other seasons of the year when milk is poorer and thinner, and more easily absorbed away. On no account should milk be left so long in the bag as to become thick. The best way to dry off cows is to milk daily or at regular periods, leaving back a part of the milk at each milking.

This is the most effective way to diminish secretion. By this means the oldest milk in the bag will be drawn out and the newer secretion left back as a check to the formation of more. This practice will dry a cow of her milk at any time, though the flow may be very large. Should the bag show any indications of fever by its increased warmth, the exhaustion of milk should be nearer complete, or perhaps all of it had better be milked out for a while, till the fever is abated and the bag becomes soft and limp.

Cows which are not in good health are more liable to give trouble in drying them than when they are well and vigorous. The weakly ones should therefore be carefully looked after. Some dairymen are in the habit of reducing the feed when they wish to stop the milk. If the animals were in high flesh and highly fed, this might do, but it is seldom advisable. Cows that have been milked for a whole season usually become thin, and need an increase instead of a decrease of feed in the fall. It is much better to let the milking run a little longer and feed liberally than to pinch a cow when she is already thin, for the sake of drying her off at any particular time.—[National Live-Stock Journal, Chicago.]

Make the best use of your straw during the coming winter, if your feed is scarce.

### Garden and Orchard.

#### European Forestry.

Now that all matters pertaining to agriculture are reduced, or are being reduced, to a science, and as the older countries are the more advanced in this respect, we, on this continent, must for many years to come adopt European methods, or the methods practised by countries most advanced in the agricultural sciences. Reports on Forestry in Europe, compiled by the United States Government from their consuls, have just been issued, and they contain a mass of useful information on the subject, and we make gleanings therefrom of such facts and figures as we deem to be of importance to our readers, commencing with the most advanced country—Germany.

The expanse of forest land in Germany is computed to be about 34,500,000 acres, equal to 25.7 of the total area of the Empire. Of the acreage, 48.7 percent is devoted to agriculture, horticulture and vineyards; 10.9 percent to meadows, and 9.4 percent to pastures and sterile lands. The state owns 32.7 percent of the forest land; communities own 15.2 percent, and private parties 48 per cent.

In the Kingdom of Prussia, the management of the forests is typical for the other German states. The Prussian Government not only exercises control over the forests owned by the state, but also over other forests, preventing them from devastation. About ten millions acres of the Prussian forests occupy level ground, half this area is planted on hilly ground; and nearly 5,000,000 acres are situated on the mountains.

The culture and species vary according to the climate and soil. The species principally cultivated are: First (*Abies excelsa*; *Abies pectinata*); Pines (*Pinus sylvestris*, *strobilus*, *austriaca*, and *montana*); Oaks (*Quercus pedunculata* and *sessiliflora*); Beech (*Fagus silvatica*); Birches (*Carpinus betulus*; *Betula verrucosa*); Alders (*Alnus incana* and *glutinosa*); Larch (*Larix Europaea*).

Poor people living in the vicinity of the forests are permitted to gather dead branches of wood, either without charge or by paying a small sum, and the provincial authorities may sell limited quantities of inferior wood in winter to the poorer classes at about twenty-five percent below market prices. Cattle, and sometimes sheep, are permitted to graze, a small charge being made: but the forestal authorities do not grant such rights when the growth of the trees are thereby endangered. Hogs are sometimes allowed to enter the forests, as they destroy insects. Tracts in the forests which can be used as meadows are rented under proper restrictions. In exceptional cases, leaves are permitted to be gathered. With a written permit, the gathering of berries, herbs, and mushrooms is practised.

The average salary paid to a chief master forester is about \$1,200 a year. The chief forester receives about \$750 per annum as salary, and fuel for his own use. He is appointed by the Minister of Agriculture, Forests, etc., and all applicants for such positions must pass a rigid examination in forestry matters. The appointment is permanent, and the appointee is entitled to a pension. The subordinates are called foresters, forest guards

and assistant foresters. All are compelled to wear uniforms.

The net revenue from the forests in Prussia for the fiscal year, according to the last budget, after deducting the extraordinary expenditures, is nearly \$6,000,000. The revenues are mainly derived from the following sources: Sales of wood, secondary products, game, peat, floated timber, meadow fees, stores of firewood, saw-mills, larger nurseries, etc., the total revenue being about \$14,500,000, and the expenditures about \$8,600,000.

When planting, deciduous and coniferous trees are mixed in order to prevent damage by caterpillars, and it is said that this practice is also conducive to the growth of the evergreens. Amongst these deciduous woods, the oak is specially used for planting amongst the conifers.

Candidates for positions in the forestry service have to undergo strict examinations in mathematics and the sciences, as well as in forest culture, surveying, &c., and must also have performed military service. There are two forest academies in Prussia, one at Eberswalde, and the other at Muenden. The lectures and practical demonstrations are accompanied by excursions into the forests three times weekly.

On the unprotected coasts of the Baltic, where the forests were extirpated in the 17th and 18th centuries, movable sands now cover vast fertile tracts, and villages which were once centres of prosperous agricultural communities, have disappeared, or fallen into ruins. In the central and eastern provinces, the light soil has been, to a greater or smaller extent, blown away, and swamps have appeared where forests once covered the sand and absorbed the stagnating moisture. In Northern Hanover there are now deserts and waste lands where formerly forests flourished, and the location is exposed to violent hurricanes. In the western mountainous provinces the once fertile soil, built by thousands of years of forest growth, has disappeared from the mountain tops, and the scorching sun, the winds and the storms have made the ground arid and unproductive. Even the valleys below, into which the rich mountain soils have been washed by the rains and melted snows, have not been improved, being filled with mud and rocky fragments. Not only have the mountain ranges become barren, but the fertile meadows in the valleys also disappeared.

The demand for lumber in Germany is greater than can be supplied, if the present forest areas are to be maintained. The quantity imported is five times greater than that exported, and the high duties on lumber is a great obstruction to increased importations.

The forest laws are very strict, and there are heavy penalties for setting woods on fire or neglecting to destroy the caterpillars. There is a clause forbidding the diminution of forestal land by digging or plowing.

In the Annaberg district, where the forest area reaches about 180,000 acres, the net profits to the state from the forests amount to nearly \$1,000,000 annually. Some figures are given as to the age of trees. Some pines in Bohemia and in Norway and Sweden have lived between 500 and 600 years. In the Bohemian forests,