



Rocky Mountain Husbandman.

PUBLISHED EVERY THURSDAY.

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TERMS, \$4.00 Per Year.

The ROCKY MOUNTAIN HUSBANDMAN is designed to be, as the name indicates, a husbandman in every sense of the term...

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Agricultural.

HAPPY is the honest farmer.

MONTANA soil will yield a sure reward for industry.

He that sows now may reap in the golden harvest time.

The sun nowhere shines so bright as in the quiet country home.

The farmer is blessed with good health, a splendid appetite, and plenty to eat.

The white robe of winter is vanishing slowly from the mountains, and the hillsides are turning green.

The quality of vegetables depends largely upon the fertility and conditions of the soil, and the attention given to the growing plants.

The thrifty farmer already has hundreds of acres sown. It is everything to plow and in the fall in order that the seeding may be done early.

Well decomposed stable manure should always form the main reliance in the garden; it should be plowed under lightly and well mixed with the soil.

Do not stop to repair fences until the crop is in. This should have been done before seed time arrived, but in the event that it was not, do not stop to do it now.

All oats, barley and wheat should be sown before it is sown. It matters not how clear the grain is, this process of cleaning benefits it. The procedure with oats and barley should be the same as wheat, complete instructions about which was published in our issue of April 3d.

Hot-beds made last month need frequent attention as the sun becomes more powerful. The sashes should be lifted as soon as the sun strikes them, and an hour afterward be removed altogether. Water only when the soil becomes dry, and then water thoroughly, so as to soak the entire mass of soil. In the afternoon, half an hour before the sun leaves the bed, replace the sashes, and when cold nights threaten, protect with matting, carpets or boards.

The American Gardener says: Peas are among the earliest crops entrusted to the soil. In planting early peas it must be borne in mind that the wrinkled sorts, although best in quality, are more tender than the round ones. For first plantings in cold, tenacious soils, the latter are therefore to be preferred. In warm, dry soils, however, there is little danger of rotting with the wrinkled kinds,--the American Wonder especially, which is the hardest of this class,--provided the seed is not covered too deep. With all the earliest planted peas it is advisable not to cover deeper than three inches; it is little difficulty to make up this deficiency by hilling up after the vines have appeared above ground.

Twenty pounds of alfalfa should be sown to the acre. It has been started very well by sowing with oats, but we prefer to sow it as a separate crop. It sown on upland it will need irrigating until the roots have grown deep into the ground. If sown on bottom land, but little if any irrigation will be needed.

Sow timothy along your fences and over the banks of your principal irrigating ditches. To have the grass grow down to the water's edge is a great benefit to ditches. Sod may then easily be had for damming when it is desirable to turn out the water, besides when the banks are sodded with grass they will not tumble down. A great deal of labor may be saved by stunting the banks of ditches and thus seeding with grass.

It is said that the growth of rhubarb may be greatly facilitated by placing an open headed barrel over it and piling fresh stable manure around the barrel. The manure will heat the earth and cause the plant to grow more rapidly. The old plan, however, of shading this plant with barrels as practiced to good success in southern countries, is not a success in this latitude. The sun here is not sufficiently hot to toughen the plant and stunt its growth as further south.

Mice make fearful ravages in the small fruit orchard during the winter. Currant and gooseberry shrubs suffer the most. One year ago we placed pine boughs about these shrubs in the HUSBANDMAN experimental garden, and found in the spring that they were nearly all peeled. Last fall we threw a light covering of stable manure about their roots and this spring had them peeled nearly as bad as ever. The work of the mice, however, was done above the mulching, which develops the fact that the resin would have been equally as bad had there been no mulching used at all. The only way to prevent the ravages of mice, we are informed by a farmer who has made the experiment, is to tramp the snow down hard about the shrubs in early winter. Our garden drifts entirely full of snow in winter, and there are few gardens in the Territory that do not, hence the tramping must be done soon after the first snow. We trust our readers will all remember this and try it next fall. We have confidence in its success.

Our Montana farmers who are making their first experiment with the Scotch Fife wheat are very much disappointed with its appearance. It is a very inferior looking grain; the berry is long and swiveled and anything but what a Montana farmer would call first-class. Yet for all that it has a good reputation and is about to be proven much more valuable for breadstuff than the round, plump, soft grain wheat of Montana. It is barely possible, however, that growth in Montana this wheat will assume a very much improved appearance, and we believe that it will. It is never as round and plump as our Montana varieties; but we believe it will in a measure supplant them. Some claim that it is later and will not succeed here, but we see no reason why it should not; our seasons are as good as Dakota, and if it is put in during the month of April, there is little or no danger of its getting frosted. We have noticed that other varieties of seed wheat brought from the east and sown here produced a better quality of grain than that sown, and see no reason why such would not be the result with the Scotch Fife. We have a stronger soil than is to be found in Minnesota or the States east, and crops grow much quicker here.

ROOT CROPS.

In America the root crops receive very little attention. This is not because they do not do so well here as across the water, but is the result of other different conditions. Here we have always had an abundance of land--proportionately more land than stock, and there was no necessity for the production of those crops which alone make it possible to keep a large amount of stock upon a small amount of land. On account of this abundance of land, grain crops could be so cheaply raised that the attention of farmers was not directed to the root crops. Perhaps the greatest obstacle of all to the production of root crops has been the high price of labor and the impossibility of doing all the work of seeding, cultivating, and harvesting with the aid of machinery. These circumstances have made the production of the root crops comparatively expensive, and those who have not made close computations are apt to think the expense

is yet so great as to destroy all profit, as compared with grain crops which are produced by the extensive use of machinery. In some parts of the United States the climate is too hot and dry for the best development of the root crops. Everywhere their production has been restricted by a surprising ignorance of their nature and merits.

Some of the obstacles in the way of the production of root crops, noted above, have been almost entirely removed, and nearly all have been lessened. The amount of land at disposal has been restricted by an increasing density of population, and the value of land has increased. Labor has become somewhat cheaper, and at the same time new implements and new methods have made it possible to do a good part of the work of production of root crops by the aid of machinery.

The exclusive cultivation of grain crops has tended to "sicken" the land of them and to make their production hazardous; while a strictly grain diet month after month has produced an alarming amount of disease among farm animals. I consider this one of the strongest reasons, if not the strongest, for the production of root crops. Grains are fed dry, when they are indigestible, and a monotonous grain diet leads to a derangement of the digestive organs and lack of nourishment for the body, productive of those diseases that originate within and making the animal predisposed to those diseases which are produced by minute organic germs from without. On the contrary root crops are easily digested, and being composed largely of fluids are apt to relieve the clogged condition of organs, incident to a dry grain diet.

Potatoes should properly head the list of root crops, but as they are extensively cultivated for human consumption, I shall speak only of proper preparation for feeding to farm animals. I speak in detail of only the turnip, the carrot, and the parsnip.

While the root crops will flourish in almost any soil, a deep, light, rich loam, moderately moist, is the best. As the seed-bed must be well prepared and the cultivation thoroughly done, it is best to put heavy or stony soils in other crops. It will pay to underdrain the land, which accomplishes two very important objects--It reduces extremes of moisture and deepens the soil. In estimating the cost of underdraining for root crops, it must be remembered that only a few acres are to be drained, as from 1,000 to 1,500 bushels of turnips, carrots, or parsnips may be produced on an acre of land specially adapted by composition and culture to these crops. The ground should be plowed the autumn before, and plowed deep, and a liberal coating of manure should be spread upon the ground before plowing. But neither manuring or fall plowing are essentials, though deep plowing is one; and if fall plowing should interfere with any preceding crop, the plowing may be deferred till spring. The soil for the seed should be thoroughly firmed. A liberal use of the drag and roller will always pay.

Turnips may be sown in the spring, but to this there are two objections: spring turnips are liable to be attacked by the maggot, and they must occupy the ground to the exclusion of other crops. Generally they may be sown after some early garden crop or potatoes. Sow broadcast, and leave to themselves till there is danger of freezing, when dig them and store in the cellar or pits.

The soil for carrots should be stirred deeper than for turnips. None but thoroughly rotted or stable manures should be applied. Wood ashes is the best fertilizer; in many cases salt also gives good results. Before planting the seeds should be soaked in tepid water, as they are very slow to germinate, and weeds will otherwise get the start of them. Sow the seed in straight drills three feet apart, so that they can be cultivated with a one-horse cultivator. Five pounds of seed to the acre are an abundance. In Canada and the Northern States, the seed should not be planted before June 15. When the plants are a fair height, thin out till they are six inches apart in the drills. The roots must be harvested before freezing weather and stored the same as turnips; but as they are peculiarly liable to rot, they should not be stored in large bulks. They may be rapidly harvested by drawing a deep furrow close to each drill, when the roots are easily removed.

There is no better root crop than parsnips but one, and the only serious objection to their cultivation is that they must be harvested during the busy season of spring. In the southern part of the United States,

where the ground is rarely frozen during winter, they are frequently grown for hogs, the swine rooting them out during the winter, thus saving the labor of a general harvesting. But in Canada and the Northern States this is not possible, and the roots will have to be left in the ground during winter and harvested in the spring. Notwithstanding this drawback, such is the excellence of this root that I am sure its cultivation will prove very profitable. Five pounds of seed to the acre is required. The directions given for planting and cultivating carrots apply to parsnips, except that the parsnips should be eight inches apart in the drills. Parsnips are more nutritious than carrots. They are especially adapted to milk cows.

Turnips should be cooked before being fed. Stock will not eat them readily when uncooked, and as they are composed largely of starch they are very indigestible when raw. The turnips are best boiled in large kettles, and should be mixed with bran or meal. This mixture makes an excellent food for swine. In fact, I know of none better. It is possible, the mixture should be fed under shelter, as it will cool too rapidly in the open air. Potatoes should be boiled and mixed with corn meal, and fed in the same way.

Carrots and parsnips are fed raw, and are both very palatable to farm animals. Horses and hogs are very fond of carrots, and sheep prefer them to any other root or tuber. Both carrots and parsnips are excellent for milk cows, increasing the flow and richness of their milk. --Cor. Prairie Farmer.

FLAX CULTURE.

Flax seed is of late years becoming a very important article of commerce. It is used for making linseed oil and oil cake, now one of the most popular fattening articles fed to stock. M. D. Harter, of Mansfield, Ohio, who has been making this matter his study for several years past, in a private letter to us a few days since suggests that flax culture might prove just the thing for Montana. He says:

"We are over-producing wheat, oats and corn and under-producing flax. Flax is easier cultivated than any other crop--is a very sure crop, and while wheat is selling in Chicago at 82 cents, flax seed is selling at \$1.65 in the same market. There is plenty of time to put in large flax crops in every section reached by your paper."

A wild flax is found growing upon our foot hills, which is similar in appearance to the tame variety. It is a perennial, grows in high altitudes, on very dry land, and seems to produce well under any and all circumstances. We have often thought that it might be improved by cultivation. The fact that this wild variety grows here is an assurance that the tame flax would grow a good crop in this climate. Should the tame variety prove a perennial, it would be one of the most profitable crops that could be grown here. Whether perennial or not, it would certainly be a good crop for Montana farmers, and it might be well for some of them to experiment by sowing on a small scale. At the prices named by Mr. Harter, no loss could attend the venture, and it might result in opening up a profitable industry for our farming people.

The Poultry Yard.

POWLS FOR COLD CLIMATES.

It is not at the present time so much the fowls as the accommodations afforded. No one has any business with poultry unless he intends to take care of them. The days of our forefathers, when the barnyard fowls roosted at night in the tops of the trees, summer and winter, as a rule, have gone by. With good care, almost any breed can be kept in a cold climate as well as in a warm one, and far more profitably, if due preparations be made. There perhaps is no breed more hardy than the Leghorns, and no variety that will yield so large a return in eggs. With good feed and care, they might be termed constant layers, but they require protection from the inclemencies of the weather. The old-fashioned Dominique is a hardy fowl, but must have protection from the severity of the weather. Fowls that are in laying must have fresh water constantly. Most varieties of Asiatics are suited to a cold climate, for they have no combs or wattles to freeze.

No fowl can rough it without shelter and plenty of food, as did the chicks of early days, when fresh eggs were known only in the heart of summer. Now the epicure de-

mands them at all seasons, and obtains them, too, except during a few weeks in mid-winter, when the prices are exorbitant. It is generally conceded that the Brahma and Plymouth Rocks are good winter layers. They will, if early hatched, commence laying in early winter, but by February have completed egg-production and become broody, when they make capital sitters. It is at this time that the smaller fowls are in the full tide of egg-production. For this reason the two breeds work well together. I keep Brown Leghorns, and in my locality the mercury drops below zero several times during the year, and often in March remaining at that temperature many days. Yet my fowls do not become frosted. They have comfortable shelter. There is no danger except to the cocks that have large combs and wattles, and with them not much, if drink is kept from them. But this method is cruel to the laying hens. Consequently the cocks are removed to an underground apartment where they remain until the mercury rises.

I have found no fowl more hardy or more profitable than these; but tastes differ. In the course of my experience I have observed that the majority of solid black fowls with blue or slate-colored legs are, as a rule, more delicate than the yellow-shanked fowls. This may be only conjecture, and may not have affected other poultry keepers in like degree. There are several breeds that can endure considerable cold, providing it be dry. Among these may be reckoned the Houdans and Dorkings, both fine fowls, and desirable, but delicate, and cannot endure exposure to wet or damp quarters. The several varieties of the Crested Polish labor under the same disadvantages. For this reason they are not common. The Black Spanish and Crevecoeur, both splendid fowls, are rarely seen, from the fact that they are considered tender. They are delicate, and will not bear neglect like some others. It is better never to form hasty opinions. Because one person is successful this makes no rule for another. --Cor. Country Gentleman.

The Household.

THE FAMOUS VIENNA BREAD.

The Vienna bread is made in various ways, some of which require the machinery of a large bake-house and are not manageable in an ordinary kitchen. The so-called "Vienna rolls" can be made in any household by the following receipt: Finest wheat flour, eight pounds; milk, three and one-half quarts; water, three and one-half quarts; compressed yeast, three and one-third ounces; salt, one ounce. After all the materials have acquired the temperature of the room, the flour is poured in a loose heap in the middle of the baking trough and a small quantity of the heap, on one side, mixed to a thin dough with the milk and water previously poured together, and mixed with the yeast and salt. The dough is allowed to stand three quarters of an hour, well covered. After this time, or as soon as fermentation has begun, the dough is mixed intimately with the remainder of the flour and the rest of the liquid, and left to rise for two hours and a half. It is then cut into pieces each weighing one pound, each of which is divided into square pieces of equal weight. The corners of each of these squares having been turned over to the center, the cakes are put into the oven and baked fifteen minutes. The heating must be uniform. If the oven is hotter in one place than another the cakes must be shifted about. To impart a gloss to them they are brushed over with a sponge dipped in milk.

Hard Times Cake.--Half a cup of butter, two cupfuls of sugar, one of sour cream or buttermilk, three eggs, and one-half teaspoonful of soda. Bake in layers and spread with jelly, or it is good without the jelly.

Pulled Bread.--Break up odd pieces of bread, without crust, into rough shapes, and dip them in and out of cold milk. Bake in a baking sheet in a hot oven until a nice light brown color, and keep in a tin, to eat with cheese.

Brown Soup.--Take fresh bones, put them in a large pot with quite two quarts of water, two small heads of celery, or outside of larger heads, two carrots, two turnips, and plenty of herbs in a muslin bag. Let this simmer for a day and a half, then when wanted, thicken it, and add sliced vegetables