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The ROCKY MOUNTAIN HUSBANDMAN is designed to be, as the name indicates, a husbandman in every sense of the term, embracing in its columns every department of Agriculture, Stock-raising, Horticulture, Social and Domestic Economy.

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AGRICULTURAL.

This season has pretty well satisfied our people that Montana, after all, is a good fruit country. The orchards of the Bitter Root are not only loaded down with luscious fruits, but throughout the territory where there are any trees we hear of them bearing nicely. This fact should inspire our farmers with confidence and induce them to plant out orchards. Not a single one of our old settlers but is abundantly able to put out at least 100 trees. Do not neglect it. It will always be cheaper to raise our fruits at home than ship them from abroad, even though we do have a railroad into our midst. Once supplied with good fruit, Montana will possess the most desirable and happiest homes on earth.

The scene on the farm is one of life and bustle. Reapers, harvesters, self-blinders, etc., throughout the entire list of harvesting machines are at work. A few farmers are through cutting and have commenced to thresh, and in a couple more weeks the buzz and whiz of threshing machines will be heard from one end of our agricultural valleys to the other. The general tendency this year is to thresh from the field and not stack. Men and teams are everywhere at work and this state of things will probably continue until the middle of October, and farmers will not be through with their season's work before November. Then they may take things a little more moderately, have more time to read agricultural newspapers and plan another season's operations.

THE LONGEVITY OF SEEDS.

There is a question of the highest interest for practical horticulture, but still enveloped in obscurity, and that is the duration of vitality in seeds. Our gardeners all know that the seeds of cultivated sorts lose their germinating power in a short time, when collected and preserved in our accustomed way. The story of the beans taken from the Herbarium of M. Tournefort, and which it is said germinated after being a hundred years in the Herbarium, leads to further views of native growth. Observations all over the globe have proved that after the destruction of forests, we behold another of a different tree take its place. How comes this? Evidently from the ground, where the seeds of this new forest were buried, and where they have lain lethargic for want of air, warmth, and other conditions necessary for their germination. But then, when we reflect that some of these forests have been there for centuries, and even for some thousands of years without change, and the improbability that the seeds of other trees, some of which are quite large, would be either brought by winds from great distances where these trees grew, or that they were buried in the ground before the forest began. But vegetables appear on earth dug from depths more or less deep, which were never known there before. This has been often observed in England. We are forced to believe that those seeds have been buried

there from time immemorial, and kept sound out of the reach of all atmospheric influences.

About 16 years ago, a dentist of Dorchester, by the name of McLean, desiring to give an account of the alterations produced in human teeth, by a long space of time, dug up near Maiden Castle, in presence of many lovers of Archaeology, one of the ancient Celtic tumuli, which are found in considerable numbers in the south-west of England. At about thirty feet deep from the surface of the ground, they found a coffin, in which were the remains of a skeleton and several articles of ornament. Upon a minute search of the contents of this coffin, there were also discovered among the bones at the point corresponding with the stomach some wattle, dry and blacksmith, very similar to old soil. This was collected by McLean. On examination in the light, it was discovered to contain a great number of ovoid (egg-shaped) bodies, which were readily known to be raspberry seeds, their outside integuments were greatly altered. The discovery excited deep interest. Some of them were presented to the duke of Sussex, president of the Horticultural society. Some of the seeds were broken, and found to have vitality. It was therefore resolved to plant them. Six seeds were given to the duke, who told his young German gardener, Mr. Hartweg, to plant them in the hot-house, not telling him what they were or whence they came, but that it was an experiment merely. The spot of each seed was very carefully marked. At the end of a few weeks, four of the seeds came up, afterwards one of these perished, the other three attained full growth, and are now growing in the garden of the Horticultural society of London.

Lindley, places the date of the burial of these seeds in the time of the ancient Britons; and at least as far back as the invasion of the Romans, into Great Britain about 1,700 years ago. And he supposes the chief or warrior, whom they had buried, must have been killed a few moments after having eaten them, as the digestive power of his stomach had not had time to effect them. Besides, it is well known that raspberry seeds are endowed with great vitality.

The following fact is still more extraordinary. It is an observation made by Mr. William Kemp, the geologist and botanist.

He says: "At a quarter of a mile from Melrose, on the banks of the Tweed, there is a quarry of sand belonging to Mr. John Bell, of Melrose, which has been worked a long time. This quarry is dug on the side of a hill entirely formed of sedimentary deposits, fifty or sixty feet above the present level of the river. At 25 feet depth a workman dug up a quantity of remains of plants, some of which had their seeds on. Messrs. Lindley and Kemp planted these seeds and raised about one-tenth of them. They proved to be of four kinds, viz: *polygon convolvulus*. Some of these are dyes, some astringent, partaking of the nature of rubarb, etc.; *rumex acetosella*, of the same race papilionaceæ; the *atriplex patula*, one of the chenopods, a race including, beets, mangold wurzel, etc., etc.; and the *atriplex unguistifolia*. It is believed beyond a doubt that, formerly, there was a lake at this place whose waters were as high as the stratified bed where these seeds are found, but no history tells us of the time when that lake existed, or of any considerable sinking of the waters of the Tweed. When the Romans arrived in Great Britain, it is certain that part of Scotland was very nearly of the same configuration as it now is. These reflections naturally lead us to the conclusion, that the seeds in question belonged to prodigious antiquity, perhaps to the paleotherian epoch, that they were growing, therefore, before the creation of man.

The longevity of seeds of vegetables is, as yet, but merely sketched out. Discoveries in this line will be great for practical use and for science.—*Agricultural World*.

PUTTING AWAY POTATOES.

Every method has been tried by farmers to store and preserve their potatoes through the winter and we may say until potatoes come again. It is the most valuable of all vegetables, though here and there we find a person and a writer who undertakes to tell us of its unwholesomeness. It is universally consumed in all civilized countries, as where it cannot be grown it is imported, which can be done long distances without injury when ventilation is attended to.

In storing potatoes several methods are adopted, yet they are all practically the same, the object being to protect them against freezing, whether buried in pits or stored in cellars. The first consideration is to keep them in perfect darkness; the next is the bins should not be too deep—not over three feet—to produce warmth and cause them to sprout. When stored in the field, straight trenches are dug, say twenty feet in length and four or five wide, which are filled to the depth of three feet with potatoes, then well covered with straw, on top of which put eighteen or twenty inches of earth. In a pit twenty feet long there should be about three gas escapes or ventilating openings, which should be plugged with straw and covered with a board set at an angle to turn the rain. If in cellars, barn or otherwise, the bins should be covered with rugs, old carpeting or straw. Those intended to be kept for late spring sales should be frequently examined and all sprouts removed; for as soon as a potato begins to sprout it loses its solidity, dryness and quality.—*Germantown Telegraph*.

FRUIT IN THE WEST.

Observations made on our late excursion show a general failure in the fruit crop in all the regions west of the Mississippi river. Grapes are an exception to this rule, at least as far west as Kansas City. Peaches are reported as winter-killed even as far south as Fort Scott, in Kansas. We saw fine apple orchards in Missouri, but scarcely any fruit on them. As far as our observation extended there is a neglect of orchards and gardens throughout Kansas which must be corrected if Kansas is to be the land of happy homes. We were surprised to see so little attention paid to fruit culture and gardening in Colorado. With proper irrigation, most of our garden roots and vegetables and many of our fruits could be raised in perfection on the valleys among the foothills on the mountains. But the fine fruit which we saw at Denver, and even the potatoes and onions on our hotel table came from the same place. The cool air and bright sunshine admirably adapt this climate to the production of apples and pears, where sufficient water can be supplied to compensate for the diminished rainfall.—*Indiana Farmer*.

DIRECTIONS FOR PLANTING TREE SEEDS.

All nut and hard shell seeds should be soaked in warm water; milk and water is better, and hot too, if convenient, soaked until the rind is softened, then placed in the earth as follows: Take of good rich loam (virgin soil) one-third, one-third sand, one-third very old decomposed manure, mix them thoroughly; then prepare boxes with holes in the bottom for drainage, fill these boxes two-thirds full of this compost, and plant the seeds, each in separate boxes, and in thickness according to the size of the seed, then sift over them good sand and loam only, about one and one-half to two inches, and over this cover about an inch of sawdust, then sprinkle with a fine syringe or water pot. The sawdust keeps the surface from baking. Keep the boxes in a light and cool place, free from the sun (which dries the surface) till the seeds are up and show two or three leaves, then bring gradually in the sun and air.—*California Farmer*.

THE HOUSEHOLD.

STARCHING SHIRTS.

If there is any one piece of household work that we dislike to do more than another, it is to "do up" shirts. With twenty years of experience we are not perfect yet, but we will give a few hints that may help some others out of difficulties.

For half a dozen shirts take two heaping tablespoonfuls of best starch, add just enough cold water to dissolve it; add a pint of boiling water, stirring it at the same time; boil slowly for half an hour, stirring it occasionally to keep it from scorching. Stir a moment with a spermaceti candle; if this is not available use a piece of mutton tallow the size of a chestnut; strain the starch through a strainer or a piece of thin muslin. Have the shirts turned wrong side out and dip the bosoms carefully in the starch and squeeze out, repeating the operation until the bosoms are thoroughly and evenly saturated, then proceed to dry. Two hours before ironing dip the bosoms in a weak solution of cold starch and roll up tightly. First, iron the back by folding the shirt lengthwise through the center; next the wristbands and both sides of the sleeves, then the collar band; now place the bosom board under the bosom, and with a dampened napkin rub the bosom from the top downward, smoothing and arranging each plait neatly. With a smooth and moderately hot iron, begin at the top of the bosom and iron downward, continuing the operation until the bosom is perfectly dry and glossy. Remove the board and iron the front of the shirt. If the irons become rough or smoky, lay a little salt on a flat surface and rub them well; it will prevent them from sticking and make them smooth.

Making Potato Bread.—Boil five or six large potatoes, mash them smooth while hot, add a piece of butter the size of an egg, a tablespoonful of sugar, a teaspoonful of salt, and a pint of warm water. Beat three teacups of flour with another pint of warm water, till free from lumps, and then mix with the potatoes. Dissolve a cake of yeast and a teaspoonful of soda, each in a teacup of warm water, and beat all well together. It makes a thin batter and should be set in a warm place over night. In the morning sift three quarts of flour into the bread pan, with a little salt. Pour the sponge, which will be full of bubbles if the yeast was good, into a cavity in the middle and knead for five or ten minutes. Cover with a cloth and set in a warm place for an hour or longer, or until it has risen to double its usual size. Then divide into four loaves and knead thoroughly and put into tins; when light again, bake in a moderate oven, half or three-quarters of an hour.

Baking Powder Biscuits.—Sift two quarts of flour, three even tablespoonfuls of baking powder and a little salt together. Mix in one tablespoon of butter or lard, or, better, half of each, and stir in nearly a quart of sweet milk, carefully, so as to get just enough. Knead as little as possible, roll out, cut into biscuits, and bake in a quick oven. Little kneading and quick baking are essential.

Yeast.—Take a pint bowl of hops and two quarts of water, boil down to one quart; put seven or eight spoonfuls of flour in a pan and strain the hop-water boiling upon it; when mixed it should be a thick batter; when it becomes milk-warm stir in a breakfast cup of good yeast, then pour it into bottles two-thirds full, stopping them with paper. Set them in a milk pan by the fire, and as soon as the contents rise to the top of the bottles put them on the cellar floor till the yeast falls; then cork and keep on the cellar floor, in an ice-house, or refrigerator. In very warm weather the corks ought to be removed every day to let the air out, and put in directly again, otherwise they are apt to burst.