



Rocky Mountain Husbandman.

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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.

WILD roses, just beginning to unfold, scent the morning air.

FRESH ashes are recommended as an excellent remedy for currant worms.

MEADOWS should be kept well watered from now on until the last day of July.

The country is gradually coming down to States' prices and farmers will have to economize accordingly.

The only way to prevent currant and gooseberry bushes from bearing most abundantly in Montana is to cut them down.

EVERY farmer must have a strawberry, plant and a couple hundred currant and gooseberry bushes growing, if he wants to have a good table.

ACCORDING to the reports of the National Bureau of Agriculture, Indiana now ranks as the first of the wheat-growing States, Ohio second, and Illinois third. The yield of wheat in Indiana is 1,316 bushels to the square mile, and 18.04 bushels to the acre.

OWING to the scarcity of wood for fuel on some of the Western cattle ranges, the ranchers are planting sun flowers to supply this deficiency. Mr. S. A. Bullard, at his ranch near Dodge City, Kansas, has seeded two acres with the mammoth Russian variety, for this purpose.

The first installment of seed for late turnips may be sown now and the last in about twenty days. Turnips sown now will attain a good size and yield well; those sown later will not be large but will be nice and spicy for table use during the winter and spring.

We last week sent out to our several correspondents blank postal cards which we trust they will fill up and return to us before July 1st. We would like an estimate of the number of acres of each crop in the different counties, together with the average condition of wheat, rye, oats, barley, clover, timothy, and potatoes, these being the principal crops of Montana, and it is very important to the farmers that we get an estimate of the number of acres grown.

In planting trees the fact that success depends more on the condition of the tree at the time of planting than on the earliness or lateness of the season is too frequently overlooked. A tree or shrub that has been dug early in the spring, properly cut back, carefully healed in, and kept in a cool place, is on the first of June in better condition for

planting than one taken from the nursery row and planted some weeks earlier. All plants accommodate themselves in a great measure to the conditions and variations of the seasons. If the season is early they develop slowly at first, while in a late one, when it does open, they make haste to "catch up;" so that one season with another there is but little difference in the time of maturity.

Those who grow oats sometimes claim that they draw more from the soil than wheat, but one who has given the matter attention states that where he has known an average crop of corn to take 75 pounds of nitrogen, wheat 39, oats took only 30, and of potash and phosphoric acid, oats took less than either corn or wheat. He thinks, however, that oats derive less from the atmosphere than other crops, receiving their nourishment from the soil alone; and while he knows that this crop requires less of nitrogen, potash, and phosphoric acid than corn or wheat, yet, for some unaccountable reason, it seems to be harder on soils than the other. — *New England Farmer.*

The yield of grain fields is often cut short on account of insufficient watering. Last year some farmers suffered considerable loss by depending too much on rain. Rain, it must be remembered, is rarely ever sufficient on a large area of our bench lands. One thorough irrigation wets the ground more, usually, than a week's rain, and is generally essential whether it rains or not. There are a few localities where there is rain enough, but we would not advise farmers to depend too much on it. They would do better to water their fields right along just the same as if there was no rain, as they are not liable to get them too wet.

The complete shading of the soil rapidly enriches it, even without the application of manure. It may be that shading causes a deposit of nitrogen from the air; but be that as it may, every farmer knows that wherever a stack of hay and straw has stood for several months, the ground underneath it is not only enriched but grows much darker in color. Anyone may try this experiment as follows: Select the poorest spot of ground on the farm, and lay over a strip of any length, but about a yard wide, a few inches of straw, and cover with a board, or, if preferred, lay only a board on the ground. If the place is then seeded to something, the difference in growth between that portion shaded and that not shaded will be very marked.

CUCUMBERS for pickling are planted in the pickle growing regions of New York, says an exchange, from the twentieth of June to the first of July, and sometimes even later. In field culture they are sown in hills about four by five feet apart, and cultivated both ways until the vines interfere; in the garden they may be grown in drills alongside of other vegetables. Ground from which a crop of early peas has been removed furnishes a suitable place for pickles. Plow a deep furrow, spread some old decayed manure on the bottom, tramp down, cover with two or three inches of soil; on this scatter the seeds two or three inches apart, and keep the ground hoed and free from weeds. To obtain the largest yield of pickles, they have to be picked as soon as they are proper size, and none should be allowed to go to seed. If seed is to be saved, a few vines from which no pickles are to be picked should be reserved for this purpose. A single vine produces only one or two seed cucumbers.

To HAVE tomatoes early is the great aim of every ambitious gardener, and to attain this desirable object many suppose they must set out their plants as soon as their ground is ready. This is in some respects correct, but the ground is not ready or fit for tomatoes as early as for cabbage and lettuce. The latter are nearly hardy, while the tomato requires a tropical climate, which it cannot find here much before the first of June, and attempts to acclimatize the delicate, tender, hot-bed plants to our frosty May winds result frequently in disaster. Strong, healthy, potted or "pricked out" plants, set out the first of June in well prepared ground, will generally make more

rapid, uninterrupted growth and produce earlier fruit than plants set out weeks before. If the plants are "drawn up," that is, have long, bare stems, they should be laid slanting in a trench or furrow, and all but a few inches of the top covered with soil. — *American Garden.*

THE OLDEST TREE IN THE WORLD.

The oldest tree in the world, so far as any one knows, is, says *Knowledge*, the Bo tree of the sacred city of Amarapura, in Burma. It was planted 288 B. C., and therefore is now 2170 years old. Sir James Emerson Tennent gives reasons for believing that the tree is really of this wonderful age and refers to historic documents in which it is mentioned at different dates as 182 A. D., 233 A. D., and so on to the present day. "To it," says Sir James, "kings have even dedicated their dominions, in testimony of a belief that it is a branch of the identical fig tree under which Buddha reclined at Urucaya when he underwent his apotheosis." Its leaves are carried away as streamers by pilgrims, but it is too sacred to touch with a knife, and therefore they are only gathered when they fall. The King Oak in Windsor Forest, England, is only 1000 years old.

THE GRAIN OF WHEAT.

Even in the hurry of harvest it will be well to pause a moment to consider the structure of a grain of wheat. It is seldom, however, that we stop from our work to think of the material we are handling. Rather is the golden grain treated as we would sand or gravel, merely with a thought of its market value. But the kernel of wheat is an interesting study. A grain of sound, ripe wheat, in itself, is a small thing; but let us examine it and see what it contains. In form it is nearly egg-shaped, with a longitudinal groove on one side; if we sever it horizontally the sections are heart-shaped. The outside layer or cuticle is mainly composed of silice—the mineral base of sand—which is rendered soluble by potash in the soil, and is carried by the little veins of the wheat plant and deposited with the woody tissue. The bran consists, first of the epicarp or outer coat of longitudinal cells; next the mesocarp or inner coat of longitudinal cells; and the endocarp or the coat of transverse cells. This triple coat, while indigestible to man, yet highly relished and valuable as cattle food, is perfectly adapted by nature for the reproduction of the plant, performing the function of circulation for the seed, without which it could not develop a new plant, or even germinate. At the upper end of the kernel is seen an appendage, consisting of minute filaments, or hairs, that are absorbents of moisture in the earth, and thus convey it to the outer coats, and thus perform an important office in aiding germination.

Returning now to the coats of the grain, there is the episperm, or outer seed coat, and the tegmen, or inner seed coat, which contain a substance called cerealine. Next is the perisperm—a single layer of large cells filled with gluten and nitrogenous products the most nutritious portion of the grain. Pure gluten is for the most part, composed of proteins, a substance which forms the basis of the nitrogenous compounds albumen, fibrin, and casein, besides sugar, gum and soluble albumen. Gluten is not, however, limited entirely to this layer as it is found distributed through the interior of the berry, as well as in the bran. The endosperm, or large cells, which form the central portion of the berry, consist mainly of starch in minute granules.

The phosphates of soda, lime, and magnesia are found about the centre of the kernel, where the outer layer turns into the berry, forming an inner heart-shaped section. These are the bone and brain making elements of wheat, and the greater the quantity that can be obtained or preserved in the reduction of the grain the more valuable is the flour.

The Chit, germ, or embryo is seen near the large end of the kernel and in the crease. It is rich in gluten, and contains also starchy oil, etc. Over the germ is a thin scale-like pellicle, easily removed with the thumb nail revealing the little germ containing oil beneath.

While the illustration and description given show what the general structure of a grain of wheat is, it must not be supposed that the gluten and starch are strictly defined layers. They are mingled together, the gluten largely predominating towards the bran, while starch forms much the largest portion of the centre.

Nature's provisions for the preparation of vegetable, as well as animal life, are perfect; her laws are harmonious, and at the same time inexorable. She requires perfect conditions if the highest results are to be obtained. In the degree that such conditions are present, will be the measure of excellence found in each and all of the myriad forms of life that abound on the earth. In a grain of wheat, nature furnishes the constituents required by the delicate plant that springs from the germ under the friendly influence of moisture and warmth in soil, and supplies to both the radical and the plumule, the pobulum necessary to their existence until they have gained sufficient vitality to lay hold of the food she also supplies in the earth and the atmosphere for the growth and maturity of plant life. — *Rural Press.*

The Poultry Yard.

PUT a mixture of equal parts of sulphur and lard on the legs of fowls that are scaly.

WHEN the heads of the young turkeys show the red, give them plenty of range. They will be able to do much toward supporting themselves.

GUINEA hens spend four weeks in hatching their eggs. As they are excellent layers of good eggs, it is best to let a common hen that is a chronic sitter do this business for the guineas. The latter are easily broken up, and go on laying just as though nothing had happened.

MANAGEMENT OF YOUNG CHICKS.

The disorders to which young chicks are subject arise either from a sudden check in the growth or from weakness, and diseases that are hereditary. The evil practice of close breeding does not affect much the first few weeks of the chick's life, but manifests itself later, many times to a grievous extent. I believe that leg weakness and crop diseases are in a great measure the effect of close breeding. That it affects size at the expense of uniformity, must readily be admitted. Another thing which I believe, also, is that chicks hatched from eggs which have been laid by well-kept, strong hens, mated with a vigorous, thrifty cock, make better and more uniform chicks, and are more easily reared. This is a most important thing, as it is the foundation. This is not all, although a great point. Food must be given liberally, and, more than all, the best of care.

The young chicks should remain on the nest until twenty-four hours from the shell. They should never be given any sour food, but should have sweet milk or pure water, with eggs boiled hard and chopped fine, stiff custard, bread or cracker crumbs, until four or five days old. Then they may be given cracked corn or buckwheat, but not wholly. Wean them from their infant food by degrees, so that they may not get stunted or be liable to hard crop or diarrhoea. If they are kept up in steady growth all the time, disease is warded off and the chicks are soon beyond its reach. If everyone realized the danger of thus stunting chicks in the early stages of growth, I think they would endeavor to avoid it. There are too many that go on doing the same thing over year after year with the like result, and never learn the true course. It is from such persons that we often hear the statement that poultry does not pay.

Among the diseases that are hereditary may be reckoned roup, one of the most trying disorders that we have to deal with. Although not contagious, it is handed down from generation to generation. After once seated I believe there is no cure, although the fowl may live a very long time. In breeding, all such fowls of either sex should be avoided. If the chicks are of good breed-

ing as to health and activity; are hatched in the natural way, under a hen; are fed with nutritious food; kept warm and dry, and not allowed to run and get over-fatigued, there will be no disorders to contend with, but the course will be straightforward. The poultryman of course has always to guard against vermin; must know all the various forms, sizes, and shapes they assume, and be able to use the proper remedies. Thorough cleanliness is a powerful preventative. — *C. B. in Country Gentleman.*

The Household.

Rhubarb Pies—A rhubarb pie is not a work of art, but it should be made a work of time for it is much better if baked slowly, unless the rhubarb is stewed before filling the plates. Great care should be used in pressing the crusts together, but in truth, rhubarb pies, like all others, are better if the lower crust be baked separately. Very nice tarts may be made by mixing a pint of stewed rhubarb with a mixture of four ounces of sugar, a pint of cream, two ounces of powdered cracker, and three eggs; beat these together and mix them with the rhubarb just before filling the plate in which the crust has been baked. Cover with crosswise strips of paste and bake slowly.

Whole Meal Biscuits—Ingredients: Two pounds whole meal, four ounces butter, four ounces powdered white sugar, one egg, and half a pint of milk. Rub the butter into the meal, make a hole in the centre, add the sugar, egg, and milk, and mix into a firm dough; roll out very thin, and cut out with a cutter two sizes larger than a crown-piece; place on iron baking-sheets and bake in hot oven till they are light brown. Great care must be taken in baking these biscuits, as they soon take color; serve the biscuits on a lace paper in the form of a pyramid.

Macaroons—Blanch one-half pound sweet almonds, and pound them well in a mortar with a little orange-flower water, add to them one-half pound sifted loaf sugar and the whites of three eggs beaten to a stiff froth; beat all well together; then drop at equal distances on a sheet of water paper; put a strip of almond on each and strew some powdered sugar over; bake in a slow oven.

Iced Tea—The tea should be made in the morning, very strong, and not allowed to steep long. Keep in the refrigerator till wanted, and then put in a small quantity of broken ice. Very few understand the art of making iced tea, but pour the scalding hot tea on a goblet of ice, lumped in, and as the ice melts the tea is weak, insipid, and a libel on its name. Iced coffee is very nice made in the same way.

Curd and Whey—Heat new milk to temperature of 98° F. by placing it over fire in a saucepan set in a pan of hot water. When the milk is warm take it off the fire, put it into an earthen dish; stir with one tablespoonful of rennet; then the milk until it begins to grow; twenty let it stand undisturbed for four or five minutes, or until the curd contents of the whey; then gently press over a bowl, the dish into a shallow, if possible, and without breaking the when the curd is let the whey drain & sieve into a glass drained, slip it from it with cream. A or china dish, and add for the curd from a pint of cream is powdered sugar is used to suit the palate.

Chocolate Pie—Two cups of sugar, one cup sweet milk, half cup of butter, two and one half cups of flour, two eggs, and three teaspoonsful of baking powder. Dissolve one-third cake of chocolate, mix with one-half cup of the cake, then marble through the hole.

Vanilla Pudding—Two pounds of suet chopped very fine, three-fourths of a pound of flour, one pound of stoned raisins, two pounds of currants, half a pound of sugar, six eggs, six spoonfuls of rich cream, a wine glassful of brandy, four glassfuls of white wine, a good teaspoonful each of cloves, nutmeg and cinnamon; mix over night and boil six hours. When turned out of the bag sift white sugar over it. Use rich sauce.