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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.

MEADOW lands should be fertilized.

WATER is one of the best fertilizing agents known.

PLENTY blesses the board of the industrious farmer.

THE fall wheat crop of our Territory has never yet deen molested by the Hessian fly.

THE market for all kinds of produce should be firmer this year than last and prices should be some better.

THE farmers of Montana, we are proud to say, are as progressive as the tillers of the soil of any country on earth.

THE matter of displaying flags at signal stations instead of hagning out bulletins, is being extensively agitated.

FARMERS should make their calculations to dig their potatoes by the first of October; however as yet there are many crops that have not matured.

IT is probably just as well to grow spring wheat as fall wheat if the farmer will plow his land in the fall and be ready to sow his crop in the spring as soon as the snow goes off.

IT costs the Gallatin county farmer forty cents per hundred pounds to send his grain to Butte or Anaconda, but the Utah farmer, living 300 miles further away, can send his there for twenty-five cents per hundred.

NOTWITHSTANDING the discrimination made between our local grain and that raised in the adjoining Territories by the railroad companies, Montana farmers should we think, be able to compete.

IT costs the Missouri valley farmer twenty cents per hundred to send his grain to the Helena market, forty miles away, while the Utah farmer sends his products 500 miles for twenty-five cents per hundred pounds.

A SMALL patch of fruit only affords a taste and is good for nothing except to prove that it can be grown in this climate. What every farmer and suburban resident wants is an acre or more in fruit so that he will have plenty and to spare.

DO NOT plant out a 100 strawberry plants and 50 or 60 gooseberry and currants, but plant 500 currants and 5,000 strawberries. Plant a nice lot while at it, and when they get to bearing you will not have just a taste, but you will have plenty.

THE cold wave which recently visited Montana has been pretty general throughout the Northern States and Canadas. A temperature of 28 degrees was reached at some points, and severe damage to the crops is reported. In Montana, however, the damage has been light. One-half of the wheat crop had already been harvested, and the remainder was too ripe to be affected. Late oats will probably be a little lighter in consequence, but the damage so far as our observation goes, is scarcely perceptible.

WE in common with many others have always recommended the planting out of currant cuttings in the spring, but Joseph Harris, one of the best farmers and gardeners of the age, says plant them now. For full particulars read an article from his pen in this issue.

FARMERS who tried the hard Scotch Fife wheat assure us that the grain produced is a much nicer looking berry than the seed sown, and for this reason conclude that when generally introduced here the Montana wheat crop will be superior in quality to that of Dakota.

EVERY farmer and gardener should save seed for next year's use. It would be a big saving to the Territory if every farmer and gardener saved all the seed he needed for next year. And besides being a saving to the Territory the seeds are much better. Seed grown in this climate produce vegetables that mature quicker than seeds grown in lower latitudes.

CARE OF HOUSE PLANTS.

In many households no sitting room is regarded as complete without plants in the sunniest window. They are the only representatives of summer life we are permitted to see for many months, and to keep them in a flourishing condition is an art worth studying. Plants are often killed by kindness, but much more frequently by neglect. They are fed and watered too often during a quiet time of rest. They are subjected to violent transition, and especially to violent heat. Chills are fatal to their beauty. Air and light are essential, but the air plants like best is that which we have breathed and charged with carbonic acid. They feed on it, retaining the carbon if they are growing in full light and thus their company is, physically as well as esthetically, beneficial to the human occupants. Water is another essential. The dry air of our heated rooms makes evaporation rapid. The water should be freely given, so as to soak every particle of the soil, but the drainage (excepting for callass and other aquatics) must be free, and no more water should be given until the pot and soil become noticeably dry again. Over-wattering and sodden soil are the most fatal and common ruin of room-plants. No other food than good, sweet, well-aired soil and pure water should be used until growth and bloom are expanding, when some diluted liquor fertilizer once a week greatly improves the volume and color of foliage and flowers if the light is good. A few drops of ammonia added to the water may occasionally be used with a good result.—*Ex.*

RAISING CURRANTS AND GOOSEBERRIES.

It is an easy matter to propagate currants when you know how; but it took me several years to find out how to do it. The nurserymen do not tell; Downing, Thomas, Barry and other authors do not tell. They know how themselves and practice it, and they think everybody else does, but such is not the case. At least *I* do not know, and for years I tried to propagate currants and gooseberries with very indifferent success.

Currants and gooseberries are propagated from "cuttings." The shoots of this year's growth are cut into lengths six or eight inches. They are then put in the ground vertically, leaving but about an inch of cutting, with a bud on it, exposed above the surface of the soil. Amateurs, like myself, usually do this work in the spring or late in the autumn. But it should be done in August or September. This is the real secret of success.

The reason is this: Propagation by cuttings requires what the gardeners call "bottom heat;" in other words, the soil should be warmer than the atmosphere. Early in spring the soil is cold. It has been frozen all winter; but in August and September, the soil for a foot or more deep, is quite warm, and will continue warm for weeks after the days begin to cool. We have a propagating house ready to our hands without the use of flues or coal or hot-bed manure. A currant cutting that is set out at this season of the year in properly prepared soil is sure to grow.

The proper preparation of the soil, however, is not always an easy matter. At this season of the year land occupied with weeds or crops is apt to be dry and hard, and it is not an easy matter to reduce the soil to a fine, mellow condition. It is folly to wait for rain. As long as the land is occupied with weeds and the surface is hard, rain will do little good. Plough, cultivate, hoe or spade the land, and then a moderate shower afterwards will be of much benefit.

For currant and gooseberry cuttings, the lands must be made fine, mellow and rich. You cannot make it too rich. Seventy-five tons of well-rotted manure per acre is none too much—or say half a bushel to a square yard. Work the manure thoroughly into the ground.

When the ground is prepared, stretch a line, and with a sharp bright spade cut a narrow row along the line, deep enough to hold the cuttings upright, with the upper end not over an inch above the surface of the soil. Place the cuttings about four inches apart. Draw the dirt up to them with a hoe, and press it firm with the foot. This is all there is to be done, except to keep the land clean afterward with cultivator and hoe. And it is well to cover the surface of the soil with manure and let it remain all winter, and then work it into the land in the spring.

If you intend to use a horse-hoe between the rows, it is better to make the rows three feet apart, but if you depend on hand-hoeing, the rows need not be over two feet apart.

It is sometimes recommended to remove all the eyes from the cuttings except one at the bottom and one or two at the top. The object of this is to raise bushes with single stems. When the buds are removed the bushes do not throw up suckers. In the garded, nicely pruned and trained bushes with single stems have a neat, tidy look. But in growing currants extensively for the market, and especially in a hot, dry climate, it seems desirable to let the bushes throw up suckers or shoots. True, they are apt to throw up more suckers than we need, and it is necessary to remove all but three or four that we wish to grow, to fill the place of old branches that it is desirable to cut out. On the whole, it might be a good plan to remove *some* of the eyes from the cuttings, so as to lessen, but not entirely destroy, the habit of throwing out suckers. There should always be at least one eye at the top and bottom of the cutting.

In regard to setting out currant bushes permanently, the first consideration should be, how can we most surely keep the land clean? If you set out bushes along a fence, the chances are that in a few years the soil will be covered with a thick mat of weeds and grass, and the growth of the bushes so feeble that moss and worms will render the currants worthless. We cultivate the corn and potatoes and cabbage, why not we cultivate currants?

On my own farm the first bushes I set out were four feet apart each way. The next lot were six feet between the rows and four feet apart in the rows. I intend to set out several thousand bushes this autumn, and shall put them in rows seven feet apart and four feet in the rows. The object is to afford plenty of room to use a cultivator between the rows, and also to drive a wagon or cart between the rows with monure. For two or three years, till the bushes get large, if desired, a row of beans or peas may be planted between the rows. In my own case, I have three year old bushes to set out, and the will occupy the whole ground from the start.—*Joseph Harris in N. Y. Examiner.*

THE GARDEN OF EDEN.

Gan-Eden, an enclosed garden, from the Greek "gan" to protect or defend, and "oden" or eden, pleasure or delight—or Paradise, is supposed by some to have been situated in Persia; by others Armenia; and by others Chaldea, on the north of the Persian Gulf near the present Bassorah, the Euphrates dividing there into four streams, in the manner mentioned in holy writ. Buckingham tells us that the people of Damascus believe implicitely that the site of Paradise was at El Mezey, near that city, now a favorite place of recreation of the Turks. The waters of the Tege and Barrady, which supply numerous fountains of Damascus, divide there into four streams, and these they suppose to be the four rivers of Moses.

The inhabitants of Ceylon say that Paradise was placed in their country, and according to the Rev. Dr. Buchanan, they still point out Adam's bridge and Able's tomb. Sir Alexander Johnson informs us that they also point out as the tree which bore the forbidden fruit, the Divi Sadner, or *Taber montana alternifolia* of botanists. For confirmation of this tradition, they refer to the beauty of the fruit, and the fine scent of the flowers, both of which are very tempting. The shape of the fruit gives the idea of a piece having been bitten off; and the inhabitants say that it was excellent before Eve ate of it, though it is now poisonous. Many other fanciful opinions have been given respecting the site of Paradise, and a Swedish professor in the seventeenth century wrote a book to prove it was in Sweden. —*London.*

WHAT ARE ONION SETS?

There seems to be a very great misapprehension in the minds of many as to what constitutes an onion set. Many confound onion tops with sets, and consider them the the same. This is a mistake. Onion sets are obtained in the following manner: Sow onion seed at the rate of five pounds to the acre. When the onions are up six inches high, thin out, leaving those pulled out on the ground. In a few days the root will swell out into a small bulb the size of a pea or hazelnut, and the stock will become dry. These are the true onion sets, and may be set out any time after they become dry, first cutting off the dry top; but in no instance should this be done before you are ready to plant out, as they will immediately begin to sprout. They may be kept any length of time after being thoroughly dried by braiding them into strands and hanging them in a dry, cool place. Even severe freezing does not injure them. From these sets large early onions may be raised. If scullions are pulled up at any time during their growth and left on the ground to dry, the large thick tops will shrivel up, all the juices descending to the root, which will swell out into a nice onion. No such bull-necked onions, or any other bull-necked roots, should be selected for seed. The tops of onions should never be cut off till they are marketed, as they will at once begin to sprout. Those intended for home consumption should not be trimmed at all until they are needed for use. The dry tops take up but little room and they absorb moisture from the onions and help to preserve them. —*Cor. Rural Press.*

The Poultry Yard.

SMITH river hens refuse to lay eggs for less than fifty cents per dozen.

FOWLS are cheaper to the farmer than beef and much more palatable.

AS times get harder our small farmers begin to learn that there is money in growing fowls.

THIS department has had the effect to increase the poultry product of Montana 50 per cent. during the past two years.

THE high price of beef and the difficulty of keeping it fresh admonishes Montana farmers to grow hundreds of chickens and have them every day if they wish, from the time they are big enough to fry until cold weather comes.

AN IMPROVED INCUBATOR.

The *American Agriculturist* gives a very good plan for a simple and cheap incubator: "The incubator is made of three boxes six inches deep. The first, or bottom box, has no top, and the floor is perforated with ten or twelve half-inch holes, in which are inserted tin tubes to admit air. This is called the ventilator. The second box, the egg drawer, has no top or bottom, but a piece running lengthwise on the bottom, on which the eggs are placed. The third box has a zinc bottom, the top and sides being of wood. This is called the heater. At the rear of this box is a tin elbow, not bending into it, but extending downwards outside. The three boxes being placed one on the other, first the ventilator, then the egg drawer, and last the heater, we now have an incubator of three divisions, the top one being heated with a lamp inserted in the elbow. The draught from the lamp is caused by two or three tubes extending from within half an inch of the zinc upwards through the top of the incubator and at the opposite end from the lamp. The whole is covered with a large box, eight inches larger in every direction, top bottom and sides filled with sawdust. The heat, smoke and impurities enter the heater, warm the zinc, and pass out at the top of the tubes. The eggs in the drawer underneath are kept at a temperature of 102 degrees."

MOULTING.

All annimals are continually casting off worn-out particles or parts of their bodies, and by their nutriment replacing them in similar form. This is mainly accomplished by the circulatory organs conveying, as they do, a constant stream of organic matter, the capillary blood vessels penetrating every part. As the stream returns the waste particles are swept along through the veins to be removed by the excretory organs. The more rapid the wear of the body from any cause, the more generous must be the supply of nutriment, or the tone of the system will be lowered.

This condition will be quickly manifested by the external appearance. The horse or ox that has been worked too hard, or a cow that has been milked for a long time without sufficient food, will have an outward appearance the very opposite of sleek. The waste particles have been removed so fast as to render it impossible to fill the void by the process of digestion without the best of food and plenty of it, and people say "the blood is out of order."

For fowls or quadrupeds having a covering of feathers or hair, nature provides that the covering shall be renewed once a year after the period of mature growth. The time of casting off feathers is called the moulting season. It seems necessary that the plumage should grow in this manner, and with such hard substance and such attachment that it can only be renewed after shedding. It can not be absorbed and it becomes worn, loses its handsome color, being only waste matter. The faded feathers fall off sometimes quite rapidly, and the body then presents a forlorn and ragged appearance. New feathers push out in great numbers at a time, making a severe draft on the vital forces, and rendering the fowls weak unless well fed and fortified.

If there has been long-continued egg-production, the moult may deferred till the near approach of winter, and thus the unclothed body, reduced in strength, may be exposed to cold winds while the blood is not in the best condition to sustain the heavy draft. We saw a Bronze turkey that had laid during the season over eighty eggs, and she was moulting in the middle of November. She had the appearance of a bird overdone, needing more summer, depending alone on her blood for her winter clothes, and that blood already too much reduced. It is only by generous feeding with easily digested food that such fowls can pull through.—*Poultry World.*

The Household.

The Successful Housekeeper never makes haste, but always uses dispatch in household work.

Scrambled Mutton.—Three cups of cold boiled mutton chopped fine, three teaspoonfuls of hot water, one-fourth of a cup of butter; put on the stove and when hot break in four eggs and stir constantly until thick. Season with pepper and salt.

Rice Pudding Without Eggs.—Take two quarts of milk and one cup of rice, one half cup of sugar and and a teaspoon of salt. Bake in a moderate oven three hours. Should be stired gently two or three times after it has begun to bake. Raisins may be added if one likes. Cream and sugar is a nice dressing for it if anything is desired.

Green Tomato Pickles.—After slicing the tomatoes, scald them in salt and water until soft. Test them by pinching a slice between the thumb and finger, and skim out nearly as soon as they boil up. Drain and put them in a jar, and turn on the vinegar. Heat the vinegar to dissolve the sugar and get the strength of the spices which may be cinnamon and cloves, tied up in little thin bags or pieces of cloth, three or four to a gallon of pickles. These are always in good demand.

A Rich Tomato Soup.—Take eight good-sized tomatoes, put them into a sauce-pan with a bunch of sweet herbs, an onion stuck full of cloves, some allspice, whole pepper, and salt. Cook them slowly until quite soft, then strain through a strainer or hair seive until the skins, onions and herbs only are left behind. Have a quart of plain stock (or any water that meat has been boiled in) boiling hot. Stir the tomatoes into it, add the yolks of two eggs beaten up in a little cold water. Serve with sippets of toast or tried bread.

Grated Apple Pudding.—A delicious pudding made of grated apples is especially enjoyed if the apples are tart and of good flavor. Grate the apples after peeling them, weigh them after grating, and put with them an equal quantity of white sugar. To about ten ounces of apples and sugar allow four well-beaten eggs, the riud of one lemon, and the juice of two. Line a shallow pudding dish with rich paste, put in the apples, etc., and bake for half an hour in a hot oven. A sauce of cream adds a touch of unequaled goodness, but it is very nice without.