



## 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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1 week	\$2	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
2 weeks	\$3	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
1 month	\$5	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4
3 months	\$10	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8
6 months	\$18	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14
1 year	\$30	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24

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## Agricultural.

The grain product of Montana this season is simply immense.

Prices will not range quite so high this winter as formerly, but they will be remunerative.

Farmers should get their grain threshed and vegetables stored this season before the winter sets in.

The destruction of crops by obnoxious insects in the United States amounts to \$400,000,000 a year.

If seeds are to be kept over a year they should be placed in a cool location and exposed to the light and air.

The weather for the past few weeks has been excellent, and farmers have progressed nicely with their late harvests.

The days for high prices for farm products in Montana have gone by. The railroad will equalize them with other grain-growing regions of the country.

The scarcity of water for irrigation in some sections of the Territory will cut down the average yield per acre below that of last year. This is especially the case in the Missouri valley.

MONTANA has spent over \$40,000 for fruit trees and ornamental shrubs. This is an enormous outlay just for an experiment, but if the proper care is taken, it will in the end prove a paying investment.

EXPERIMENTS at the Ohio Experiment Station make it appear doubtful whether it is best to sow the largest grains of wheat for seed. Investigation shows that the largest grains usually come from the smallest heads, and that if we constantly select the largest grain, we will be constantly breeding down the size of the head.

THERE is no better employment for capital than in the construction of canals to convey water for irrigating purposes upon the uplands in the valleys of Montana. A few hundred thousand spent in this manner would add largely to the acreage of tillable lands, and it could not fail to be a paying investment to the capitalist.

The United States stands first in the world as a wheat growing country. A few years ago France ranked above all the other wheat-growing nations; now her wheat area is less than half of that of the United States. A curious fact in this connection is, that notwithstanding our phenomenally

rapid increase of population, the increase in wheat-growing is still more rapid, the per capita quantity having more than doubled in the thirty years preceding the taking of the 1880 census.

A NEBRASKA man says hay is good for hogs. Cut the hay short and mix with bran, shorts or middlings, and feed as other feed. Hogs soon learn to like it, and if soaked in swill or slop food it is highly relished by them. In winter, use for hogs the same hay that you feed to your horses, and you will find that it will save bran, shorts or other food. It puts on flesh as rapidly as anything that can be given them.

OWING to the fact that the frost killed the potato tops very late this season, the tubers would be better if they could be allowed to remain in the ground until the 15th of October, but this would be rather hazardous. The experience of farmers who have made the subject their study for the past fifteen years would be against taking such a risk. The majority agree that the root crop should be in safety by October 5th, at the latest.

AGRICULTURAL papers often have a good deal to say about what farmers should do during their leisure days in October. Now, if the Montana farmer has any great amount of leisure this month, it is a new thing to us. As a rule Montana farmers are busier in the fall than at any other season. This is very natural, for there is more to do. In addition to the garnering and marketing of the season's crop, there is an almost endless field of labor to prepare for the next spring's planting that should by all means be pushed.

A WRITER in an exchange says: I discovered many years ago that wood could be made to last longer than iron in the ground, but thought the process so simple that it was not well to make a stir about it. I would as soon have poplar, basswood or ash as any other kind of timber for fence posts. I have taken out basswood posts after having been set seven years, that were as sound when taken out as when first put in the ground. Time and weather seemed to have had no effect upon them. The posts can be prepared for less than two cents apiece. This is the recipe: Take boiled linseed oil and stir in pulverized coal to the consistency of paint. Put a coat of this over the timber and there is not a man that will live to see it rot.

THERE are about 4,000,000 farms in the United States. There are five States each having over 200,000 farms, viz: Illinois, Ohio, New York, Missouri and Pennsylvania. Who can calculate the added agricultural wealth, prosperity and happiness of the nation that would result from a resolve on the part of a majority of the farmers owning these 4,000,000 farms to annually make some improvements on the ways and methods of each preceding year? More thorough cultivation, better improvements, and, above all, better care of them; better fences, better barns, better stock, better homes, more home enjoyments, more social gatherings, more family picnics, in which the help are allowed to participate, more products about the farm, for the boys and girls to have personal interests in; more good books and papers; more smiles and fewer frowns; more forbearance; less impatience; more pleasant words at home; more time and sunlight in the parlor; and no room about the house, or anything about the farm, "too good" for father, mother, boys and girls to enjoy.—Ez.

### FALL PLOWING.

Out of the volume of agricultural matter that appears in the columns of our Eastern exchanges, not one article in five hundred is applicable to Montana husbandry. We herewith reproduce an article from the pen of a correspondent of the *Country Gentleman*, which is full of good sound sense, but does not fully apply to Montana. The grass and weeds do not grow upon the fall-plowed lands here unless irrigated, hence the warning in that respect is unnecessary. Besides it is well in Montana to fall-plow lands early or late, or whenever the farmer can. Even June plowing is good. There-

fore, while we reproduce our cotemporary on the subject, we would urge fall-plowing in any shape—anything rather than no plowing at all.

If fall plowing is properly done, and at the proper time, it has the advantage of favoring earlier spring sowing and lessening the work at that busy time, an advantage that is too important to be overlooked. But if not done at the right time, and in a proper manner, it had better be put off till spring. Thus, by plowing land early in the fall, a chance is given for weeds and grass to spring forth, particularly grass when sod is turned down, and especially when that grass is couch or quack grass. In such case, unless the land is plowed again in the spring, the grass and weeds will contend with the grain for the mastery, and too often successfully—always in the case of quack—affording, besides, a chance for the better ripening of the seeds of the foul stuff.

Generally, if not always, land should be plowed rather late in autumn, and if there is much to plow, the work is continued, if the weather and condition of the soil will admit. The later the plowing is done under such circumstances, the better, even should it extend into winter, which however is rare here at the North. This gives the fresh ground to the frost and the snow, with no benefit to noxious weeds and plants, and with the further advantage of the freezing and thawing in the spring. The difficulty with late plowing is that the soil is apt to be wet, which, whether corrected by the frost or not, makes unpleasant work. This is less the case with sandy soil, or a well-drained clay loam; but with clay soil, retaining its water long, and packed in plowing, or hard and tenacious, it is not only unpleasant, but in some cases hurtful, as when packed by a heavy weight of snow during the winter, with little or no frost to relieve it, the spring freezing and thawing do not penetrate sufficiently to benefit much. It will take long for such soil to dry, and then the harrow will skip over it making little impression. What can be expected from such a condition of the land? If plowed again, the chances often are not much better—breaking up rough and wet below where it rests on the subsoil.

We used to plow such soil the first in the fall, when it was the driest, or defer the plowing till spring, or, if too late to put in prepare it for buckwheat. In no case should the porous texture of the soil be sacrificed, and clay of all soils is the most subject to injury of this kind, the harm usually being done in the fall and spring. With proper management, fall plowing may be made to improve the texture of the soil through the action of the frost, as when thrown to the air in a comparatively dry and open condition, so that the elements have free play with it, the spring will find it mellow than the plow left it in the fall, and in a condition for early sowing. This should be done in time, as by deferring it rains may occur and pack the soil, and as clay parts slowly with water, may make the sowing late or defeat it altogether. It should, therefore, by all means be done as soon as the ground will allow, even if quite early, and all the more where the soil lacks drainage. The grain will then get the start of the weeds, and if the soil is good, stand a chance to keep it, for one of the principal difficulties with fall plowing is the advantage it gives to weeds and grass.

### SHRUNKEN WHEAT.

Red wheat is coming into favor with farmers, as it stands severe winters better than Clawson or other white varieties. For the long red wheat several cents more per bushel are paid by millers, and this year this variety is the only one in my neighborhood that has yielded 25 bushels or over per acre. Some crops have nearly all been contracted for seed immediately after being threshed. A good many farmers find their wheat so shrunken this year that they will buy seed rather than sow that grown by themselves. This shrunken wheat will most of it grow, but it does not produce so vigorous a plant as that having a plumper berry. There is besides the difficulty in sowing shrunken grain, that much more seed is be-

ing put on an acre than is supposed. With fairly plump wheat one bushel of seed should distribute fifteen grains on every square foot of surface. The usual amount sown is two bushels, and if shrunken it will give something between thirty and forty grains per square foot, which most strenuous advocates of thick seeding must admit is too much.—Ez.

### SAVING SEED.

Director Sturtevant, of the New York Agricultural Experiment Station, makes the following statement: There is no one factor which is of more importance to the farmer in increasing his crops than this one of the quality of the seed used, and fortunately all the experience we have indicates the great power that man has, through a judicious selection, in changing for the better the properties of the seed he uses. As between a distinctively good seed and a distinctively bad seed there may be a difference of double the crop harvested, and in some classes of plants the difference in the value of the crop harvested may be manifold.

## The Poultry Yard.

### WATER EXPERIMENTS.

G. H. Payne, Fremont, Nebraska, writes to the *Fancier's Gazette* that he has been experimenting with raising chickens on the no-water theory. In March, 1879, he had two broods hatched at the same time from the same male parent, but from two different hens. One brood was allowed all the water they would drink; the other got water only when it rained. Food for chicks alike to both broods. The brood that had the run of plenty of water made strong, healthy chicks; the other was affected with diarrhoea when young, made weak tows and died the following winter.

"The results from experiments," he says, "allike as regards conditions of cooping, feeding, etc., during the season of '80, '81 and '82, varied but little from the above. The length of life of these birds I do not know complete, but enough to warrant the assertion that chicks reared without water do not prove the best as breeders. The conclusions arrived at from these experiments prompt me to advise the supply of clean pure water, from the day of the chick's birth, and to keep it before them from early morn until the last chick has gone to roost. I have followed this practice for twenty years past, and doubt that I ever lost a chick thereby. During these four years of experimenting, I raised yearly about one hundred additional chicks, keeping clean water before them at all times, free from disease and very little lice. If properly fed, young chicks will drink very little the first two weeks, but after that time their cry will be water! water!"

### THE WYANDOTTE.

The event of the year in poultry circles was the admission of the Wyandotte to the list of standard varieties.

The bird may be described as of medium size, and combining the intrinsic values of the most desirable breeds with intrinsic qualities that will not require the evil tendencies of inbreeding to maintain; a bird that may be bred with profit for the market, and at the same time have its place in the show pen.

The Wyandotte is of composite origin, and shows by its prominent characteristics and sports that the Brahma, Cochins and Hamburg were concerned in the make up, as we have in the most valuable properties of each maintained and developed, and the objectionable features eliminated. Thus, the bird may be said to be the meaty and prolific Hamburg increased in size and made more hardy, but without the broodiness and tendency to lay on fat that is objectionable in the Asiatic.

The standard birds are well pictured in the illustration. The head of the male is short and broad; the comb rose, oval in front, wide at back, the spike being less developed than in the Hamburg. The face of both cock and hen is bright red, the eyes

bay, the earlobe and wattles medium in size and of fine texture. The colors of the plumage are clear white, and a rich velvety black, or, where these mingle as on the under body, the thighs, and back of the upper part of the neck, having the appearance of gray. The back and saddle of the male are long and flowing, each feather having the center black, tapering gradually from the full width of the feather at the down to a point at the extremity. The back is broad, the body deep, full and rounded at the sides, the breast broad and carried prominently forward. The features of the breast of both male and female have the web white and the edge black, showing as a whole a regular and well defined lacing. The wings are medium in size and fold close, both secondaries and primaries having the inner web black, the outer edge of the latter white, and of the former laced with white. The coverts are white, with black center stripe widening toward the tip, giving the effect of a double bar. The wing bows are white. The thighs are short and plump, the feathers short and fluffy. The legs and feet of both male and female are naked, and bright yellow in color. The hackle feathers of the hen are shorter than in the male. The back is short and broad, with body deep and well rounded at the sides. The feathering of the former is black, with white center, of the latter it is evenly laced with black. The wings are of medium size, and neatly tucked up; the flights black, the lower edge laced with white, the secondaries with the inner web and tip black. Tail coverts are black, pencilled with white. The tail is rather more developed than in the Asiatics, but is of that order. In weight the standard cock is 8½ pounds, the cockerel 7½, the hen 6½ and the pullet 5½.—*Fancier's Journal*.

## The Household.

*Spanish Shortcake.*—Made from the following receipt will be found very good: Take three eggs half a cupful of butter, one cupful of sugar, one cupful of milk, a little cinnamon, two cupfuls of flour, and a heaping teaspoonful of baking powder. Beat the sugar and butter to a cream; add the eggs and beat all three very light. Stir in the flour. Bake in a shallow tin, which cover with a thin icing and brown in the oven.

*Mount Blanc Pudding.*—Boil six or seven large apples as you would for sauce, stir in two ounces of butter, a little sugar, and the grated rind and juice of half a lemon. Cover the edge of a baking dish with a layer of puff paste, well butter the inside of the dish and line it plentifully with fresh bread crumbs. Fill it with the apple mixture, and cover well with more bread crumbs. Scatter little bits of butter over the top, and a sitting of sugar, and let it be in the oven until the paste is done, and the top of the pudding slightly browned. Whip the whites of three eggs to a stiff froth, and pile them roughly in spoonfuls over the bread crumbs at the top of the pudding, but not over the border of paste; sift a spoonful of white sugar over it, and put it back into the oven just long enough to set the eggs without coloring them.

*Tomato Sauce.*—Pour boiling water over the tomatoes to loosen the skins; peel them and slice into an iron stew-pan or porcelain-lined kettle; let them stew from half to three-quarters of an hour, skimming off the yellow froth as it rises to the top. A little before serving, season with salt, pepper and a little butter. Stir a teaspoonful of flour smooth in a little water as for starch, and add also a dessertspoonful of sugar. Lay thin pieces of toast in the bottom of a vegetable dish, pour the hot sauce over, let stand five minutes and serve.

*Tomato Pudding.*—Stew the same as for sauce. Cover the bottom of a pudding dish with very thin pieces of toasted bread. Pour the stewed tomatoes over; grate on bread till there is about half an inch of the crumbs; scatter over the top a few pieces of butter and bake in a quick oven.

*Kid Boots.*—Before putting the patent shoe polish on kid boots it is very advisable to rub them over with a little glycerine, putting it on with a small piece of sponge. This prevents the kid from cracking.