



**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, embracing in its columns every department of Agriculture, Stock-raising, Horticulture, Social and Domestic Economy.

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2 weeks	3	7	10	15
1 month	4	12	18	24
3 months	10	24	36	42
6 months	18	36	54	66
1 year	30	48	66	84

Transient advertisements payable in advance. Regular advertisements payable quarterly. Twenty-five per cent. added for special advertisements.

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**Agricultural.**

MONTANA needs rain to bring out the grass.

THE crop of wild fruit promises to be abundant.

IT requires an abundance of water to make a good crop.

THERE is nothing more beautiful than a rural mountain home.

THE tourist of our mountains can sit upon a snow bank and gather wild flowers.

THE Montana farmer can, by judicious irrigating, grow a good crop whether it rains or not.

THERE is much more effort being made now to produce meadows of tame grass than formerly.

MORE ornamental trees were planted in Montana this spring than ever before, and the results thus far have been better.

THE "barbed-wire" conflict has resulted in favor of the farmers in Iowa. Tally one for the farmers of the Hawkeye State.

OUR highly esteemed contemporary, the *Prairie Farmer*, is now edited by Orange Judd, who for thirty years guided the helm of the *American Agriculturist*.

FARMERS should not give their whole time to money getting. They should take a holiday occasionally. A day may be pleasantly spent in visiting the neighboring mountains, fishing, gathering wild flowers and studying the beauties of nature.

THERE is no question but alfalfa will grow splendidly in Montana. In localities where the snow does not lie it is liable to winter kill the first winter, but after that it generally does well. In localities where the snow lies deep it will thrive from the time it is sown.

In 1877 France appropriated for the support of agriculture and commerce over \$20,000,000; Russia for agriculture and public lands nearly \$15,000,000; Austria and Hungary, for agriculture alone, \$5,500,000; Great Britain, \$800,000; Sweden, \$650,000; the United States for the same year appropriated \$174,686.

Russia, our greatest competitor in the markets of the world for agricultural products, spends for the aid of her agriculture and cares of her public lands, seventy times as much as this country does, and little Sweden three times as much as this great nation for the support of the industry upon which its prosperity and perpetuity depends.

THE Kansas *Farmer* warns Western farmers against the expectations that a soil, however rich, will always remain fertile without manure or rest. It says: "Kansas is not old, but many of her farmers are witnessing what other men have seen in other places, and what will be seen wherever farmers persist in working their lands continuously without rest or recuperation."

FARMERS are doing more work within themselves than ever before. But now that the crop is in it is well to rest a day or two, for "all work and no play makes Jack a dull boy."

Those who have good bench land should remember that by irrigating it they can produce nice blue-joint meadow, and that one ton of blue-joint hay is worth more than three tons of swamp-grass hay.

**THE ADVANTAGE OF IRRIGATION.**

We have often alluded to the great advantage Montana farmers have over those of the States in being able to irrigate their fields. Still there are those in our midst who are short-sighted enough to look upon it as being an expensive necessity and a drawback to Montana farming. This is a grave mistake. The most learned agriculturists of the land fully coincide with us that the country that is possessed with facilities for irrigation, has a grand advantage over those that have not. Prof. W. J. Beal, of the Michigan Agricultural College, says: "Irrigation has often been attended with surprising results, converting a lean, hungry meadow into an oasis."

Such a long ago truthfully said: "Irrigation is the easiest, cheapest, most certain mode of improving poor land, especially that of a dry and gravelly nature. The land is thus put into a state of perpetual fertility, without any occasion for manure."

The late J. S. Gould told the farmers of Connecticut if they would sow many different kinds of grass and then irrigate the land they would have seven or eight times the amount of grass they then had. Solon Robinson thought that the rivers of Connecticut would do more good in irrigation than in turning all the wheels of the State.

After experimenting, even in moist England, Mr. Pusey said in the "Journal of the Royal Agricultural Society" for 1849, that the money spent in irrigating grass land yielded a profit of 30 per cent. All water is a weak liquid manure, and the warmer the better, if heated by the sun only. A water meadow is the triumph of agricultural art. Dry, light soils are most beneficial, clay soils least.

Prof. J. Buckman says: "By irrigation the list of grasses changes; but grasses will nearly all die out or greatly improve in quality, whilst many good ones, few in number before, rapidly increase. Again, such weeds as plantain, bulbous crow-foot, finger grass, and many others, give place to a growth of grasses."

Montana may well feel proud of the natural facilities possessed in this direction, and we believe the superiority of our crops and ease with which the fertility of our soil is perpetuated, is as much due to the fact that our fields are irrigated as to the superiority of our soil.

**HINTS ON IRRIGATING.**

The management of a field in irrigating is a matter that requires some good judgment. Many of our Montana farmers are in the habit of plowing deep ditches at intervals across their fields from which they turn the water. But in harvest time those ditches are such a hindrance to the reaper that they have to be filled. In digging to fill them considerable grain is destroyed and a good deal of time consumed. With the large ditches, however, a better head of water can be had and probably the land can be flooded quicker, yet it is believed by many farmers that it is better to make only a few of the large cross or "feed" ditches, and from them run single furrows, say from twenty to thirty feet apart in which to lead the water. Where the field is level or descends gently, considerable time may be saved by the latter management. The large ditches may be made from 300 to 400 yards apart, and left to remain permanently. From them the furrows may be run in such a direction as will enable the irrigator to flood the high and low places alike. The single furrows will not interfere with the harvester machine and the "lands" in harvesting may be made between the large ditches. An expert hand at irrigating can flood a large area of ground in a day with the ditches constructed on the latter plan. He does not have a large head of water to manage at any place, but by the use of good judgment he can keep the water moving all the time. He has only to open the furrows and turn the water in, and to watch and shut off the water when it has covered the area designed for it. There is usually time to attend to this. If he has a good supply of water he may arrange to have the water

spreading from four or five furrows at the same time. The great point in irrigating a field is the laying out the ditches. This should be done with the utmost care, as much may be saved by thus arranging the feed ditches they should be placed in a direction so that the water will not run too rapid and cut their banks, and the same precaution should be taken with the smaller furrows.

**CUCUMBER CULTURE.**

Although cucumbers are pronounced by physicians to be very unhealthy, yet it is very generally cultivated; and, in fact, no kitchen garden can be complete without it. It usually sells for a good price in market, and I, for one, am very fond of it, especially in the form of pickles. If these are put up as they should be.

My mode of culture is to dig out good sized holes, six feet apart each way, and place about one peck of well-rotted manure in each; then fill up somewhat higher than the original surface, so that after the dirt settles it will be about level with the surrounding ground, and plant eight or ten seeds in each hill. If very dry, give them a sprinkling each evening after sunset, before they come up as well as through the season, for they are plants which require considerable moisture. I hoe often, and after danger from the striped bug is passed, thin to four plants in a hill.

The striped bug, *Diabrotica vittata*, seems to be a natural enemy of the cucumber, and against him I have tried all sorts of remedies which I have seen recommended. Boxes with tin cloth tacked over the top, are effectual preventatives, but if one has many hills, devices of this sort are expensive. The last season I kept vines free from bugs by the use of ashes and kerosene. I moistened the ashes with kerosene, and applied a handful to the centre of each hill. It seemed to spread to strong an odor for them and they beat a retreat. After commencing to bear, we look them over every day and gather some for pickles, saving a few of the earliest and most perfect ones for seed, and when they are ripe we pick them off and place them in the sun a few days; then the seed is taken out, washed clean, dried and put in paper bags for the next spring's planting.—*Rural World*.

**THE HISTORY AND HOME OF LUCERN.**

Lucern is a deep-rooting perennial, indigenous to the south of Europe, and has been naturalized in the south of England, as it has in some parts of the United States. A bushel of the seed is set down at sixty pounds weight, and numbering 12,000 seeds per ounce. It is reckoned by the English, among the artificial grasses, as are all the clovers, though technically they are not grasses at all. The clovers, called "artificial grasses," comprise trifolium, lotus, medicago, onobrychis and mellilotus.

Lucern was highly valued by the old Romans, and is of unknown antiquity in Spain, Italy and the south of France. It is cultivated in Peru, and is mown for cattle feed all the year round. It has never been regarded as successful in Great Britain, any more than it has in the United States. It is mentioned by the oldest agricultural writers of England, among whom are Hartlib, Blythe and others. It is called alfalfa in South America. For forty years, since the writer began to read agricultural papers, discussions on the importance of cultivating lucern, as a farm crop, have been common and earnest, yet there are relatively few among the numerous readers of the *Country Gentleman*, who have ever seen a good crop of lucern growing. It must be an attractive forage plant, judging from a plate of it in the report of the Department of Agriculture for 1881-2.

Prof. W. H. Brewer, of the Sheffield School in New Haven, says of it in the *Botany of California*: "In cultivation it is a most valuable forage plant for warm, dry regions; the root penetrates to the depth of eight or ten feet, and may endure many years. The herbage is very nutritious, and yields several crops annually in some parts of the State where it grows and blooms through the year." There is no difference between the English and German lucern and the Spanish and Chilian alfalfa. Therefore, let us call this plant by the good old English name rather than by the Spanish name, alfalfa. The botanist of the Department of Agriculture says: "It belongs to the family of clovers, growing to the height of two to four feet, with an upright, smooth stem, branched, with an abundance of ter-

nate leaves, three-quarters to one inch in length, oblanceolate and serrated at the upper part. At the summit and ends of the branches purple flowers are produced in small, oblong clusters, succeeded by numerous, short, spiral, twisted, smooth pods. It is little known in the cultivation of the Eastern States." He might have included the Middle States.—*Cor. Country Gentleman*.

**The Poultry Yard.**

MR. WM. BOYER, living near Sasasfras, in this county, says a New York correspondent, gives as a sure cure for the gapes a mixture of a half peck of meal to one pint of epsom or rochelle salts, or smaller quantity in same proportion. Allow the chickens to eat freely of it and a cure will follow. Red paint mixed with meal is also good. Mr. Boyer has had large experience with poultry; he has thirty or forty hens now sitting and nearly a hundred young chicks.

THE disease known as "gapes," says a correspondent to the *Country Gentleman*, which greatly afflicts the young poultry of every description, can also be produced or prevented in a great degree by the mode of feeding and care. The prevention consists in the promotion of rapid growth that produces vigor and strength. The lodging places of fowls should be warm and dry, especially dry, for when the fowls are in repose, they are liable to be surrounded with noxious vapors, the effects of which appear in sudden colds, sore eyes, swelled heads and black combs. Fowls are far too valuable to be exposed in this manner. They rank by the side of other stock in profit when good care is taken of them. This may not in all cases be realized. A dozen fresh eggs, or a well-grown chick, comes very convenient for the table when friends come in unexpectedly.

**SOME FAMOUS LAYERS.**

A correspondent in the *Poultry Journal* says: While the several pure-bred fowls that we have kept have all been good layers, we must say that none have equaled the laying record of some of the many crosses we have made. This is nothing strange, as the raw life that such crosses gave to the fowls should be shown in their extra prolificity. This has been our pleasing results of each cross, almost regardless of what material is used in the formation of the fowls, and according to our experiments the good effects did not cease with the first cross as most writers assert that it will, but was fully as strong in the chicks reared from these cross fowls as in the first progeny. And even when these crosses were used to cross again with common fowls or with other pure breeds, the results were about the same—a fowl of splendid laying qualities.

Some fine Houdan hens mated with a Brown Leghorn cock gave a fine lot of jet black hens, cocks dark breasts and red backs and hackles. For great laying qualities we have rarely seen the equal of these hens. Some were quite large, too; one, we remember, weighed over seven pounds. But they were usually about the size of Brown Leghorn hens. Eggs were white as could be, and as large as Houdan eggs. These hens crossed with Plymouth Rocks gave a larger Dominique-colored fowl, but were not quite as good layers in summer, being inclined to sit occasionally. They were good winter layers, however; had light-colored legs and were a fair market fowl, dressing rather more fleshy than Black Spanish. The fifth toe and crest had very nearly disappeared, showing only in a few specimens, and very lightly at that. A few feathers at the base of the skull and a slight bifurcation of the hind toe were all the external traces of Houdan blood, but the eggs showed plainly, and the fowls when cooked showed by the fine quality of flesh that the French fowl blood was still alive. Some of these fowls, left to themselves on a farm near by, soon reverted to the jetty black of the first cross. The blood appeared to be very strong. We were shown a few hens the other day, which, said the farmer with pride, "are some of the old Houdan-Leghorn cross. I never saw the beat of those hens for laying. Every morning when I come to the barn they are on the nest." "But they are very small," we remarked. "But they lay a larger egg than any of your Brahmans or Cochins," said our friends, enthusiastically. One of the best crosses we have lately seen was produced by mating a Langshan cock with some brown-colored hens of no partic-

ular breed as far as we could learn. They were mostly dark colored fowls, their only weak point being their dark and sometimes slightly feathered legs. They were immense as winter layers, and as hatches and mothers they would have been hard to beat. However, this rather light colored skin and dark legs and beaks were fashionable in the eyes of farmers and others selling live poultry, and for that reason this cross is not to be recommended.

Light Brahmans and any medium sized fowl are suitable for general purposes. We have crossed this fowl with several other breeds and the common fowls and have never failed to get a good, practical, every day fowl. They were in every case good winter layers and usually good hatches, too. Occasionally a hen or pullet would be found that was as strictly a non-sitter as any Leghorn or Hamburg. But while, if we only wanted eggs and flesh for market, we might go on crossing, we would, if we owned a farm, keep some breed in its purity, as we could then have the fancier's pleasures as well as his profits.

**The Household.**

**Queen Fritters.**—Boil one pint of milk, and stir in flour enough to make a stiff batter. Let it cool, then beat in five eggs, one at a time, and fry in hot lard.

**Meat Sauce.**—A good sauce for hot or cold roast beef is made of one tablespoonful of grated horseradish, one teaspoonful of made mustard, four tablespoonfuls of vinegar and one teaspoonful of powdered sugar. Mix well, and serve in a gravy-dish.

**Custard Pie.**—Take double the usual number of eggs; use only the yolks for the custard, reserving the whites until the pies are done. Beat the whites to a stiff froth, add a tablespoonful of pulverized sugar for each pie, flavor with lemon, and spread smoothly over the top of each pie. Return to the oven for a few moments until of a light brown; then set away in a cool place.

**To Fry Beefsteak.**—Set the frying-pan over the fire, and when thoroughly heated, lay the steak in quickly, after having well pounded it if not tender. Place a cover over it and allow it to cook one minute; raise the cover and turn the steak quickly. Replace the cover for a minute longer. Take up, pepper and salt, and, if liked, lay a bit of butter on each piece. Serve hot.

**Queen Pudding.**—Soak a pint of bread crumbs in a pint of milk. Beat the yolks of eight eggs and whites of four with one cupful of sugar; flavor with lemon; add one tablespoonful of butter, and bake. Beat the whites of the four eggs that were left out with one cupful of sugar; put it over the pudding as soon as baked, and cook it till the meringue is light brown. Eat with butter and sugar sauce.

**Krapples.**—To one quart of flour add three tablespoonfuls of white sugar and a little salt, three tablespoonfuls of yeast and two well beaten eggs. Let the dough be well mixed up with a little warm water or milk, so that you can mold it thoroughly together for twenty minutes or more. Then cut into small pieces, mould round like an apple, open them in the middle and fill up with raspberry jam, or strawberry preserve, or stewed apples or peaches. Place the krapples on a tin to rise very light, and when double the size that they were when made, fry them in hot lard like doughnuts, and sprinkle over them when hot white sugar with ground cinnamon mixed together.

**HOW TO MAKE A BED.**

Says the Philadelphia *Press*: "Let every bed-maker, as soon as all the covers are spread, turn down the upper sheet, and all above it, leaving a generous margin below the bolster. Some people, you know, pull all the covers straight up to the top and lay the bolster upon them, so that when bedtime comes the bed must be rearranged at the head. Boys don't like this way, and perhaps some other folks don't, either. It is the custom to pile two big, square pillows on the top of the bolster, and then put on two pillow-shams, and then sometimes, or perhaps before the pillow-shams, a sheet-sham. This is setting a trap for the unwary. Only a remarkably careful woman is equal to the task of getting off all the 'finery' properly. Why not almost, if not altogether, abolish shams of all kinds? Why not honestly take off the big, square pillow and supply every bed with a comfortable bolster to take the place of pillows? If you like adornment, embroider or decorate the slips and sheets themselves without any make-believe. Silk, lace, and the like, seem out of place on a bed, which should suggest repose."