

the best practice in irrigation farming to use water sparingly and to introduce every effort in cultivation to preserve the moisture supplied.

Root crops are irrigated by furrows made midway between rows. These furrows should not be more than 500 feet long, and in light, sandy soil with little fall this distance should be reduced. Short furrows insure a more even distribution of water, and frequently prevent injury to the crop by water-logging the soil near the lateral.

**Potatoes.**—In Colorado the common practice in raising potatoes is to grow alfalfa for two years and then to plant the ground for potatoes for two years, and at the beginning of the fifth year sow to wheat. In turning down alfalfa in the spring before planting the potatoes, the field should be irrigated and afterwards plowed from 6 to 8 inches deep when the soil is dry enough to crumble up into small particles as it falls from the plow mould-board.

Some farmers prefer to take off a grain crop after alfalfa so as to thoroughly eradicate the latter from the soil before planting to potatoes, as in cases where the alfalfa is not completely killed out it proves very troublesome amongst the potatoes, and a great deal of hand labor is required to keep the potatoes clean. Alfalfa will probably prove difficult to kill out in Southern Alberta, and a grain crop before potatoes is, therefore, recommended.

Potatoes require the most careful treatment. The ground intended for an irrigated crop should be smooth, having sufficient slope to make the water run freely between the rows; 7 to 10 feet to the mile gives good results. It should be dragged until the soil is firm throughout and thoroughly pulverized in the surface. The ground should be laid off in rows 3½ feet apart with a marker. If the early Ohio, which grows the smallest vine of any variety, be used, it is advisable to plant the potatoes 10 inches apart in the row. Varieties producing larger vines should be placed at a greater distance. The closer you have the rows together and yet being able to cultivate with a single horse, the better will probably be the result, as it is essential that the ground should be protected to the greatest possible extent by the vines in order that the moisture may not evaporate too quickly after irrigation on hot days, as the potato is a plant that does best in a cool, moist soil. The practice is quite prevalent of giving the ground a good soaking prior to putting in the seed.

When the sprouts appear above the ground they should be promptly harrowed so as to preserve the moisture and kill the weeds. It is a very difficult matter to lay down any directions that would be applicable in all cases in regard to the proper handling of water upon a potato crop. It may, however, be stated that it is generally vastly better to allow the potato vines to attain a considerable growth before water is applied. If the ground should turn very hot and dry and the vines should show signs of ceasing to grow, water becomes a necessity irrespective of the season, unless the crop is very near maturity.

If the spring has been cold and backward and the sub-soil is still lacking in warmth, it will be found fatal to the potato plant to apply water, even if the soil is abnormally dry. In an average season in Southern Alberta, one irrigation should mature a crop of potatoes, but if the growth of vines is heavy and shades the ground well, two or even three waterings will increase the yield and will not injure the tuber.