

UNIVERSITY OF IDAHO

EXTENSION DIVISION

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SUGAR BEET GROWING BY BOYS' AND GIRLS' CLUBS, STATE OF IDAHO

*(James W. Jones, Agriculturist, Office of Sugar-Plant Investigations,
Bureau of Plant Industry, U.S. Department
of Agriculture.)*

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BOYS' AND GIRLS' CLUB WORK

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Sugar Beet Growing by Boys' and Girls' Clubs State of Idaho

(James W. Jones, Agriculturist, Office of Sugar-Plant Investigations,
Bureau of Plant Industry, U. S. Department
of Agriculture.)

Soil

Almost any soil that will produce a good crop of potatoes will produce a good yield of beets. Gravelly soil is not desirable. Fall plowing is not imperative but it is an aid for any root crop. Land that has previously been in potatoes, tomatoes, corn or other cultivated crop is good. An old feed lot may be plowed and fitted for beets. Coarse, fresh manure should not be plowed under in the spring but generous quantities of well rotted manure may be plowed under, either in the fall or spring. Sometimes a light dressing of well rotted manure is spread on the surface after the seed bed has been prepared.

Fitting the Seed Bed

The seed bed for beets should be worked down fine and firm.

Implements that are ordinarily used on other farm crops are all that are needed for plowing and fitting for beets. It is important to have moisture near the surface when the seed is planted because the small beet plant is delicate and may not come thru the soil if planted more than one and one-half or two inches deep. A good seed bed helps to bring on prompt and uniform germination of the seed. The land should be leveled so irrigation water will be economically used.

Time to Plant

As a rule, beets sown reasonably early do best. Sometimes a late frost will seriously injure a stand of beets where the seeding is too early. However, beets sown moderately late on a well prepared seed bed will sometimes outgrow

the early sown crop. Much depends upon the season. If a hard crust forms before the beets are up, or after they are up, a field roller or a "spider" attachment for the cultivator may be used to break the crust. A corrugated or uneven surface roller is better than a smooth surface roller. When the beet plants are large enough to have two pairs of leaves, the roller does not injure them seriously, if the crust is not too hard to be broken.

Drilling

A four-row drill is used for sowing the seed. On small areas, a hand garden drill will do.

Seed will be furnished by the sugar company with whom the crop is contracted. The seed is paid for in the autumn. Ordinarily, from ten to twelve pounds of seed per acre is planted if the seed bed is well prepared. Some plant more and others less than these amounts. With soil and weather conditions favorable, six pounds will give a good stand. Some very good growers, however, plant as many as fifteen pounds of seed per acre. The rows should be eighteen or twenty inches apart. On some types of soil, the rows are wider apart.

If the soil loses its natural moisture before seeding, the field should be irrigated and then fitted before seeding. Occasionally, there are types of soil that require irrigation after the seed is sown, to bring the plants thru. Under good management, it is seldom that beets require irrigation until some time in June or July.

Cultivation

As soon as the rows can be readily followed, the field should be cultivated. Cultivation not only destroys the weeds, but also promotes the growth of the plants. Sometimes the small plants will be bothered with what is termed "damping off." This disease is more prevalent in cold, damp weather. It causes the lower part of the beet root to turn brown. This checks the growth and sometimes it destroys the plant. Cultivation aids in warming the soil and promotes plant growth. "Blocking out" the rows with a hoe, preliminary to thinning, stirs the soil and helps to cor-

rect the disease. Thinning should follow as soon as the trouble begins to subside. "Damping off" seldom ever entirely destroys a stand of beets but will stunt the early growth.

The cultivator should immediately precede the thinning process and then again soon after thinning. The field superintendent will advise the grower in adjusting the several different attachments for the cultivator. The crop deserves to be cultivated five or six times during the season.

Thinning

The plants should be thinned so that only one plant will be left in a place and the plants should be spaced from twelve to fourteen inches apart in the row. Sometimes the rows are first "blocked out" with a hoe and then the remaining plants are thinned by hand. This thinning process should begin when the second pair of leaves are well developed. If the thinning is delayed too long, the plants that are to be left growing will be stunted.

A twelve-year-old boy or girl will thin from one-fourth to one-half acre per day.

Irrigation

Irrigation water should be applied as often as it is necessary in order to keep the crop growing in a thrifty way. The cultivator has shovel attachment for furrowing out the rows for irrigation. The furrow method is always better than flood irrigation. Water must not be allowed to stand on the beets. The cultivator should be run just as soon after the irrigation water is taken off as is consistent, to prevent the land from crusting and drying too quickly and dissipating the moisture.

Weeding

It is necessary to go over the field once or twice during the growing season and pull out the weeds that escape the cultivator. If a good job of cultivating is done, pulling the remaining weeds will not be a hard task. Allowing weeds to grow not only reduces the yield of beets but also interferes with plowing out the beets and harvesting.

Harvesting

A horse-drawn lifter loosens the beets in the rows so they may be readily pulled by hand. Sometimes the beets are pulled and thrown into windrows or piles and then topped, using a heavy, long-bladed knife. About the best way is to top the beets as they are pulled and then toss the beets into windrows or piles. The beets are then loaded directly from the windrows or piles into the wagon that hauls them off to the sugar factory or to the receiving station, where the beets are weighed. Beets that are topped and left in the field over night or for any considerable length of time should be covered with beet leaves to keep them from withering, because of evaporation and also to keep them from freezing.

Yields

Fourteen to sixteen tons per acre is considered a good yield but many club members grow more than twenty tons per acre.

By-Products

The beet tops and crowns which are left on the fields will weigh from five to eight tons per acre. They may be fed to all kinds of livestock. The most economical way to use the tops is to silo them in a natural earth silo and after they have fermented, they are fed much the same as corn silage is fed.

Another rather common practice is to gather the tops and crowns and cure them in piles and later feed them. Others will turn stock into the fields and graze them off. Turning the stock in to graze the tops off the field involves less labor but it is more wasteful.

Beet pulp and molasses are sugar factory residues that are widely used for feeding to livestock.

Conclusions

Beets are a cash crop. Pay day comes in the early winter. Very few crops will average better net profits per acre. There is nothing mysterious or hazardous in growing the crop. The club members can do practically all of the work in producing the crop except, perhaps, the heavy team work. There is need for but little cash outlay.



One man with a hoe will block out as many beets as three boys will thin in a day. The two small boys shown in the above photograph each thinned about one-fourth of an acre per day. The cultivator should immediately precede the blocking and thinning. The soil works better following the cultivator. It is better to follow the three operations closely and then cultivate again soon after the beets are thinned. This plan will conserve moisture and also make the hand-work easier.



Showing a one-horse, two-row riding beet cultivator. One man will cultivate from four to six acres of beets per day with this equipment.

One man with a horse will block out as many beets as five boys will thin in a day. The two small boys shown in the above photograph each thinned about one-fourth of an acre per day. The cultivator should immediately precede the blocking and thinning. The soil works better following the cultivator. It is better to follow the three operations closely and then cultivate again soon after the beets are thinned. The man will conserve moisture and also make the work easier.