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Producing Earlier Cantalopes in South Dakota

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Producing Earlier Cantaloupes

Cantaloupes produce best when grown in a relatively long growing season with plenty of soil moisture and bright sunlight. The principal commercial varieties of cantaloupes grown in the United States require a growing season of 80 to 130 days and a rather high mean temperature. In South Dakota the growing season is relatively short and the mean temperature is low; prevailing strong winds during the growing season often injure plants to the extent that early yields are reduced. However, some varieties of cantaloupes can be grown successfully here.

If a grower adopts methods which will help warm the soil early in the season and protect the vines from wind, a good crop of cantaloupes can be produced. In the summer of 1961, experiments were set up at the South Dakota State College Experiment Station using various methods for producing an earlier crop of cantaloupes. The following recommendations are suggested for cantaloupe growers.

1. Plant a variety or varieties recommended for South Dakota.

2. Transplant 5-week-old plants in the field. Seedlings should be started in the hot-bed 4 weeks before the date of the last spring frost in your area but transplanted to the field 1 week after the usual date of the last spring frost.

3. Plant two to three seeds directly into 3-inch peat pots. After 2 weeks, thin each peat pot to two seedlings. Transplanting of cantaloupes into peat pots after germination is not recommended.

4. As soon as possible in the spring, plant rows of sudan grass windbreak across the field running east and west or at right angles to the prevailing summer winds. The sudan grass should be planted thick and the rows should be approximately 40-45 feet apart. Sudan grass makes an excellent temporary windbreak because it takes little space, grows fast, and is almost disease-free.

5. At the times of transplanting of cantaloupes sudan grass is not tall enough to give adequate wind protection to the vines. Before planting, dig a 6-inch "V"-shaped furrow parallel to the sudan grass at proper intervals (generally 6 feet apart) and transplant the peat pots 6 feet apart in the furrow. This protects the plant from the wind in early stages of growth and gives them a good start. Later on the plants start growing faster and vines spread out of the furrow. The furrows are gradually filled with soil during cultivation.

6. Black plastic (polythethylene), used as a mulch, increases early yields and total yields of cantaloupes. Plastic, 2 mils in thickness and 3 feet
wide can be placed over the rows before transplanting. Holes should be made in the plastic through which the plants grow. Soil is placed along each edge of the plastic to hold it down. Care should be taken not to have loose edges where the wind can get under it. On a small scale it is worthwhile to save the plastic for use in the following years. It could be used for two to three seasons. Plastic may be purchased for about one-half cent a square foot. A plastic mulch might be the difference between an early crop and no crop at all. Good results have been obtained both from irrigated and non-irrigated plots with black plastic mulch.

Either step 5 or 6 will give good yields.

7. A sandy loam soil should be used for growing cantaloupes. Crop rotation should be practiced. Cantaloupes yield best where grown after alfalfa. When alfalfa ground is not available they could follow some annual cover crops. For quick growth a complete fertilizer of a 1:2:1 ratio should be applied in a wide strip under the row. A fertilizer analyzing approximately 5-10-5 at the rate of 400 to 1,000 pounds per acre is recommended. When plants start to bloom, a side dressing of approximately 100 pounds of ammonium nitrate should be applied. Striped or spotted cucumber beetles should be controlled with rotenone dust or methoxychlor dust or spray as soon as they appear. Application of insecticides should be repeated as often as required for insect control.

Figures 1 and 2 show the difference between direct seeding and using 5-week-old transplants planted in a “V”-shaped furrow and protected by a windbreak. The transplants mature 18 days earlier and have a yield three times greater than cantaloupes started directly in the field.

Figure 1. July 15, 8-week-old plants: Direct seeding into the field on May 15, no wind protection.

Figure 2. July 15, 6-week-old transplants: 5-week-old plants in 3 inch peat pots transplanted into 6 inch “V”-shaped furrows on June 1. Note the height of the sudan grass after 2 months.