care must be taken that the plants and fruit do not suffer. Irrigation should continue during the harvest period. Pronounced wilting of the plants should be prevented. Diseases which damage cantaloupe leaves may be spread from one leaf to another by splashing water. It is absolutely necessary to follow a good disease control program.

**Disease Control**

Fusarium wilt, Alternaria, and powdery mildew are usually the most serious diseases of cantaloupes. There is a continuous search for adapted varieties resistant to Fusarium wilt and powdery mildew. Fungicides prevent infection and spread of leaf diseases. Fungicides do not cure leaves already infected. Fusarium Wilt, Alternaria, and Powdery Mildew are the most serious diseases of cantaloupes in Oregon. The use of resistant varieties is the best control for Powdery Mildew and Fusarium Wilt. Alternaria leaf blight can be controlled by the use of zineb (Dithane Z-78 or Parzate) at the rate of 2 pounds of 75% wettable powder per 100 gallons of water or 4 pounds of fixed copper per 100 gallons water. See annually revised Oregon State University Plant Disease Control Handbook for latest disease control measures. When using fungicides, follow the label directions carefully!

**Insect Control**

The most troublesome melon insects are the squash bugs and cucumber beetles. Thrips and aphids may also cause considerable damage.

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<tr>
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<th>Amount of Active Toxin/Per Acre</th>
<th>Interval Between Last Application and Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphids</td>
<td>Malathion 1 lb./A</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>Diazinon 1 lb./A</td>
<td>3 days</td>
</tr>
<tr>
<td></td>
<td>Parathion 1 lb./A</td>
<td>7 days</td>
</tr>
<tr>
<td>Cucumber beetle</td>
<td>Methoxychlor (dust)</td>
<td>1 day</td>
</tr>
</tbody>
</table>

E. C. Formulations may be phytotoxic to melons. See annually revised Oregon State University Insect Control Recommendations for the latest control measures.

**Weed Control and Cultivation**

The crop should be kept free of weeds until vine growth prevents further cultivation or hoeing. All cultivation should be as shallow as possible. Flat cultivation is better than killing. The primary purpose of cultivation is to control weeds. Shallow cultivation and hoeing when the weeds are very small is the best method of control. Chemicals have been developed which can be sprays on the soil to help control weeds and reduce the number of cultivations necessary.

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<th>Material</th>
<th>Amount of active ingredient/acre</th>
<th>Remarks</th>
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<tr>
<td>Almark-3</td>
<td>3 to 4 lbs. water immediately after seeding on moist soil and follow with 1 inch irrigation.</td>
<td></td>
</tr>
<tr>
<td>Remicide</td>
<td>6 lbs. Apply pre-plant and incorporate simultaneously or immediately after application.</td>
<td></td>
</tr>
</tbody>
</table>

See annually revised Oregon State University Weed Control Recommendations for the latest control measures.

**Harvesting**

Cantaloupes should be firm, well-netted and well-formed and picked at a full slip for best quality. “Full slip” is the stage of ripeness at which the melon comes away easily from the stem attachment. For distant shipment less mature cantaloupes are picked at “half slip.” A good quality cantaloupe contains 10% or more soluble solids in the juice and has good size, net, and aroma. Smooth melons of netted varieties, and those from dead vines are culls.

During the early part of the season harvest every other day. Later in the season daily picking is best.

**Precooling**

After melons have been picked they should be placed in the shade or in a cool room and handled carefully. They should be packed in attractive crates, pre-cooled to 40 to 45 degrees F. for shipping. Refrigeration equipment used for cooling the melons before shipment should have enough capacity to maintain the storage room at 40 to 45 degrees F. without the coils being cold enough to accumulate ice. It is important that the humidity remain high (85% to 90%) in cold storage to prevent drying and shrinking of the melons.

**Storing**

<table>
<thead>
<tr>
<th>Cantonoupe</th>
<th>Commercial Storage Temperatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>full slip</td>
<td>40° to 45° F. 4 to 8 days</td>
</tr>
<tr>
<td>half slip</td>
<td>45° to 50° F. 1 to 2 weeks</td>
</tr>
</tbody>
</table>
Growing Cantaloupes in Oregon

N. S. Mansour, J. R. Baggett, and Garvin Crabtree, Department of Horticulture; Paul A. Koepsell, Plant Pathology; and Joseph Capizzi, Entomology; Oregon State University

Cantaloupes are widely grown in commercial acreages and home gardens. Commercial production is concentrated in Umatilla and Jackson Counties.

Recommended Varieties

The warmer locations of Oregon such as Hermiston, Roseburg, and Medford have a wide choice of varieties which will mature properly. Any of these listed below would be sufficiently early and adapted. Certain very late varieties such as Golden Beauty Casaba, Honey Dew, and Creshaw might be grown successfully in the warmest areas.

For marginal areas, such as the Willamette Valley, only the earliest types are suitable. These are listed below. Also included is a group of high-quality F₁ hybrid varieties.

Hearts of Gold—very small cavity, good quality and yield, medium size, Fusarium wilt resistant.

Hales Best 45 (Imperial 45)—round, evenly netted, medium-size, good shipping quality, resistant to powdery mildew.

Honey Dew—mild flavor, round to oval, medium size, good shipping quality, resistant to Fusarium wilt.

Iroquois—heavy ribbed and netted, nearly round, with a strong musky flavor. Good size. Fusarium wilt resistant.

Supermarket (F₁ hybrid)—oval, medium netted with a medium small cavity and medium musky flavor. Resistant to Fusarium wilt and downy mildew.

Saturcy Hybrid (F₁ hybrid)—somewhat later, but similar to Supermarket, heavy net. Good size. Resistant to Fusarium wilt.

Barrel Hybrid (F₁ hybrid)—good yield and quality, medium cavity, heavily netted and ribbed, near round, good quality and yield.

Supermarket (F₁ hybrid)—mild flavor, round to oval, medium size, good shipping quality, resistant to Fusarium wilt.

Gold Star (F₁ hybrid)—very similar to Iroquois, slightly earlier. Fusarium resistant.

Spear—large, pointed at stem end, heavily netted, large size. Adapted to cool climates.

For warmer areas:

Hales Best 45 (Imperial 45)—round, evenly netted, medium-size, good shipping quality, resistant to powdery mildew.

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Supermarket (F₁ hybrid)—oval, medium netted with a medium small cavity and medium musky flavor. Resistant to Fusarium wilt and downy mildew.

Saturcy Hybrid (F₁ hybrid)—somewhat later, but similar to Supermarket, heavy net. Good size. Resistant to Fusarium wilt.

Harper Hybrid (F₁ hybrid)—very small cavity, good quality and yield, medium size, good shipping quality, resistant to Fusarium wilt.

Fertilizer

The fertilizer required for any field will depend on the native soil fertility and the previous soil management. It is helpful to have the soil tested before planting. Suggested fertilizer rates are:

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Rate per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (N)</td>
<td>50-80 lbs/A</td>
</tr>
<tr>
<td>Phosphate (P₂O₅)</td>
<td>40-100 lbs/A</td>
</tr>
<tr>
<td>Potash (K₂O)</td>
<td>60-240 lbs/A</td>
</tr>
</tbody>
</table>

(Southern Oregon and Willamette Valley)

Fusarium wilt resistant.

Use purified high magnesium limestone to adjust soil pH to 5.7–6.5 (pH not critical).

Up to 500 pounds of fertilizer per acre (for the home garden: about 10 pounds to 1,000 sq. ft.) may be used at time of planting provided the fertilizer is in bands 2 inches to the side and 1 inch below the level of the seed. If additional nitrogen is needed, side-dress up to 40 pounds of N per acre when the vines begin to run. Specially mixed fertilizer for cantaloupes should contain 6 to 8 pounds of boron per ton. A special mix is not available; broadcast and work in 1 to 2 pounds of boron per acre before planting.

Frequently, because of dry weather for other reasons, the plants are unable to take up enough magnesium and boron from the soil. Since it is difficult to predict these conditions, nutrients may be applied separately or added to the insecticide and fungicide sprays and applied to the leaves.

In controlled tests in other states the application of nutrients to the foliage at the proper time has given as much as 25% increase in sugar content of fruit. This practice may be profitable in Oregon:

1. When the vines begin to run: 4 pounds refined magnesium sulfate, 2 pounds refined borax, or similar soluble boron formulation, in 100 gallons of spray. Apply at the rate of 100 gallons per acre. (For the home garden: 1 tablespoon of Epsom salts and 1 teaspoon of borax in 1 gallon of water.)

2. When the crown set fruit is about 1.2 inches in diameter: 4 pounds refined magnesium sulfate and 2 pounds refined borax, or similar soluble boron formulation, in 100 gallons of spray. Apply at the rate of 125 to 150 gallons per acre. (For the home garden: 1 tablespoon of Epsom salts and 1 teaspoon of borax in 1 gallon of water.)

Seeding

Buy seed only from reliable sources. Prepare land thoroughly by plowing, discing, and levelling.

Drill 3-4 pounds of seed per acre in rows about 5 to 6 feet apart after all danger of frost is past and soil is warm enough. (For the home garden: about 10 pounds to 1,000 sq. ft.) may be used at time of seeding provided the fertilizer is in bands 2 inches to the side and 1 inch below the level of the seed. If additional nitrogen is needed, side-dress up to 40 pounds of N per acre when the vines begin to run. Specially mixed fertilizer for cantaloupes should contain 6 to 8 pounds of boron per ton. A special mix is not available; broadcast and work in 1 to 2 pounds of boron per acre before planting.

Soil

Cantaloupes may be grown on a wide variety of soils, though heavy clays should be avoided. Land should be fairly fertile, well-drained and, if possible, well-watered with organic matter. Sandy loams are generally best suited for melons because these soils warm quickly and can be worked early in the spring. Soils heavily infested with nematodes should be fumigated before planting cantaloupes. For details of methods for controlling nematodes, see your County Extension Agent.

Nutrients

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<th>Element</th>
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Fusarium wilt resistant.

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The crop should be kept free of weeds until vine growth prevents further cultivation or hoeing. All cultivation should be as shallow as possible. Flat cultivation is better than hoeing.

The primary purpose of cultivation is to control weeds. Shallow cultivation and hoeing when the weeds are very small is the best method of control. Chemicals have been developed which can be sprayed on the soil to help control weeds and reduce the number of cultivations necessary.

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<td>Remicidic</td>
<td>6 lbs.</td>
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**Harvesting**

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<tr>
<td>Aphids</td>
<td>Malathion 1 lb./A, Diazinon 1 lb./A, Parathion 1 lb./A</td>
<td>1 day, 3 days, 7 days</td>
</tr>
<tr>
<td>Cucumber beetle</td>
<td>Methoxychlor (dust) 1.75 lbs./A</td>
<td>1 day, Apply when plants are dry</td>
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Commercial Storage Temperatures