Use of Peat Pots for Cantaloup Transplants

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YOUNG CANTALOUP seedlings being grown in peat pots within the greenhouse, at Yuma. These later were transplanted in the field, pot, plant and all.

The most important aim of cantaloup production in Arizona is that of early market maturity. Growers who can produce early cantaloups while the demand is high and the supply low receive premium prices.

One possible way to produce early cantaloups is to grow seedlings in a sheltered area such as a greenhouse or cold frame and then transplant to the fields after the danger of frost and cold weather has been lessened.

Hard to Transplant

However, unlike some plants, the cantaloup plant is very difficult to transplant, and if the roots are exposed prior to transplanting the plant will die. A method of transplanting with little damage to the root system is possible by using an organic pot that will disintegrate or permit root penetration when buried in the moist soil of plant beds. Pots of this type, known as peat pots, are currently being tested in the Yuma Valley.

Peat pots are made of peat moss pressed into the shape of a pot. The pressed peat is strong enough to retain its shape during the time young plants are being grown, but will permit root penetration and will not hinder normal root development when the potted plant is transplanted to moist soil. Pots of this nature will permit the transplanting of cantaloups with very little disturbance of the root system.

In addition to producing larger plants earlier, the practice of transplanting has the advantages of early weed control. It also eliminates the thinning operation required in direct seeded fields. Fields can be cultivated prior to transplanting, permitting mechanical destruction of weeds. Since the transplants will be planted at the desired spacing, thinning operation is eliminated.

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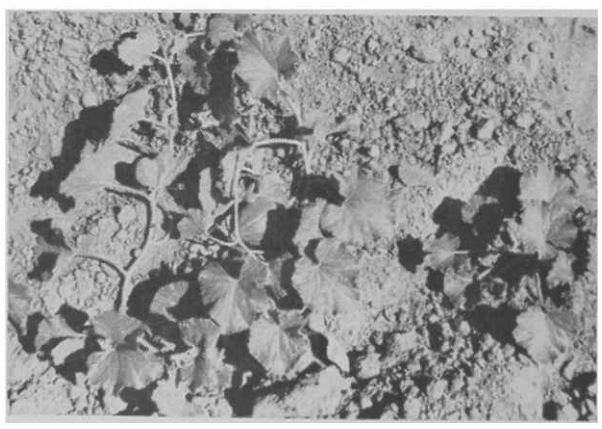
There Also Are Handicaps

One of the inherent dangers in use of peat pots for cantaloup transplants is that establishment of a sufficient root system is not rapid enough to support the transplant under the relatively adverse environment of field conditions in late winter.

When a cantaloup seed germinates in a plant bed, the root system develops prior to the emergence of the shoot and is able to maintain the continued growth of the plant. Transplants, even in peat pots, do not have a root system comparable to field germinated plants. The roots of transplants in peat pots are disturbed either by the confines of the peat pot itself or, if they penetrate the peat pot prior to planting, they are likely to be injured or exposed during the transplanting operation.

Cantaloup transplants in peat pots are dependent entirely on the root system within the confines of the peat pot at the time of transplanting. This root system must support the transplant until new roots are generated which will penetrate the soil of the plant bed outside the pot. If the available soil moisture of the soil mix in the peat pot is not sufficient to maintain the transplant during the period when new roots are beng generated, the plant will wilt and possibly be killed by desiccation.

BELOW, COMPARATIVE growth of cantaloup plants, both seeded on the same day (Jan. 11) at Yuma. Plant on left was grown in a three inch peat pot and transplanted to the field 25 days after seeding (on Feb. 4). Plant on right was direct seeded in the field. Photo taken in latter part of April.



Older Plants Resist Viruses

The production of earlier and better cantaloups is closely associated with efforts to reduce damage to cantaloups caused by mosaic viruses. Since the extent of damage caused by these virus diseases is closely associated with the size of the plant at the time of infection (the smaller the plant the greater the damage), production of a larger plant earlier will help reduce damage. Therefore, at the time the viruses are moving from plant to plant in the field, the cantaloup plant started in a peat pot will be larger and more resistant to damage by virus infection.

Furthermore, the transplant need not be put in the ground as early as seeded melons, even to produce larger plants earlier. As a result, the plant will not be exposed as long to the possibility of virus infection.

A series of tests are being conducted in the Yuma valley to determine the proper methods of producing cantaloup transplants. The size of peat pot and type of soil mix to use in the peat pots, as well as the stage of growth that is best for transplanting, will be investigated.

Twelve hundred SCS soil scientists are now mapping about 50 million acres of land a year. More than 821 million acres — or more than a third of the nation's land — have already been surveyed.

Durante el embarque del ganado en jaulas de ferrocarril, remolques de camión, etc., y durante el tránsito, los vacunos deben ser manejados y atendidos cuidadosamente para que puedan llegar a su punto de destino en las mejores condiciones posibles.—TIERRA