

Bees, Bouquets, & Better Tangerines

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Yields Increased in Experiment At Yuma Mesa University Farm

In a Clementine (Algerian) tangerine pollination experiment at the Yuma Mesa Citrus Experiment Farm, plastic screen cages were maintained over 6 trees during flowering time. All bees were prevented from visiting 2 of these trees while honey-bee colonies were provided the other 4 caged trees.

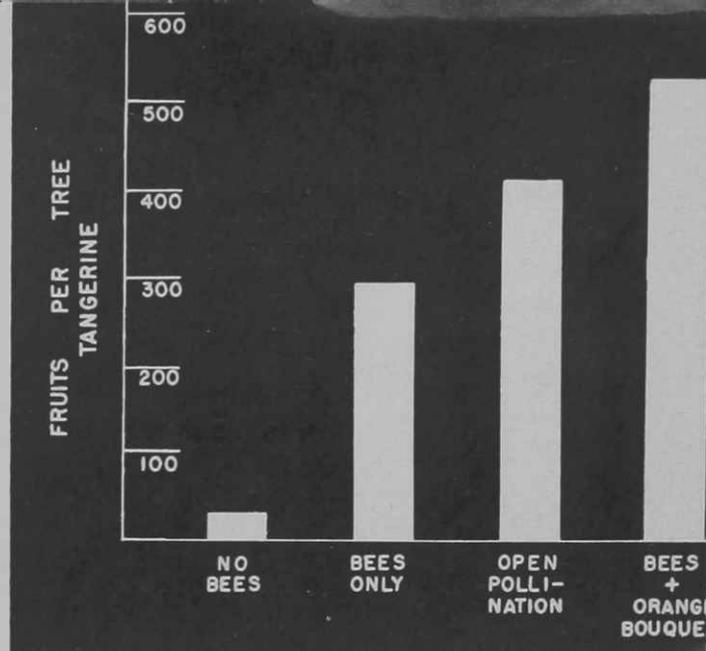
Bouquets Provided

Each morning in 2 of these bee cages fresh bouquets of Hamlin orange blossoms were placed in water buckets. Later in the season Meyer lemon bouquets were used. These bouquets were to provide a source of foreign pollen which the bees could distribute among the tangerine flowers.

Results were clear-cut. Trees having both bees and other citrus bouquets yielded 16 times as many tangerines as those with no bees, and double the yield of those provided with bees only.

In comparison, 6 uncaged trees exposed to chance encounter with foreign pollen and bee visitation produced 13 percent fewer tangerines than those provided with bees and bouquets. This was, however, half again as many tangerines as were produced where bees but no foreign pollen were provided.

Tangerine blossoms fertilized with foreign pollen produced better quality fruit. Although the tangerines on all trees were of approximately the same size and weight, the cross-



NO BEES=caged tree, no bees.

BEES ONLY=caged tree with honey bee colony.

OPEN POLLINATION = tree without cage resulting in chance pollination.

BEES + ORANGE BOUQUET=cage tree + bees + bouquets of orange blossoms.

pollinated ones had 4 more seeds each, were sweeter and produced 38 percent fewer fruit with dry sections. Improving fruit quality was an unexpected result requiring further study.

1 Colony of Bees Per Acre

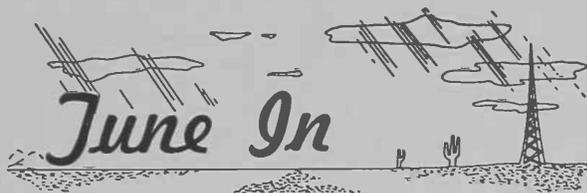
One colony of honey bees per acre distributed in the orchard is the standard recommendation for pollination of deciduous fruit orchards. This rate should be adequate for tangerines. Providing foreign pollen in the commercial orchard will necessitate interplantings or grafting of suitable pollen parents.

Farm Credit—

5. **Build reserves for emergencies.** Commercial farmers can no longer meet expenses for very long periods simply by liquidating capital. Now is a good time to set aside cash, government bonds, or other liquid reserves to use as a cushion when needed.

6. **Emphasize efficient production.** During rising prices, major emphasis should be placed on size of business. When prices decline, look for ways of controlling unnecessary costs and strive for more efficient production.

Avoid buying more machinery than is necessary for efficient operation. Machines are an investment but their cost must come out of farm earnings. Study operations in detail to find ways of making more efficient use of labor.



SUNDAYS

KOY, Phoenix, 8:45 a.m. — Garden Program.
DAILY (EXCEPT SUNDAY)
KTAR, Phoenix, 6:15 a.m. — Your County Agent.

MONDAYS

KYMA, Yuma, 7:00 a.m. — On the Farm Front.

MONDAY THROUGH FRIDAY

KYUM, Yuma, 7:20 a.m. — On the Farm Front.

TUESDAYS AND THURSDAYS

KCLS, Flagstaff, 9:40 a.m. — Your County Agent Reports.

MONDAYS WEDNESDAYS AND FRIDAYS
KCKY, Coolidge, Casa Grande, 6:45 a.m. — Pinal County Farm and Home Program.
KYCA, Prescott, 8:45 a.m. — News and Notes from the County Agent's Office.

WEDNESDAYS

KCLF, Clifton, 12:15 p.m. — Farmer's 15.

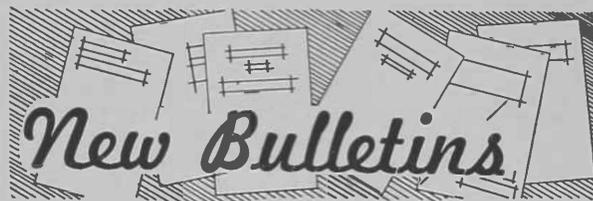
SATURDAYS

KOY, Phoenix }
KTUC, Tucson } 1:00 p.m. — Arizona
KSUN, Bisbee } Farm and Ranch Hour
KYMA, Yuma } (U. of A.)
KCLS, Flagstaff }

KGLU, Safford, 1:15 p.m. — Stepping Along with your Agricultural Extension Service.

TELEVISION THURSDAYS

KIVA, Channel 11, Yuma — 6:10 p.m. — The KIVA Farmer.



Ask your County Agricultural Agent for a copy of any of these new bulletins or circulars. They are free to Arizona farmers and stockmen.

EXTENSION SERVICE

Circular 131 (Revised) Cattle Feeding in Arizona (To be printed about May 1)
Circular 179 (Revised) Cotton Insect Control in Arizona, 1954.
Circular 199 (Revised) Control Insects of Flowers, Shrubs, and Shade Trees.
Circular 210 (Revised) Arizona Insect Control Recommendations, 1954.
Circular 215 — Wash Your Blankets.

EXPERIMENT STATION

Gen. Bull. 252 — Arizona Agriculture, 1954.
Gen. Bull. 253 — Watery Brown Rot of Vegetables in Arizona (with pictures in color).