New Banana Squash

improvement sought in strain released to seedsmen in 1953

Glen N. Davis

The orange banana squash—which originated as a selection from the regular or Pink Banana variety—differs from the parent variety in many respects.

The new variety is the result of eight generations of straight selection followed by self-pollination in each generation. The first increase was grown from the seed of one self-pollinated fruit in the summer of 1949 and released to seed producers that fall.

As the name indicates, the variety has a bright orange-colored skin. No slate, gray, or off-colored fruits appear, as is characteristic of the regular Banana strains. The flesh is highly colored and very thick in relation to the cross section of the fruit. The seeds are large, full, and tan in color. The seed cavity is unusually small. A portion of the mature fruits tend to be slightly sickle shaped and perhaps somewhat more pointed on both the stem and blossom ends than is characteristic for other strains of Banana squash.

The fruits of Orange Banana are considerably larger than those of other existing strains. No data on actual yields are available, but the variety is very prolific and individual fruits weigh up to fifty pounds. It is well adapted to any areas of production where Banana squash strains have proved successful.

Orange Banana squash has a very tough—almost woody—rind about one-eighth inch in thickness. Unless severely bruised during harvesting and handling, the fruits will keep in storage for several months. The tough rind is very desirable for that portion of the crop which is sold on the fresh market or placed in storage, but it presents considerable difficulty in peeling and for this reason is not well suited for processing. Work is in progress to develop a strain which will retain the present size and color and replace the tough rind with one more characteristic of other Banana strains, which can easily be handled by the processors.

Orange Banana, as originally released, had one defect which was of concern to seedsmen. The factor or factors controlling seed size and color were apparently not well fixed. Some of the seeds were flat and white instead of being full and tan. Both types of seed, however, produced identical plants and mature fruits. Two additional generations of selection with self-pollination have corrected this defect, and a second release of stock seed was made in the fall of 1953.

Glen N. Davis is Associate Professor of Vegetable Crops, University of California, Davis.

Laboratory Analysis of Orange Banana Squash.
Composition per 100 grams of fresh material.

Moisture (gms.)	Energy* (Kcal)	Protein (gms.)	Calcium (mg.)	Iron (mg.)	Phosphorus (mg.)	Ascorbic acid (mg.)
88.49	31.7	0.87	13.8	0.51	27.1	22.0

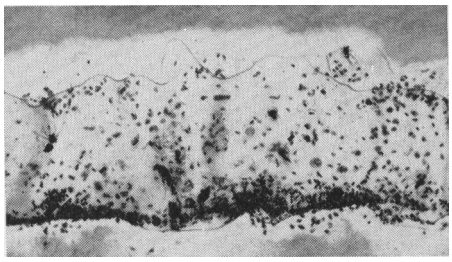
Riboflavin (mg.)	Thiamin (mg.)	Niacin (mg.)	Total sugar (gms.)	Starch (gms.)	Alcohol insoluble (gms.)	Carotene (mg.)
.038	.037	0.83	4.62	2.22	5.40	1.9

* Fat 0.3 gms. assumed in calculation of energy. Value obtained from U.S.D.A. Misc. Publication No. 572, 1945.

The study plot turned out to be a test of the residual value of the acaricides, as mite populations did not build up on the check plots until after the last application in August.

All of the treatments gave what could be considered commercial control, but some of the materials exhibited definite selectivity against the two species of mites in the orchard. Aramite gave excellent control on the 2-spot mite but was not among the better materials for European red mite. The same characteristics were shown by 876. Genite 923, on the other hand, gave very good control of European red mite but was weak in control of the 2-spot mite, as was the case with demeton—Systox. Sulphenone and chlorobenzilate, although providing commercial control, did not measure up to some of the other materials. Malathion apparently does not possess enough residual effect to prevent a late mite buildup. The two materials that gave the most consistent control of both mite species were Ovotran and Dimite.

Both check plots had high mite populations of both species by the middle of September, with considerable leaf damage and numerous mite eggs in the calyx end of the fruit. None of the treated apples had mite eggs in the calyx end.



Sticky band showing migration of first instar aphids from roots to aerial parts of tree.

Two of the materials used caused injury to the apples. Genite 923 caused black spots on the fruit, and the apples from the 876 plot showed brown sunken spots on the sides of the fruit.

All of the plots were carefully checked throughout the season for woolly apple aphid. The malathion treated block had no aphid colonies for the entire season. The demeton block showed a few aphid colonies on the trunk and main limbs but none in the aerial portions of the tree. None of the other materials showed any effect on the aphid populations; however, the infestations were not especially heavy on any of the plots including the checks.

The 1953 experimental plot on apples showed the need for materials with long residual value in order to prevent late season buildup. Several of the materials used showed such residual effects, but their specificity against the two mite species is a factor that must be taken into account. None of the long residual acaricides, with the exception of demeton, appear to have any effect on woolly aphid; therefore it seems necessary to include an aphicide with the acaricide treatments. Really satisfactory control of the woolly aphid has not as yet been realized, however, and this subject will be the focus of further research, directed especially against prevention of migration from the roots.

Harold F. Madsen is Assistant Entomologist, University of California, Berkeley.

Arthur D. Borden is Entomologist, University of California, Berkeley.

Edward C. Koch is Associate Agriculturist, University of California, Berkeley.

The above progress report is based on Research Project No. 806.