

Promising New Seedling Fig

Conadria variety, a hybrid developed in 30-year fig breeding program, shows promise for both fresh and dried fruit markets

Ira J. Condit and Robert M. Warner

Tested at Chowchilla, a new hybrid fig—the Conadria—showed such pronounced vigor of growth, crop production, and quality of fresh and dried fruit that one grower grafted ten acres of young trees to the new variety.

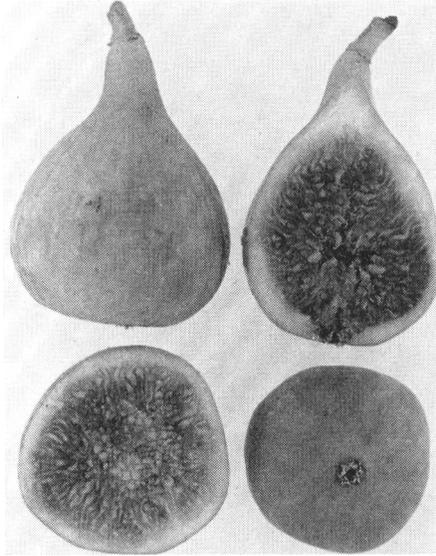
Trees of Conadria have been planted and tested since 1950 in Riverside, Corona, Vista, Los Angeles, Fresno and vicinity, and Merced, in addition to Chowchilla.

At Vista, the tree grew vigorously, had healthy green foliage, produced two crops with the second continuing to mature into November.

Scions of the original seedling grafted in trees at Riverside and Los Angeles made good growth and produced some fruit during the second season. At Los Angeles, in 1955, the fruit was excellent in appearance and of good quality. One tree in a poultry yard at Riverside produced an unusually heavy breba—first crop—that was followed by such a good second crop that the tree broke down under the heavy weight of fruit.

At Fresno, the demand for cuttings and scions has been so great from the trees available that it has been difficult to determine the natural habit of growth. However, Conadria trees are fairly dense with drooping branches which turn up at the tips. The growth of young trees is more vigorous than that of White Adriatic—Verdone—trees planted in adjacent rows. Trees of both Conadria and Verdone, however, show much more susceptibility to the rootknot nematode than do trees of Mission—Franciscana—which thrive at Fresno in spite of infestation.

The leaves of Conadria—like those of most fig varieties—vary in size, number of lobes, and depth of sinuses. The average leaf from a vigorous branch meas-



Second-crop Conadria figs as grown at Riverside. Actual figs are twice the size shown above.

ures 8" in length of blade and 8.5" in breadth. On a single tree, 76% of the leaves are 7-lobed and 24% are 5-lobed. The middle lobe is from 5" to 6" long and 3" across at the broadest part. Lat-

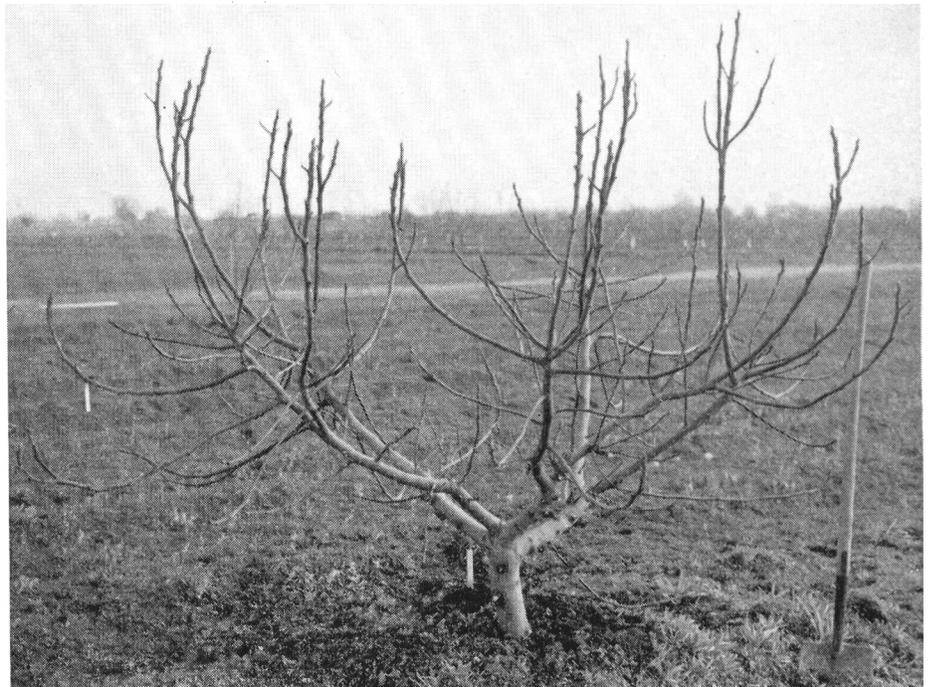
eral lobes are 4" long and the two lower lobes 2.5" long. The two auricles or lobes at the base of 7-lobed leaves are from 0.75" to 1.25" long. The margins are shallowly crenate—scalloped—on the upper parts of the lobes only. Petioles are from 3.5" to 5.00" in length.

The breba crop at Riverside is good to very good. Figs are large—3" to 3.5" long and 2.25" in diameter—pyriform, with prominent, thick neck. The average weight of three figs was 88 grams. The stalk is up to 1/4" long. The eye is medium, with outer scales green, and inner scales pink. White flecks are numerous, conspicuous, and thickly scattered over the surface. The skin is green and slightly flushed with violet from the underlying thin meat. The pulp is light strawberry, slightly hollow at the center. The flavor is sweet and mild. Quality is good. The breba season is from July 2 to 16 at Riverside, and earlier at Fresno.

Second-crop figs are much like brebas but smaller in size. Average weight is 50 grams. The shape is turbinate to pyriform, with neck thick and short or prominent and somewhat flattened. The skin is

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Three-year-old Conadria near Fresno.



Quality of Conadria and Verdone Figs (Common figs orchard run)

Variety	Date	No. of Figs	% Pass-able	Infes-tation	Wt.
Seedling 76-62	9/16/55	100	75	18	865 gms.
Verdone	9/16/55	100	51	41	840 gms.
Conadria	10/11/55	20	90	5	...
Conadria	10/11/55	50	94	0	490* gms.
Conadria	9/14/54	100	99	0	...

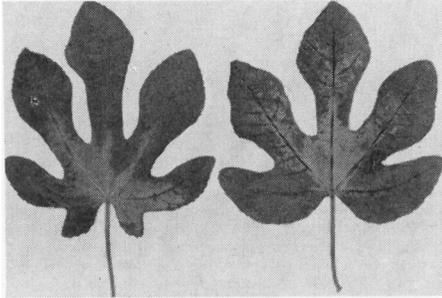
* Not well dried.

FIG

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green, with small scattered white flecks. The eye is medium and the scales are chaffy. The meat is white or sometimes tinged with violet. The pulp is solid, light strawberry, with a distinctive fig flavor. The quality is very good.

In 1954, figs at Riverside continued to ripen over a long season, some still maturing on Christmas day. The extremely hot weather in August 1955 caused the



Typical 5- and 7-lobed leaves of Conadria from vigorous branches.

ripening figs to become flabby in texture and made them unfit for shipment to the fresh-fruit market.

At Fresno and Chowchilla, Conadria produced dried figs of excellent quality and remarkably free from defects.

Sugar analyses of a large number of samples of dried figs in 1951 showed the total sugar content of Verdone to be 55.88%, Calimyrna—Sari Lop—56.00%, Franciscana 57.02%, and Kadota—Dottato—57.69%. A representative sample of Conadria tested in 1954 showed 63.3% total sugar.

Development of Conadria

Actual fig breeding has been carried on at Riverside since 1928. A total of 16,650 seedlings, involving 273 combinations, have been grown and tested. Many varieties of edible figs have been used as female parents, including the commercial varieties of Dottato in 33 combinations, Franciscana in 13, Sari Lop in 16, and Verdone in 31.

Of the many combinations, the most promising seedlings producing edible figs were obtained from the Dottato and the Verdone crosses, especially from the latter. One such cross—Number 143—made in 1944, involved Verdone and a seedling male fig or caprifig, Number 72-80. Both parents are parthenocarpic—the fruits reach maturity without the stimulus of flower pollination or deposition of eggs by fig insects—in development of fruit. The resulting progeny totaled 72 seedlings; 38 produced edible fruit and 26 of these were parthenocarpic

in fruit development. Three of the seedlings were regarded as worthy of distribution and trial in other areas. One especially, Number 143-5, has proven to be of sufficient promise—fruits were first produced in 1947—to warrant the distinction of having a variety name given to it. The selected name—Conadria—is a combination of the names Adriatic and Condit.

Conadria seems to be a very promising new variety of fig for the production of both fresh and dried fruit. It is especially promising for dried fruit in the San Joaquin Valley.

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HORSERADISH

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twisted. Actually, slight air movement could pass through these two types of bundles.

Roots held in the office at 78°F did not produce any growth when subsequently planted. Those held at 0°F appeared in fairly good condition after thawing. However, only 4% produced any growth. Unwrapped stecklings and those in porous Kraft paper held in cold storage were poor. A striking advantage in favor of the tightly sealed polyethylene bags was apparent because the stecklings had the least decay and were firmer than any of the other lots.

Other Observations

One grower's pit was located under the eaves of a building where it collected much more water than those in the open. The roots were wet when the pit was opened and were more turgid and in better condition than the roots in any of the other pits.

Stecklings were actually frozen in some of the shallower covered pits but thawed when the ground warmed up with no apparent damage to the roots.

Stecklings which were much shriveled on arrival were buried in a wet sawdust pit and emerged in excellent turgid shape.

Stecklings did not keep satisfactorily in the common nonrefrigerated earth-covered potato cellars of the area.

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STRAWBERRY

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ing white, and clothed with root hairs in contrast to irregularly shaped, amber-colored rootlets devoid of root hairs in the check areas. The acre fumigated with chloropicrin yielded in 1954 an estimated 19,590 pounds—9.8 tons—of fruit. The average yield per acre for the check areas was under four tons. Thus, during the first year, Verticillium wilt control and increased growth which attended the fumigation with chloropicrin gave a net increase of nearly six tons of berries to the acre.

Verticillium Wilt Control in Lassen Strawberry by Chloropicrin Fumigation of Land Previously Repeatedly Planted to Tomatoes.*

Dosage per sq. ft.	Description of treatment after fumigation	% losses from Verticillium wilt over 2 years.**
2.0 ml.	½-in. water seal.	12.7
2.0 ml.	½-in. water seal.	12.0
2.0 ml.	Rolled, rototilled and rolled in 24 hours.	15.3
2.0 ml.	Rolled, rototilled and rolled in 24 hours.	18.0
3.0 ml.***	Rolled, no water seal.	10.7
3.0 ml.	Rolled, no water seal.	9.3
3.0 ml.	Rolled, rototilled and rolled in 24 hours.	8.7
3.0 ml.	Rolled, rototilled and rolled in 24 hours.	12.7
Check	No fumigation	51.0
Check	No fumigation	55.0

* Experiments conducted at the U. C. Deciduous Fruit Field Station at San Jose.

** Plants showing symptoms were dug from the plots to facilitate recording.

*** The actual dosage ranged from 2.5 to 2.8 ml. per square foot.

During the second growing year—1955—the acre fumigated with chloropicrin showed exceptional vigor, and the check areas began to decline. The decline is thought to be due to the presence of root-invading fungi not related to Verticillium wilt. The yield from the fumigated acre was estimated at 33,400 pounds—16.7 tons—in contrast to an average of approximately 7.6 tons per acre for the check areas. The increase per acre attributable to the disease control and increased growth attending chloropicrin fumigation was 9.1 tons. The fumigated acre manifested exceptional vigor to the end of the second year and gave every indication of a good third year.

Since the beginning of this experiment late in 1953, considerable progress has been made in machine application of chloropicrin. Machine application may ultimately take the place of hand guns without loss in precision performance.

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