



The Backyard Orchard – Citrus Module 6.2 – Puffy Fruit, Dry Fruit & Split Fruit



LSU AgCenter Backyard Orchard Certificate
Course

Dr. Raj Singh, Dr. Ed Bush, Dr. Kiki Fontenot, Dr. Joe Willis, Anna Timmerman &
Chris Dunaway

Puffy Fruit

- Mostly a problem on young vigorous growing satsuma trees (1-5 yrs.).
- Puffy fruit on older trees are the result of fruit set on late blooms during periods of warm weather.
- Little can be done to prevent puffy fruit.
- Time, good growing conditions and proper care will help to reduce the occurrence of this condition.
- This is not a nutritional problem caused by lack of fertilizer.
- Puffing is rare in sweet oranges, limes, and lemons.



Dry Fruit

- **Overripe Fruit**

Up to a certain point, the longer citrus is left on the tree to ripen the sweeter it gets. However, leaving the fruit on the tree too long, will cause the fruit to overmature and become dry. Pick fruit as it ripens.

- **Rootstock**

Dry fruit can occur when citrus trees are grown on a vigorous rootstock.

- **Young Trees**

Immature trees often produce dry fruit during their first years of production. Some varieties such as navel oranges and tangerines may not produce juicy, sweet fruit within the first three to five years. As the tree matures, the fruit will become juicier.



Dry Fruit

- **Weather Stress**

Unseasonably warm or unseasonably cold weather while the orange tree is in fruit can be a cause dry fruit. When a tree is under stress from weather conditions, the fruit will suffer while the tree works to survive the unexpected conditions.

- **Warm Fall Temperatures**

Dry citrus fruit is also associated with a long, warm fall season. Citrus need cooling temperatures to begin the final stages of ripening. If summer temperatures last into the fall months, ripening is delayed and fruit will become overly mature inside without showing signs of ripening on the outside.

- **Frost Damage**

Frost damage on citrus fruits appears as dehydrated, dry pulp that occurs following exposure to cold temperatures. Within a few hours of a frost, the fruit's juice vesicles begin to rupture because ice crystals are forming inside them.

Dry Fruit

- **Improper Irrigation**

A lack of water can cause dry fruit. Citrus trees need deep watering--watering that saturates the soil at least 3 feet deep--regularly but infrequently. During dry times, young citrus trees should get a deep watering every five to seven days, mature trees, trees over three years old, every 14 days. To avoid over watering, allow the top inch of soil to become dry before watering again.

- **Too Much Nitrogen**

Too much nitrogen can cause dry orange fruit. This is because nitrogen will encourage rapid growth of foliage at the expense of the fruit.

Split Fruit



- In hot, dry weather, the fruit peel becomes tougher and less elastic. If the fruit begins to swell from the inside very quickly, the peel will split at the weakest point.
- Inconsistent watering, allowing a tree to get very dry, then giving it water, can cause citrus fruit to split, and is the most common cause in home gardens.
- When a citrus tree has deficiencies in potassium or calcium, the rind tends to be thinner or weaker, making it more prone to splitting.



Split Fruit



Preventing Fruit Splitting

- Consistent watering, not allowing a citrus tree to get too dry. Deep watering (3') regularly.
- Regular fertilization, ensuring that the tree is provided with all the nutrients it requires. Soil test or leaf test.



Please post all your questions and results to the message board that was emailed to you.

