

# POMEGRANATE FACT SHEET

## Cracks

Cracking of mature fruit is an important physiological disorder which causes great economic loss to pomegranate producers. It is a general problem throughout its growing areas and among all varieties worldwide.

Causes associated with fruit cracking may be improper irrigation, environmental factors, and nutritional deficiency.

Other factors associated with cracking is high evapotranspiration, low humidity, water imbalance and temperature fluctuations between night and day especially in the development stage of fruit although cracks are more evident when fruit are at maturity stage.

Cracking is caused due to a variety of factors and a combined strategy is needed to address this problem.

## Environmental factors

- Moisture imbalance in the soil
- Air humidity
- Increased air temperature
- Hot, dry winds
- Heavy rainfall following a dry spell
- Difference in day/ night temperatures
- Temperatures of above 38°C and humidity of less than 60% during rapid flesh growth

## Rainfall and irrigation

- Increased irrigation during fruit growth and development have a significant effect on reducing fruit cracking and increased yield
- Rainfall increased cracking in water stressed plants due to greater expansion in fruit aril comparing to fruit peel.

## Physiological factors

- Some cultivars with thinner skin and more aril weight ratio than skin weight was more resistant to cracking.

### **Plant nutrition**

- Combined application of boron, iron and calcium at low doses had significant effect on cracking
- Zinc and magnesium can also have positive effect.
- Humic acid and kaolin also had positive effect against cracking

### **Plant growth regulators**

- Some growth regulators in combination with moisture conservation and nutrients had a positive effect.

### **Management of fruit cracking**

- Adequate moisture during fruit growth and development is mandatory as dry conditions cause the peel to become thicker and harder and promotes cracking.
- Soil moisture conservation, make maximum use of available water by using drip irrigation, mulching, using compost and green manure and cover crops.
- Protect fruit from direct sunlight by bagging and shading.
- Use of protective sprays.