

# Georgia Pomegranate Update: 2014



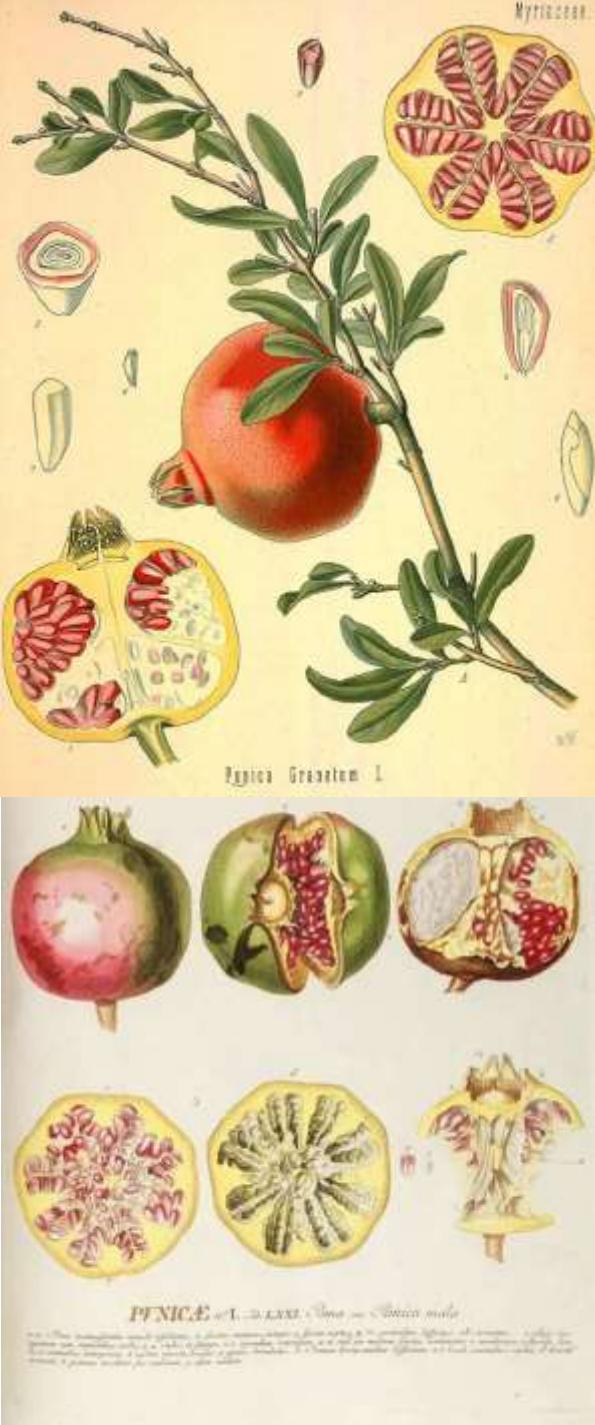
‘White Plantation’ Bland/Slightly Sweet, Soft seed, Yellowish Pink

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The University of Georgia  
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Tifton Campus  
Florida Pomegranate Association 3rd Annual Meeting  
Oct. 10, 2014



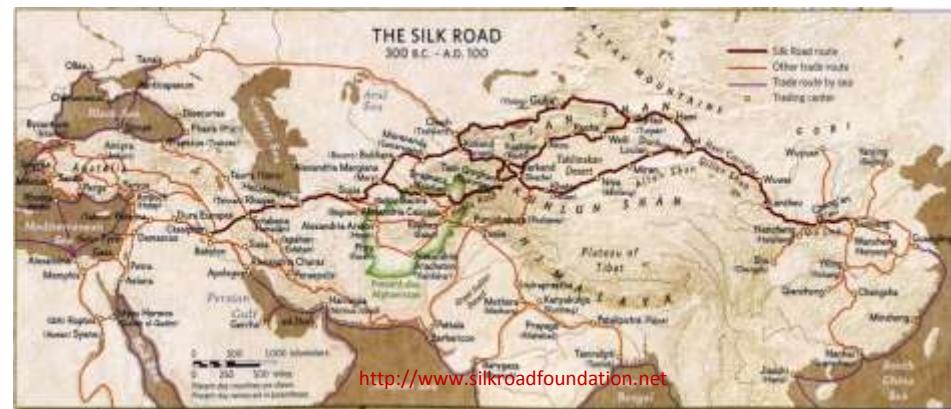
# *Punica granatum* L.

- Native Habitat from Iran to the Himalayas in Northern India
- Cultivated since antiquity throughout the Mediterranean Region of Asia, Africa, and Europe.
- *Punica* is the feminized Roman name for Carthage, *Malum punicum*, the ‘Apple of Carthage’.
- Linneaus renamed *granatum*, meaning seedy or grainy



# *Punica granatum* L.

- Pomegranate cultivation known in Persia 3000 BCE
- Phoenicians brought Pomegranate to Tunisia and Egypt by 2000 BCE
- By 100 BCE Pomegranate was cultivated in China
- 800 CE pomegranate was spread throughout the Roman Empire and Iberia
- First evidence in the New World, early 1700's in Spanish Florida and English Georgia



<http://www.silkroadfoundation.net>

# *Punica granatum* L.

- The Gods Must Be Crazy
- Arabic – rumman
- Hebrew – rimmon
  - Both mean ‘Fruit of Paradise’
- Greeks – the “fruit of the dead”; provides sustenance to the residents of Hades.
- Symbolizes
  - Love, immortality, fecundity, prosperity



<http://www.smith.edu/jewishstudies>



Hades abducting Persephone (Vegetation goddess) by luring her with pomegranate seeds



# **Punica granatum L.**

- Biblical *Song of Songs*,
  - Sheba ecstatically replies to Solomon's blandishments: "Let's us get up early to the vineyards; let us see if the vine flourish, whether the tender grape appear, and the pomegranates bud forth: there will I give thee my love."
  - Solomon in reply describes Sheba as a garden whose "plants are an orchard of pomegranates" further "As a piece of a pomegranate are thy temples within thy locks."
  - Sheba say she wants Solomon to drink "the spiced wine of the juice of my pomegranate."



# *Punica granatum* L.

- Fruit Characteristics (Taste, Seed, Aril Color)
  - *Jimmy*: Sweet/Juicy, Soft Seed, Yellowish/Pink/Red
  - *Lester*: Sweet/Sugar Cane, Fairly Soft, Y/P/R
  - *JC*: Slightly Sweet, Fairly Soft, Y/P/R
  - R6 *Al-sinar-nar*: Sweet/Tart, Hard, Y/Orange/R
  - R8 *Salavatski*: Tart, Fairly Soft, Y/P/R
  - R16 *Kara bala miursal*: Sweet, Fairly Soft, Y/Orange/R



# *Punica granatum* L.

- R19 *Nititski ranni*: Tart, Hard, Red
- R25 *Bala Miursal*: Sweet/Tart, Slightly Hard, Y/R/G
- R26 *Afganski*: Sweet, Soft Greenish/Red/Yellow
- R30 *Kazake*: Sweet/Tart, Hard, Y/Lt Red
- R33 *Surh-anor*: Slightly Tart, Hard, Y/Lt Green/R



# *Punica granatum* L.

- 2013 Harvest Don Wade's Farm: a day at the fishhouse 9/9/2013
  - Accessed:

Code	Assessment Name	Taste	Seed	Skin Color
R-6*	Al-sirin-nar	Sweet/Tart	Hard Seed	Yellowish/Orange Red
R-16*	Kara bala miursal			
R-19*	Nititski ranni	Tart	Hard Seed	Red
R-25*	Bala Miursal	Sweet/Tart	Slightly Hard Seed	Yellowish/Red/Green
R-26*	Afganski	Sweet	Soft Seed	Red
R-30*	Kazake	Sweet/Tart	Slightly Hard Seed	Yellowish/Red/Green
R-33*	Surh-anor	Slightly Tart	Hard Seed	Yellowish/Lt Green Red

\*Harvested 2013 & 2014



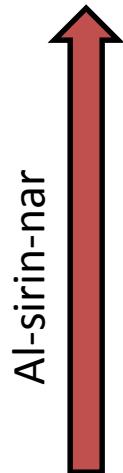
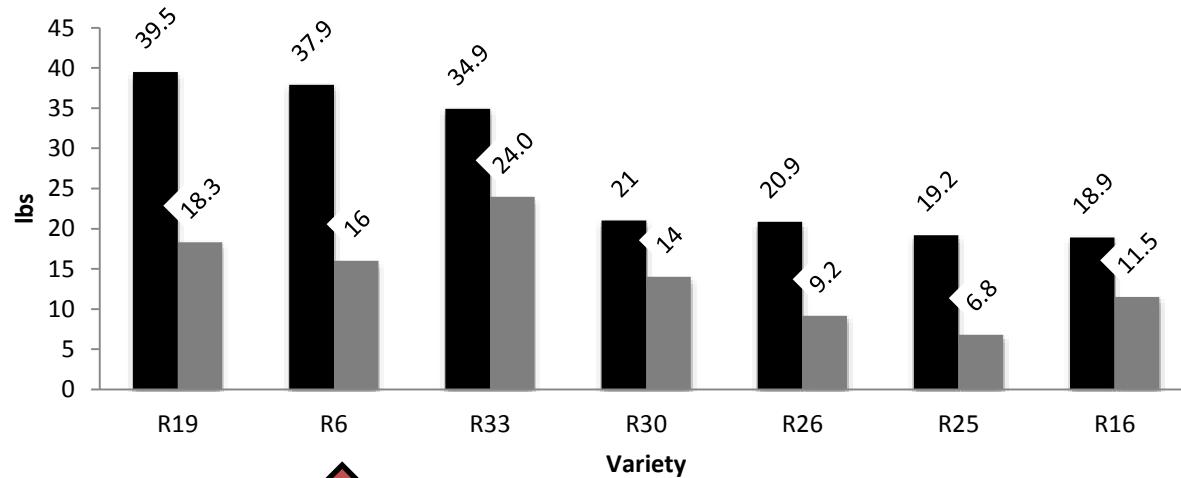
# *Punica granatum* L.: Alma Harvest

- Single Harvest – third leaf
- Minimum: 9” diameter fruit
- Weight calculated on per tree
- Postharvest:
  - Fresh marketable separated from total harvest (lb)
    - Sunscald, damage, decay, blemish
  - Fruit peeled and arils sensory evaluated
    - 11 people tasted fruit

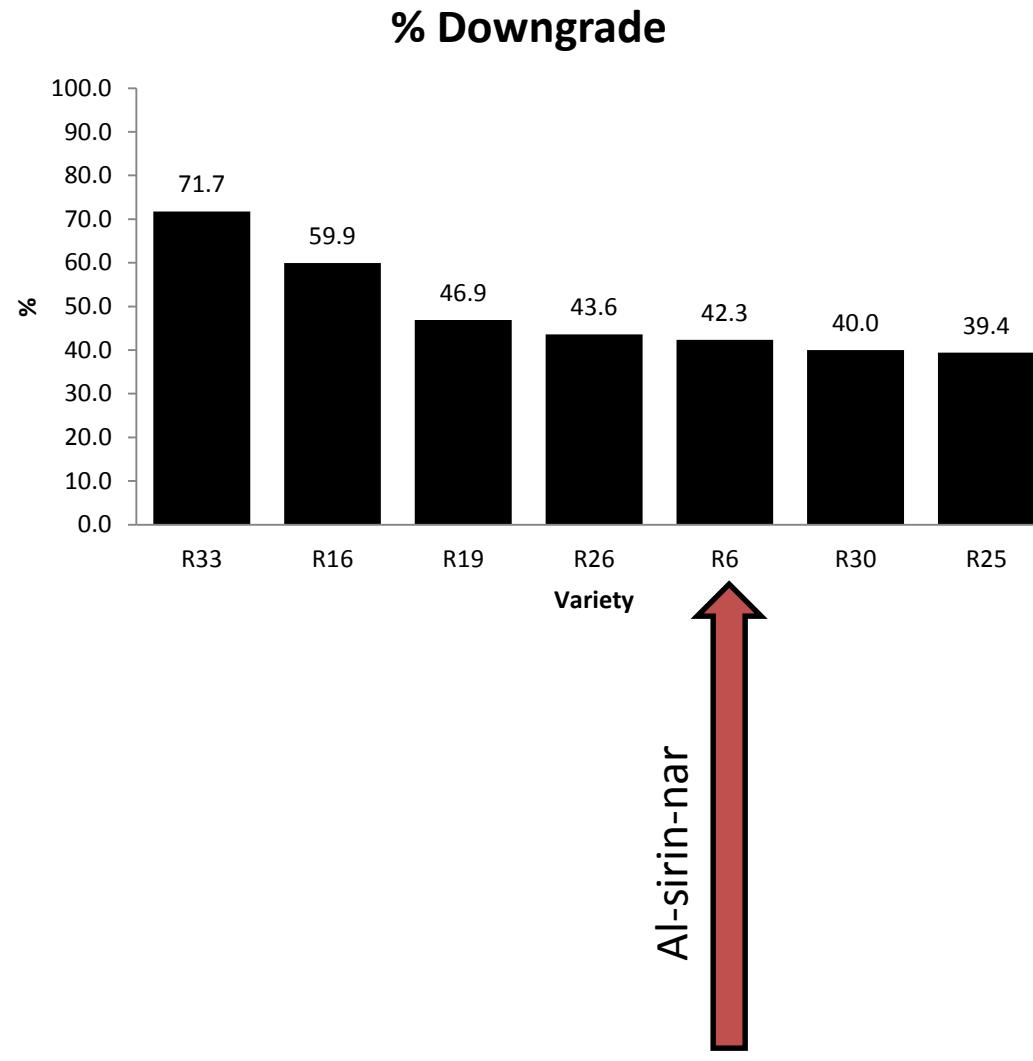


# *Punica granatum* L. Alma Harvest 2013

Fresh and Processed Marketable Fruit  
Comparison in lbs

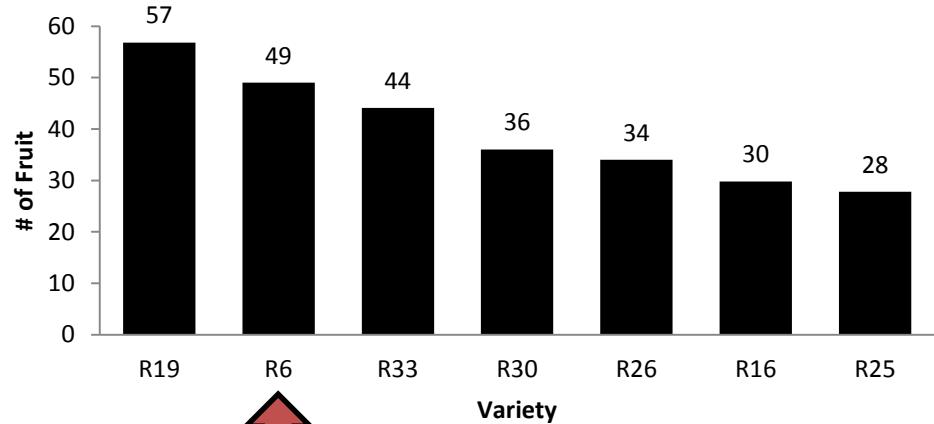


# *Punica granatum* L. Alma Harvest 2013

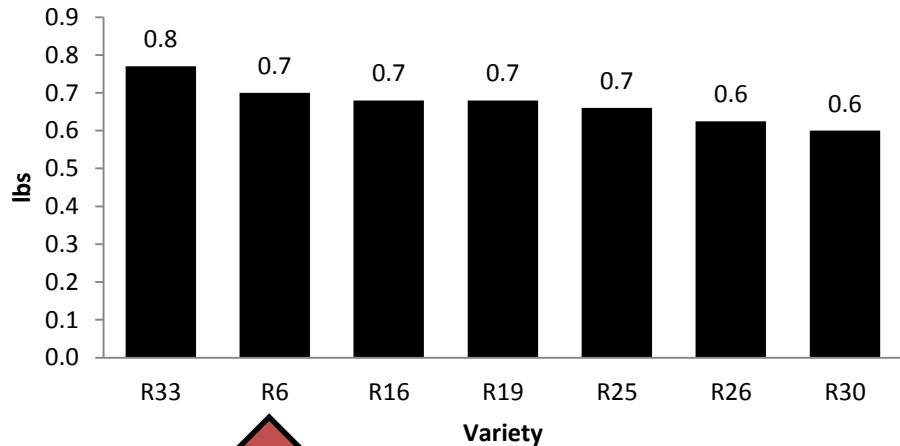


# *Punica granatum* L. Alma Harvest 2013

Average Fruit per Tree



2013 Average Weight per Fruit in lbs

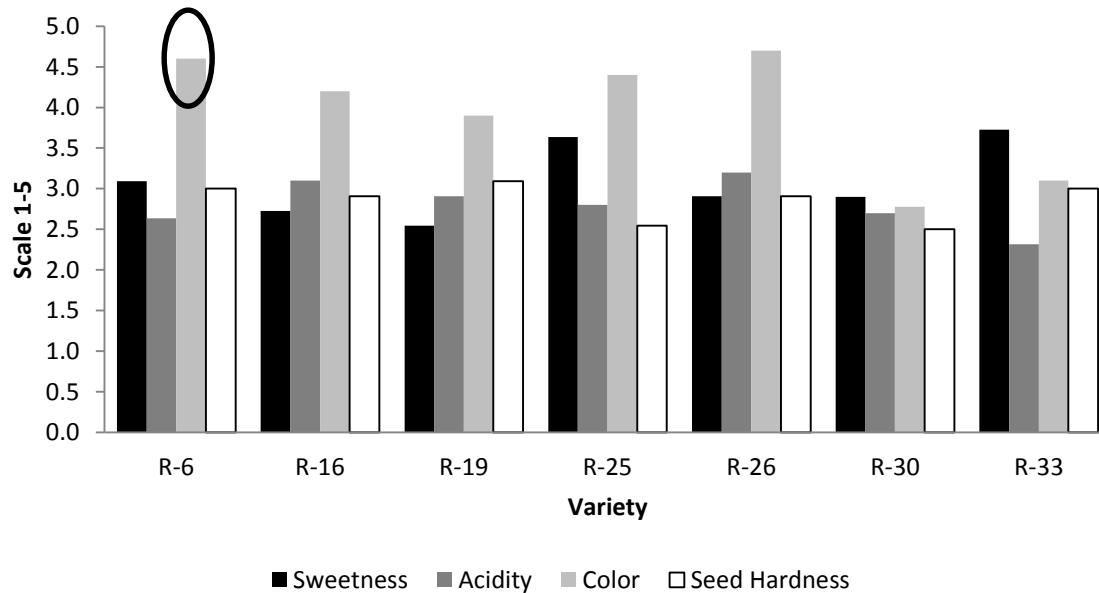


Al-sirin-nar



# *Punica granatum* L. Alma Harvest

2013 Sensory Analyses



## Sensory evaluations of pomegranate varieties

*Rating scales:*

- |               |                                  |
|---------------|----------------------------------|
| Sweetness     | 1 = very sweet, 5 = not sweet;   |
| Acidity       | 1 = very acidic, 5 = not acidic; |
| Color         | 1 = white, 5 = dark red;         |
| Seed hardness | 1 = very hard, 5 = very soft.    |

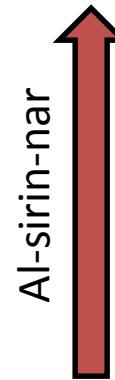
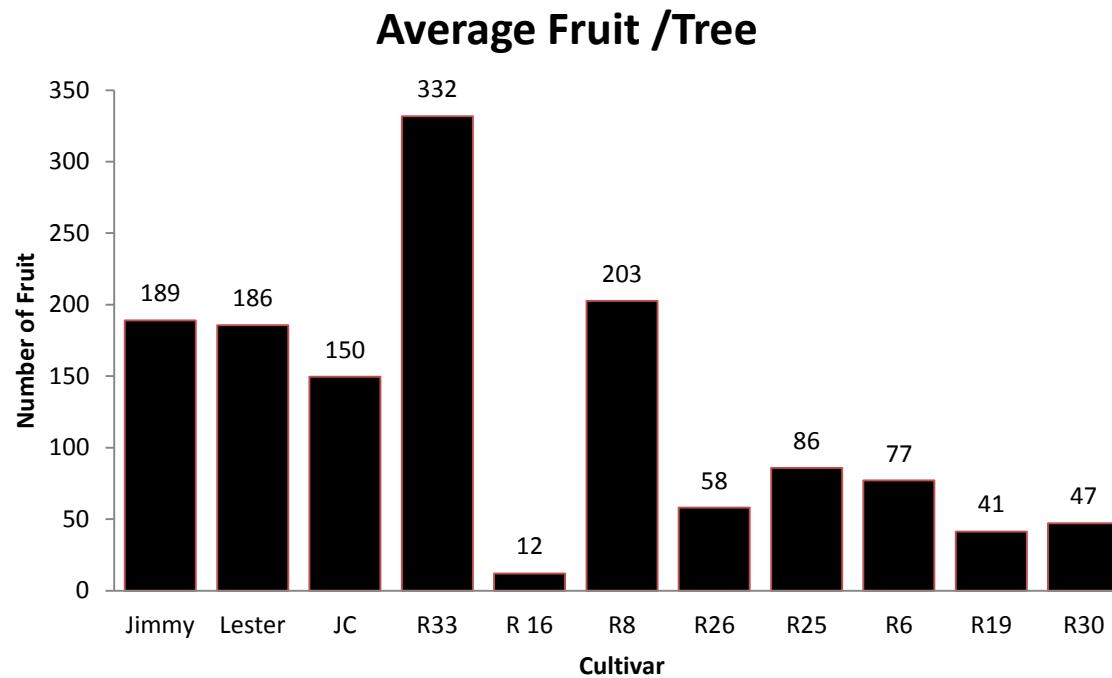


# *Punica granatum* L. Alma Harvest 2014

- Harvest on September 24, 2014 @ Don Wade's Farm
  - Cultivars harvested # of trees Leaf
    - Jimmy 5 6
    - Lester 5 6
    - JC 5 6
    - R6 Al-sinar-nar 5 4
    - R8 Salavatski 5 4
    - R16 Kara bala miursal 5 4
    - R19 Nititiski ranni 5 4
    - R25 Bala Miursal 5 4
    - R26 Afganski 5 4
    - R30 Kazake 5 4
    - R33 Surh-anor 10 6&4
- Total Harvest 4946.5 lb



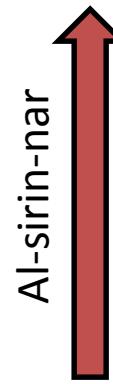
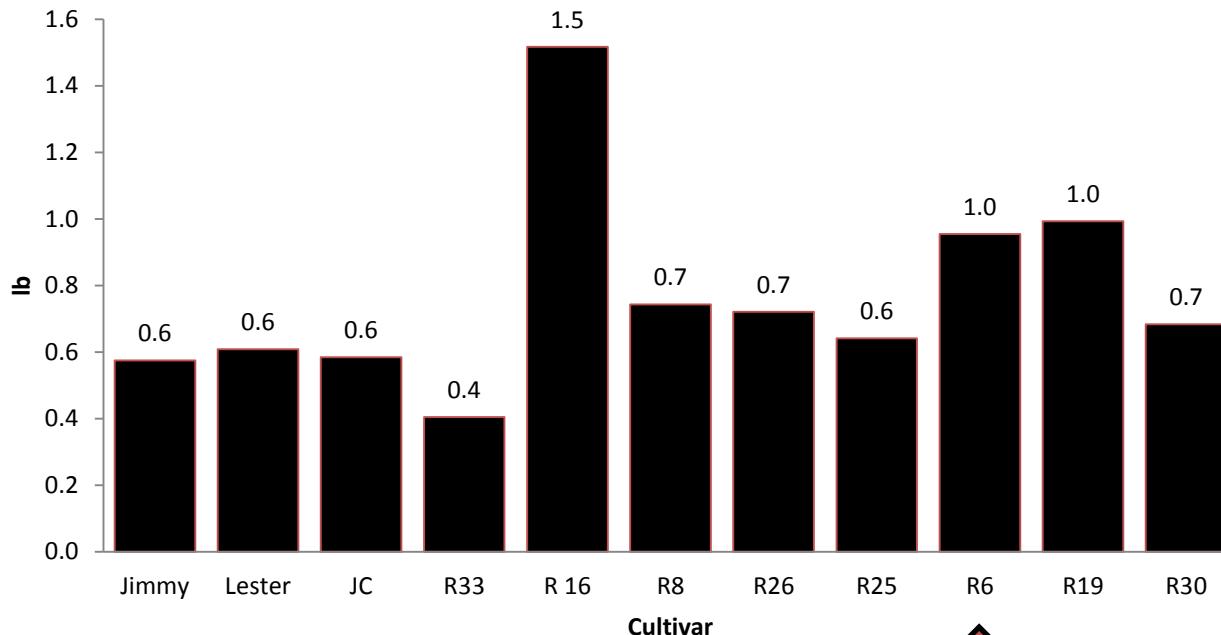
# *Punica granatum* L. Alma Harvest 2014



# *Punica granatum* L. Alma Harvest

## 2014

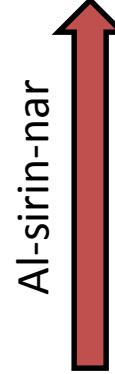
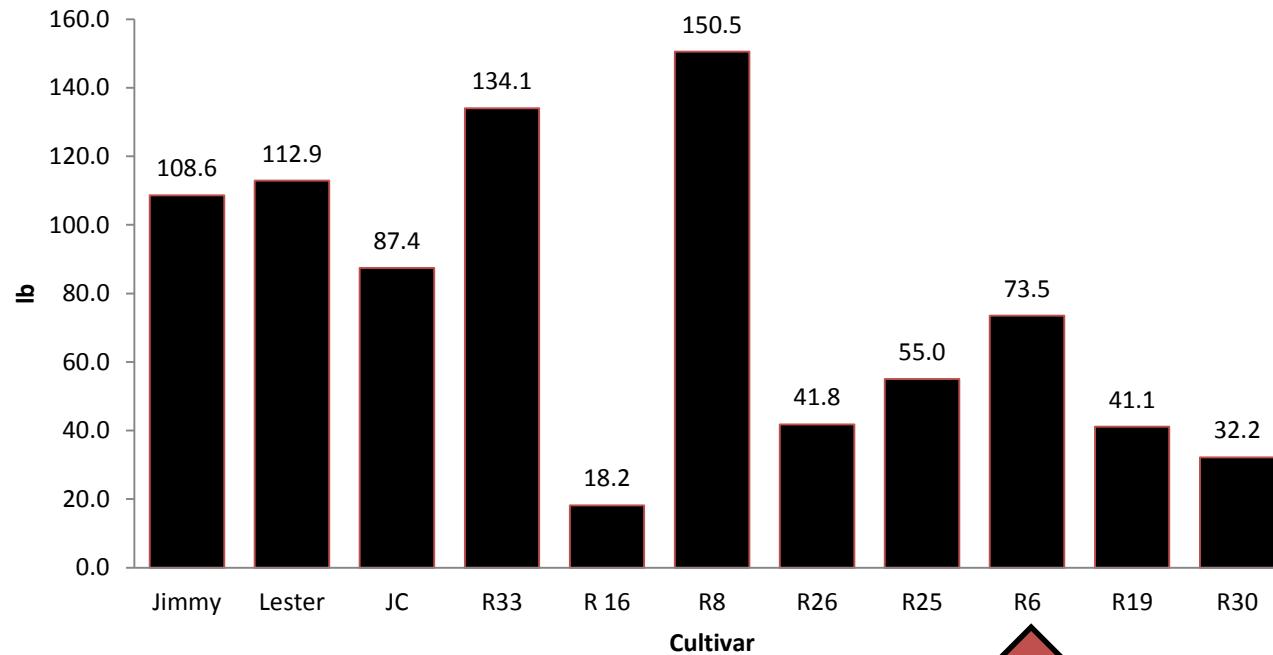
### Average Fruit Weight



# *Punica granatum* L. Alma Harvest

## 2014

Average Fruit Weight/Tree



*Punica granatum* L. cv. Lester



*Punica granatum* L. cv. JC



*Punica granatum* L. cv. Jimmy



*Punica granatum* L. cv. R 26 Afganski



*Punica granatum* L. cv. R 25 *Bala*  
*Miursal*



*Punica granatum* L. cv. R 6 Al-sinar-nar



*Punica granatum* L. cv. R 16 Kara bala  
miursal



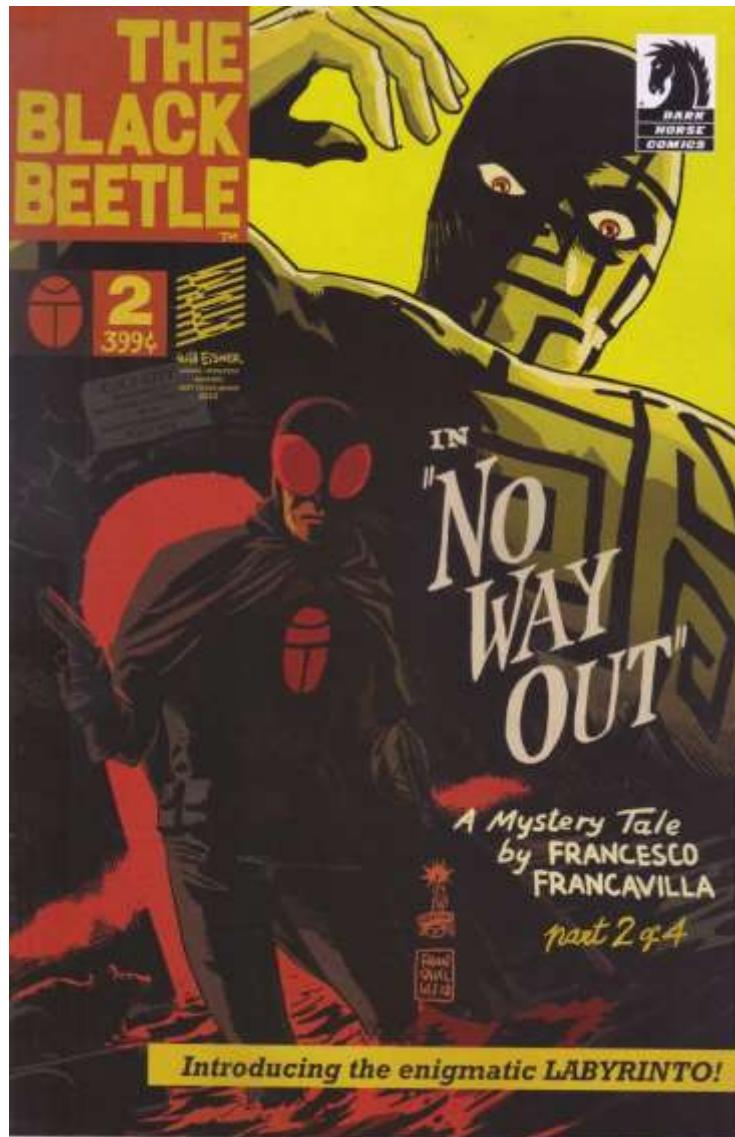
*Punica granatum* L. cv. R 30 Kazake



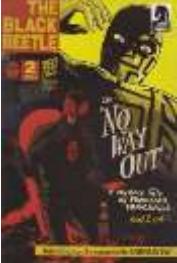
*Punica granatum* L. cv. R 33 Surh-anor



# *Punica granatum* L.



# *Punica granatum* L.



5460806



UGA5209014

Black Twig Borer  
*Xylosandrus compactus* (Eichhoff, 1875)  
<http://www.insectimages.org>



# *Punica granatum* L.



UGA2166001

UGA2165096



European shot-hole borer

*Xyleborus dispar* (Fabricius, 1792)

<http://www.insectimages.org>



# *Punica granatum* L.



European shot-hole borer  
*Xyleborus dispar* (Fabricius, 1792)  
<http://www.insectimages.org>



Black Twig Borer  
*Xylosandrus compactus* (Eichhoff, 1875)  
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# *Punica granatum* L.



European shot-hole borer  
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Black Twig Borer  
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# *Punica granatum* L.



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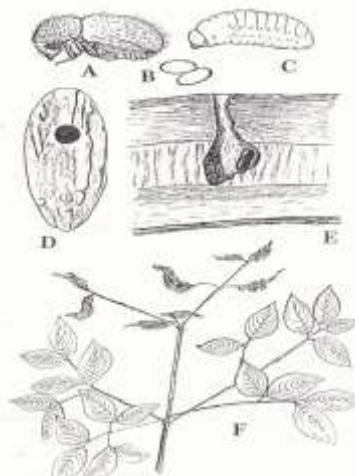
# Punica granatum L.



European shot-hole borer  
*Xyleborus dispar* (Fabricius, 1792)  
<http://www.insectimages.org>



Black Twig Borer  
*Xylosandrus compactus* (Eichhoff, 1875)  
<http://www.insectimages.org>



Black Twig Borer. A, Female. B, Eggs of the closely related and slightly larger *Xylosandrus germanicus*. C, Typical scoytid larva. D, Entrance hole. E, Gallery in small twig with a female. F, Wilted foliage of dogwood killed by black twig borers.

## Damage:

- Early spring females bore into, generally, young pencil sized limbs and bore galleries to lay eggs
- Males are wingless and spend their entire lives inside woody material
- Females need not mate to lay eggs
- Once eggs are laid, the female will inoculate the gallery with fungus for the young to feed upon

## Control:

- Pyrethroids can control beetles if in contact with the product
- However, if in the plant forget it!
- Best practice is to prune out and destroy infested material (minimum of 4" from the hole)
  - BURN THE PRUNINGS!

# Thank You

- Acknowledgements
  - Don Wade and the Georgia Pomegranate Association
  - Joe Peavy, Wade Nursery, Harvest 2014
  - Dr. Juan Carlos Diaz-Perez
  - Dr. Jim Dutcher, Dept. of Entomology UGA Tifton
  - Participants of the 2013 Georgia Pomegranate Meeting