

## Diversity of Bottle gourde (*Lagenaria siceraria*): Phenotypic characterization and valorization

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### INTRODUCTION

Bottle gourd (*L. siceraria* (Molina) Standl.) also known as calabash gourd or white flowered gourd, is a member of the Cucurbitaceae family. The seeds of the crop have been reported to contain high levels of oil.

Used as containers, bowl, music instrument, decorative purposes or in some cases, fishing floats. Commonly used in medicine because of its nutritional properties.

*Lagenaria* is an interesting plant species with capacity to tolerate adverse environmental conditions (water stress) and with remarkable nutritional qualities.

Unfortunately, in Tunisia, *L. siceraria* is a neglected underutilized species despite its beneficial characteristics.

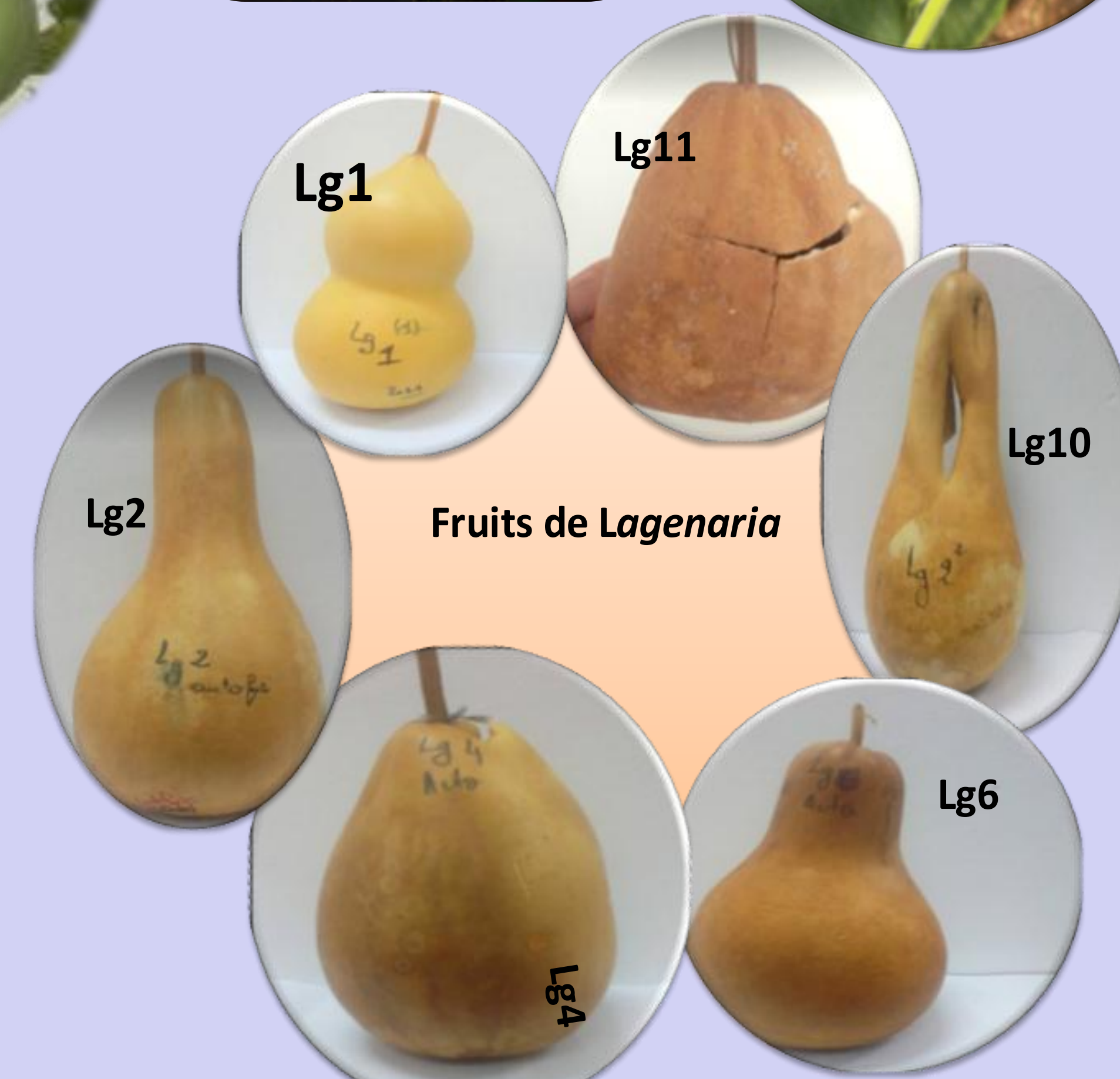
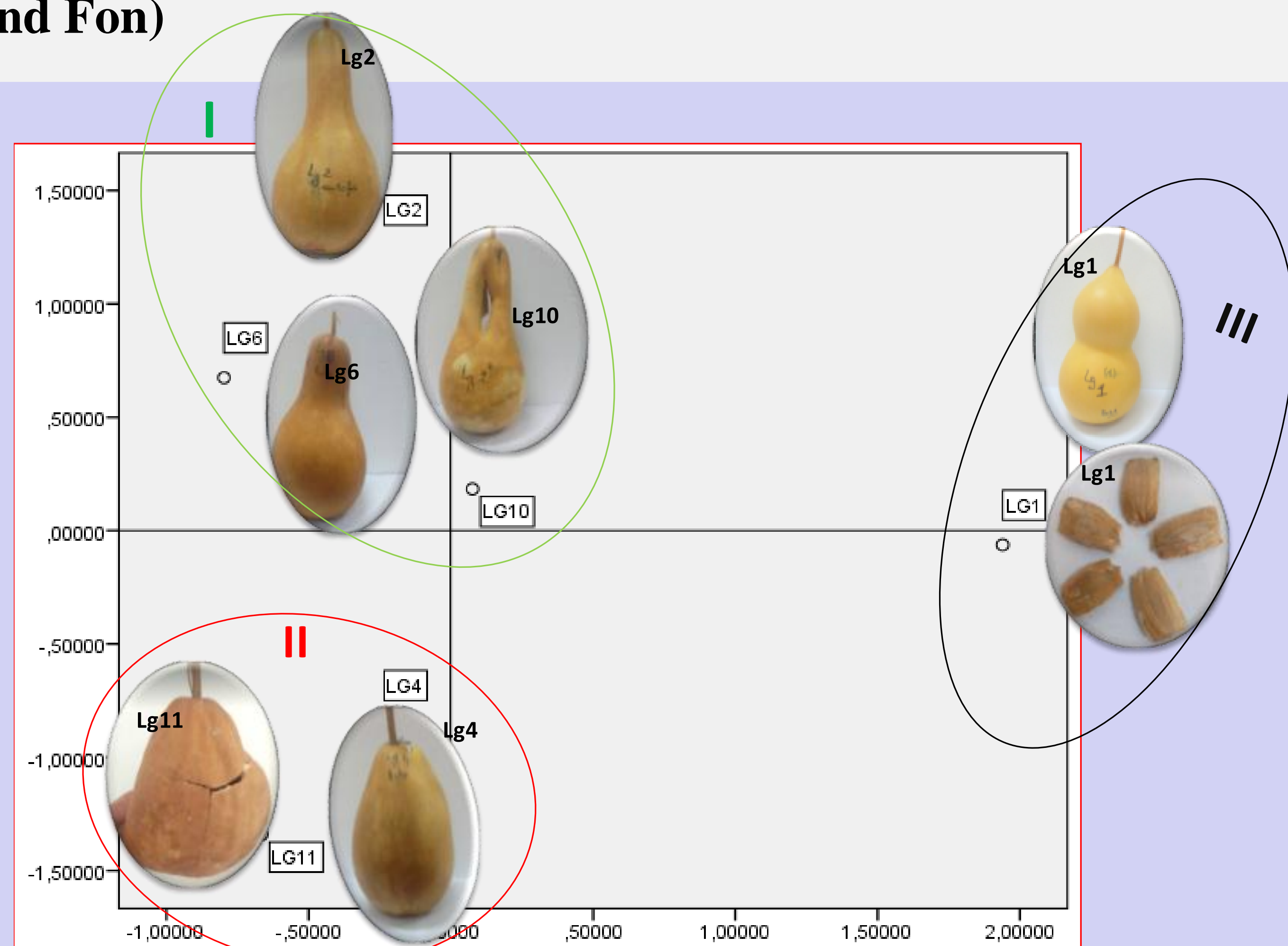


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The objective of the present study was to **collect** and **characterize** bottle gourde landraces, for future **valorization**

### MATERIAL AND METHODS

- Morphological characterization (Leaf, flower, fruit and seeds)
  - Fruit : shape, length, neck shape and length
  - Seed: color, length, width, 100 seed weight
- Screening for fungal disease resistance (Fusarium wilt: Fom and Fon)



Fruits de *Lagenaria*

### RESULTS

➤ PCA allowed distinguishing 3 groups:

The 1<sup>st</sup> contains the Lg2, Lg6, and Lg10 accessions characterized by obovate-shaped fruits with a cylindrical neck, beige and brown seeds, and a sweet taste.

The 2<sup>nd</sup> contains Lg4 and Lg11 accessions, with the main character of obovate fruits without a neck, small seeds often beige with a sweet taste.

The 3<sup>rd</sup> grp included only the Lg1 accession characterized mainly by round-shaped fruits and a globular neck, a vigour root system architecture, and large-sized seeds of light brown color with bitter-tasting.

➤ All the evaluated landraces were resistant to FOM and FON and could be utilized as resistant rootstocks



### CONCLUSION

We highlight the significance of Tunisian bottle gourd genetic resources as a valuable genetic reservoir and emphasize the need to develop strategies for their conservation and valorization as rootstocks, for melon and watermelon, resistant to Fusarium wilt.