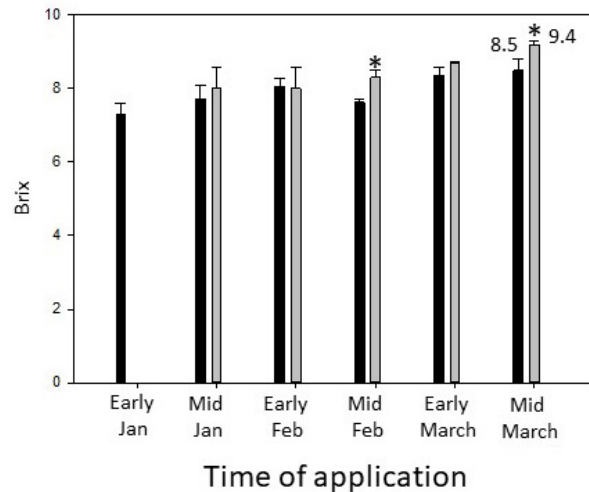


# Brassinosteroids and Fruit Quality and Yield

**Researchers:** Fernando Alferez, Divya Aryal

**Contact:** Fernando Alferez,  
[alferez@ufl.edu](mailto:alferez@ufl.edu)

UF/IFAS SWFREC



**Summary:** There are some indications that brassinosteroids (Brs) may advance commercial internal maturity by almost one month in ‘Valencia’ sweet orange, depending on the time of application. However, the best time of application in this variety and other sweet orange varieties like ‘Hamlin’, still needs to be determined, so this treatment can become economically feasible. We are working to determine how Brs treatment influences internal maturity in ‘Hamlin’ and ‘Valencia’ sweet orange varieties during fruit

maturation, with the aim of finding the ideal maturation stage for applying the hormone and obtain the best sugar to acid ratio. Our results for the first season show that in ‘Hamlin’, Br application increased sugar-acid ratio from 9 to 12 by early December. We also found a higher fructose content in juice from Brs-treated fruit. In ‘Valencia’ fruit, by harvesting in March, °Brix in controls was 8.5, whereas in Brs-treated fruit it was 9.4. We also found an increase in yield after Brs treatment between 9% and 29%

depending on the time of application. This needs to be refined to achieve the best results.

## Take Home Message:

- Brs improve internal fruit quality by increasing sugar-acid ratio in juice. The best timing to achieve maximum results appear to be closer to harvesting, but this needs to be confirmed.
- Brs induce accumulation of certain sugars in the juice.
- Brs increased yield in ‘Valencia’.

## Funding:

