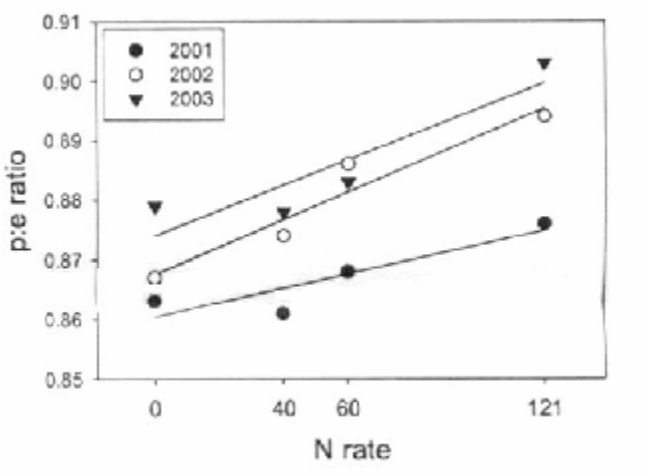
NITROGEN APPLICATION AFFECTS FRUIT SHAPE

Study partially funded by TCPB

A problem sometimes found in Valley citrus is fruit elongation, or an increase in the length from top to bottom compared to the central diameter. Sometimes this phenomenon can become so severe that it results in a condition known as sheepnosing which reduces the quality and value of the fruit. There are a number of ideas about what causes this to happen, but little data had been available so far to support these ideas.

A study has been underway since 2001 to evaluate various aspects of citrus fertilization, including rate of N application. Rio Red grapefruit yields in this study have increased with increasing rate of N applied up to ab4ut 60 lbs N/acre, but then remained unchanged at higher N rates. However, increasing N application also increased elongation as demonstrated by the increase in the polar to equatorial (p:e) ratio as shown in the figure. This pattern continued at rates up to 121 lbs N per acre, the highest rate applied in this study. This suggests that while excess N application has no beneficial effect on increasing yield, it can have a detrimental effect by affecting fruit shape.



Proper fertilization now becomes alt the more important. Too little N results in lost production. Too much, however, results in unnecessary expenses, contamination of runoff going into the Arroyo Colorado and the Laguna Madre, and poorer fruit quality.

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