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Response of Micro-Tom to Low Light

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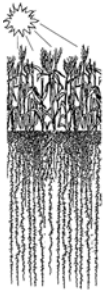
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RESPONSE OF MICRO-TOM TO LOW LIGHT

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Yield is proportional to light absorption, but maximum light cannot always be supplied to crops in either space station production settings or in teaching situations. It is therefore important to determine how crops grow in light-limited conditions. 'Micro-Tom' tomato was grown in fluorescent light under shade cloth to provide 100, 200, and 300 $\mu\text{mol m}^{-2} \text{s}^{-1}$ for 16-h photoperiods at 26/22 °C for 117 days.

Yield and harvest index increased as light

increased. There were significant amounts of unripe fruit after 117 days. During ripening, the fraction of dry matter decreases within the fruit.

The higher yield was likely due to better fruit set in higher light, as evidenced by higher numbers of fruit with additional light. Higher light did not influence ripening, and the fraction of red fruit stayed constant with all light. 'Micro-Tom' was able to set and ripen fruit even at extremely low light levels.

