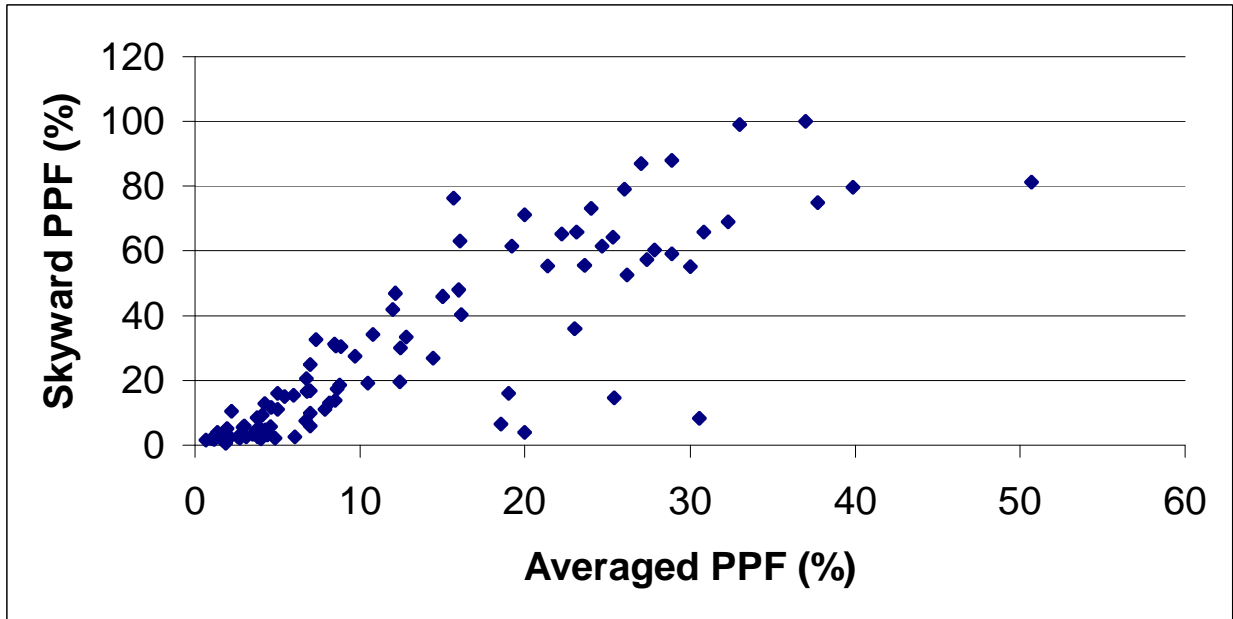
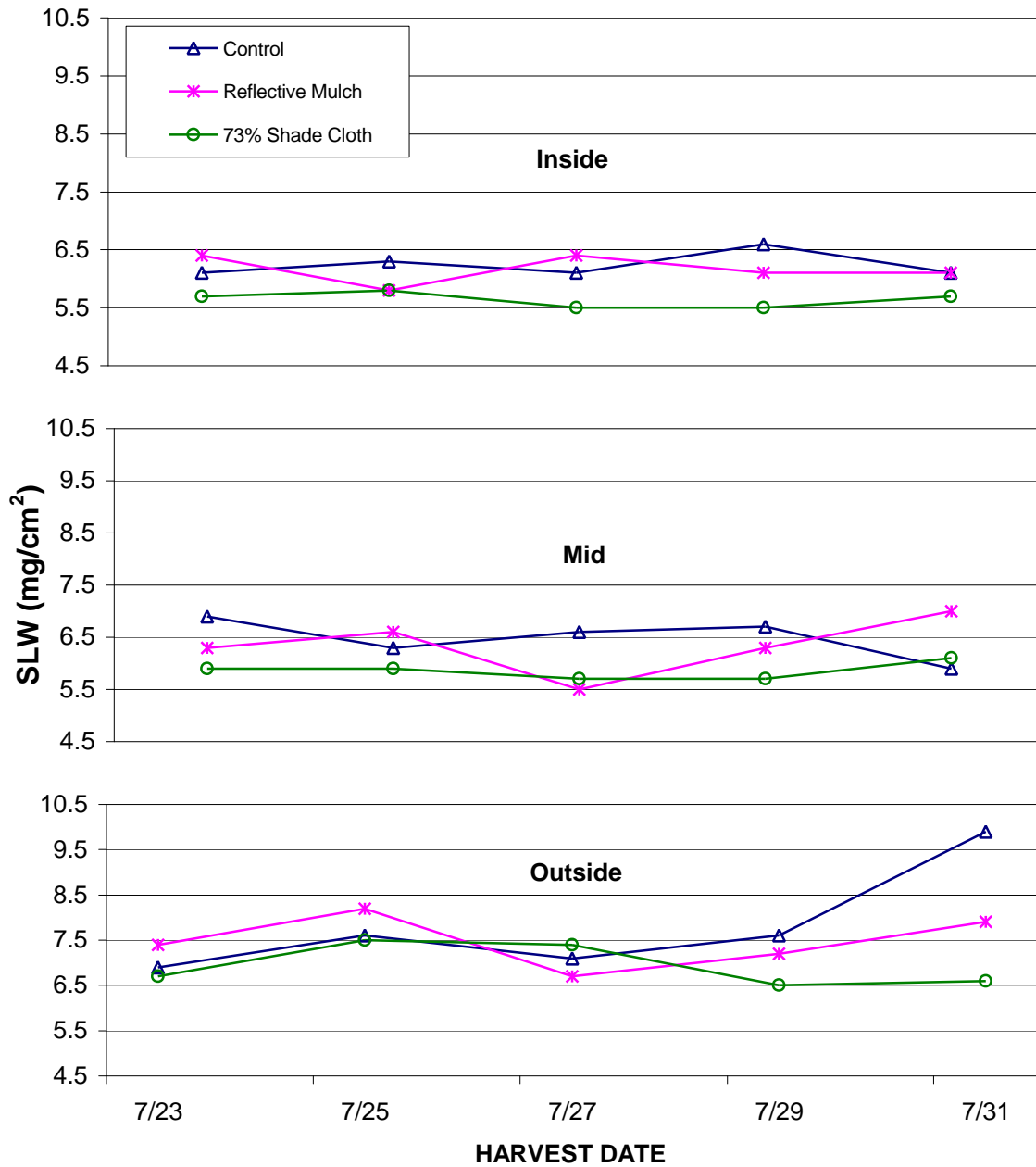


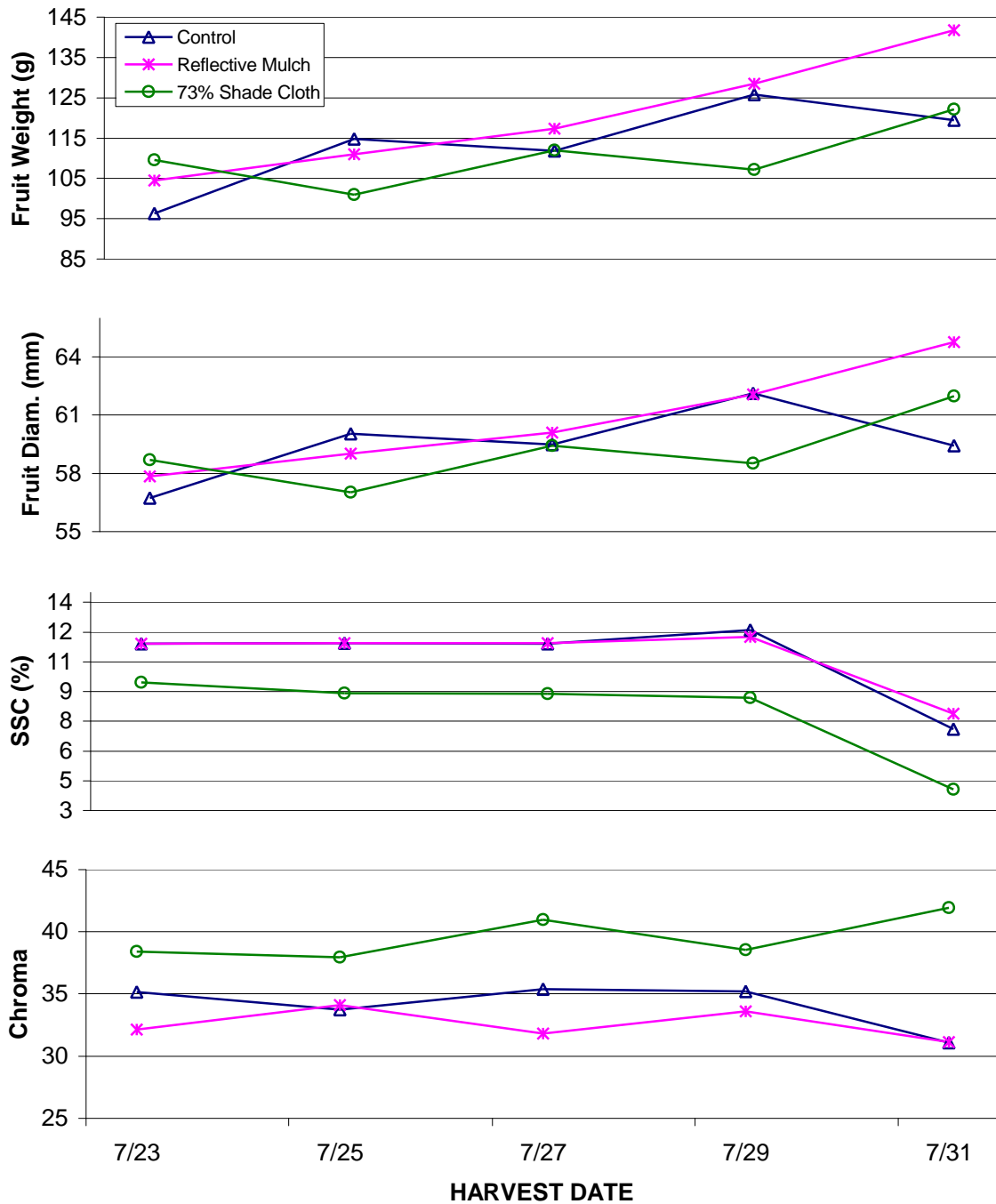
**Figure 1.** Representation of a color solid for L\* a\* b\* color space. (Minolta, 1994).



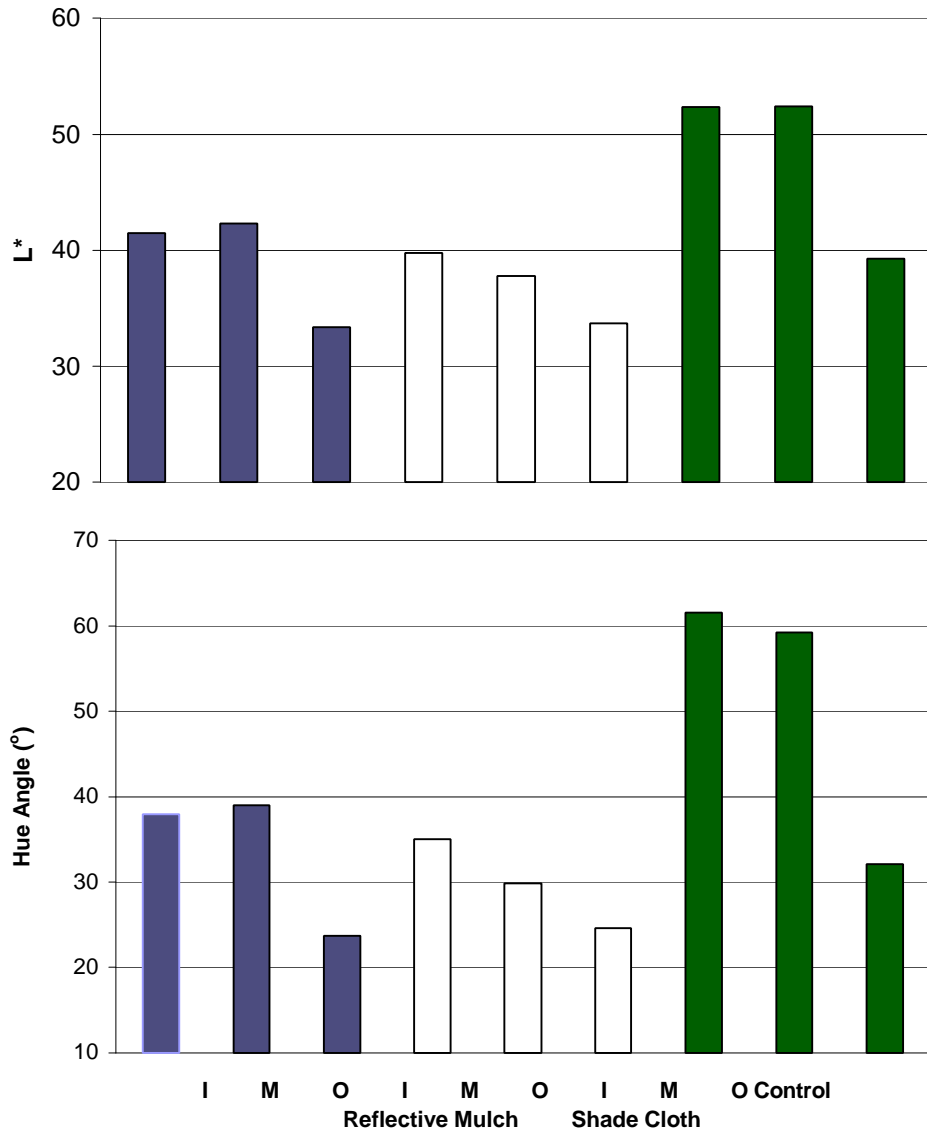
**Figure 2.** The relationship between two methods of measuring photosynthetic photon flux (PPF) intercepted by a fruit. The percentage PPF as viewed on the x-axis was an average of six measurements (top, bottom, north, east, south, and west) for each fruit, while the y-axis is the percent PPF measured from the top of each fruit



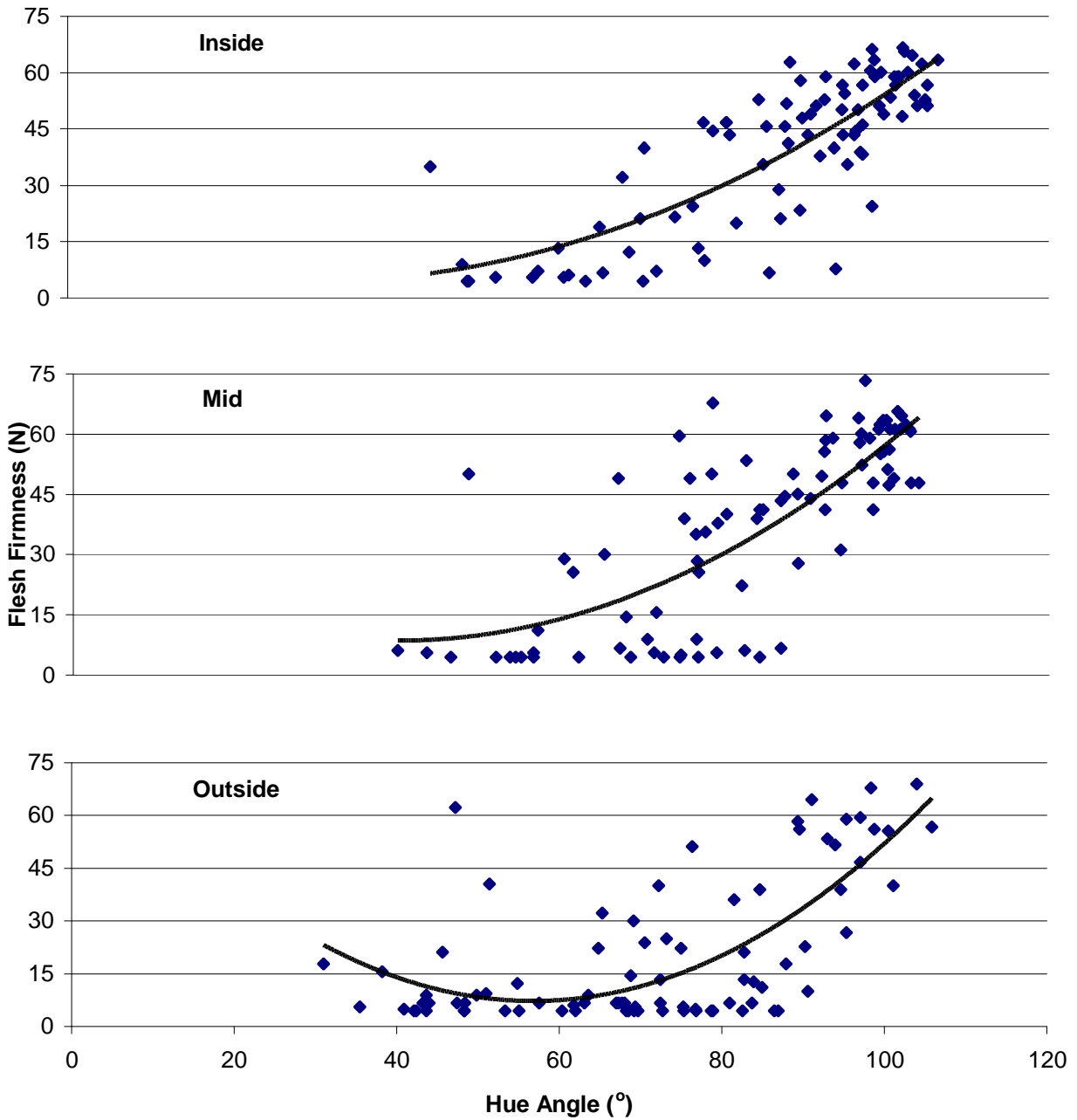
**Figure 3.** Specific leaf weight (SLW) of leaves harvested next to fruits developing at the outside, mid, and inside of ‘Norman’ peach trees on five harvest dates.



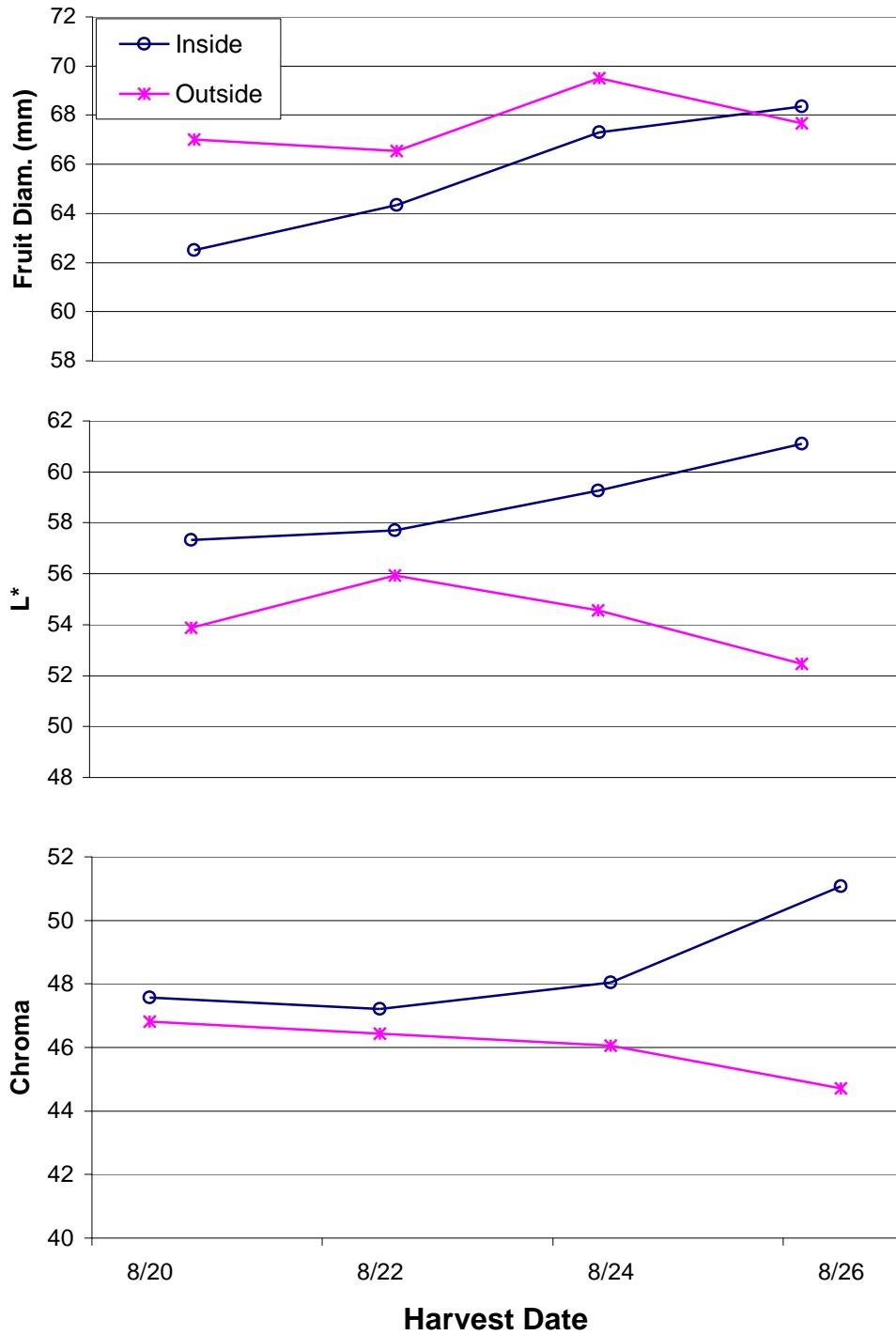
**Figure 4.** Fruit weight, fruit diameter, soluble solids concentration (SSC), and chroma measured on the blush side of the fruit for ‘Norman’ peaches harvested on five dates from trees receiving three treatments that provided a range of light interception to the fruit.



**Figure 5.** L\* values and hue angles measured on the blush side of ‘Norman’ peaches. Fruit were harvested from the inside (I), mid (M), and outside (O) of the canopy from control, reflective mulch-treated, and shaded trees. L\* = lightness; hue angle = arctangent  $b^*/a^*$ , where  $0^\circ$  = red-purple and  $90^\circ$  = yellow.



**Figure 6.** Relationship between flesh firmness and hue angle measured on the non-blush side of ‘Norman’ fruit. Fruit were harvested from control trees, trees with reflective mulch on the ground, and trees covered with 73% shade fabric. Hue angle = arctangent  $b^*/a^*$ , where  $0^\circ$  = red-purple,  $90^\circ$  = yellow, and  $180^\circ$  = bluish-green. Inside ( $y = 0.01x^2 - 0.60x + 13.42$ ,  $R^2 = 0.65$ ), Mid ( $y = 0.01x^2 - 1.08x + 30.22$ ,  $R^2 = 0.60$ ), Outside ( $y = 0.024x^2 - 2.72x + 84.62$ ,  $R^2 = 0.50$ ).



**Figure 7.** Fruit diameter, and L\* and chroma values on the blush side of the fruit for 'Cresthaven' peaches harvested on four dates from the inside and outside of the canopy.

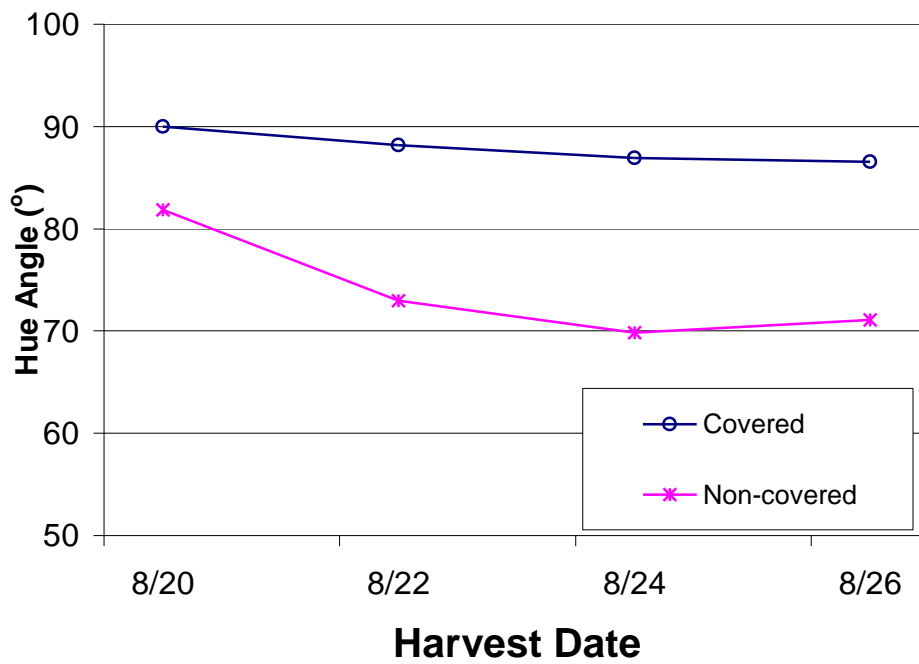
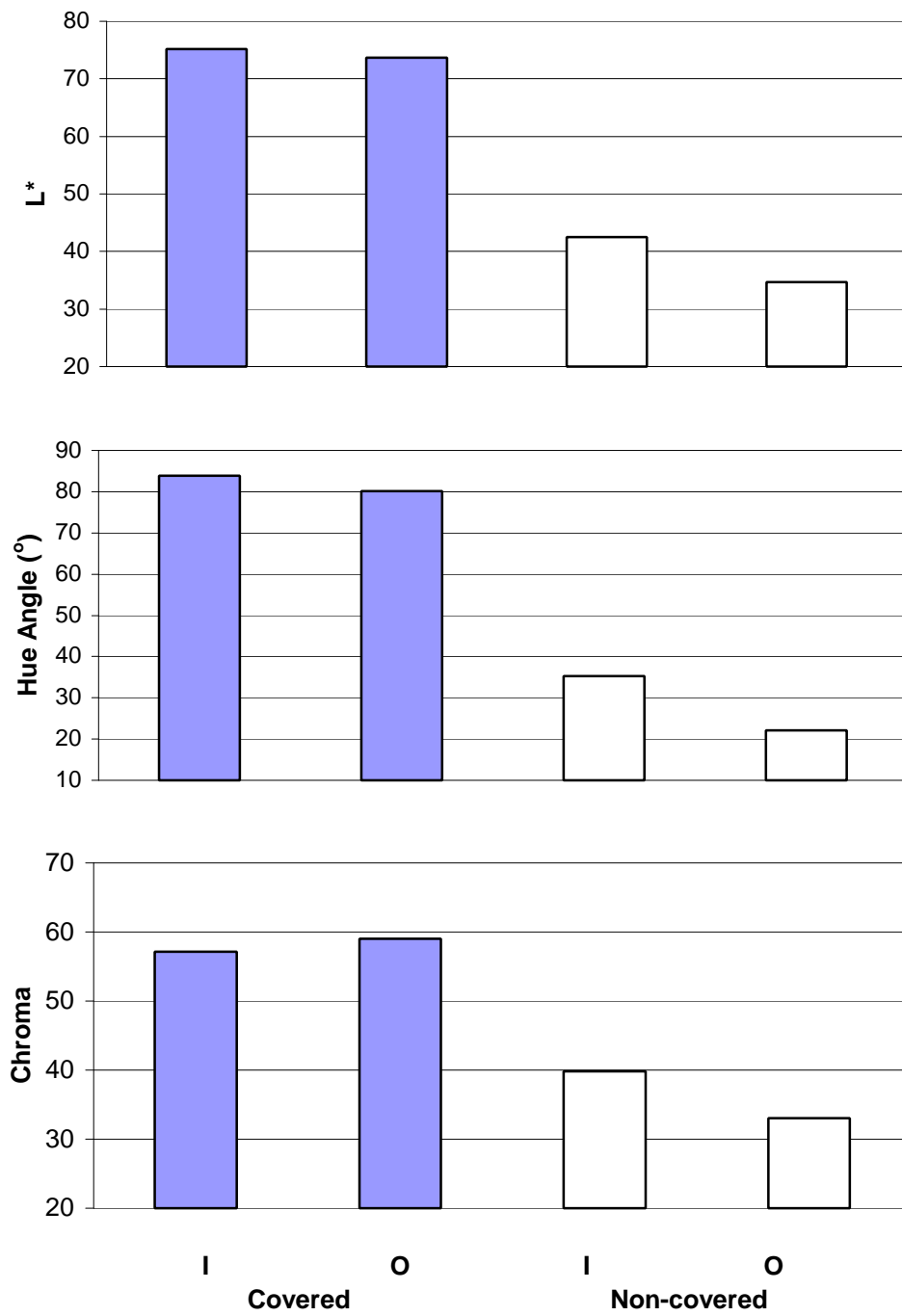
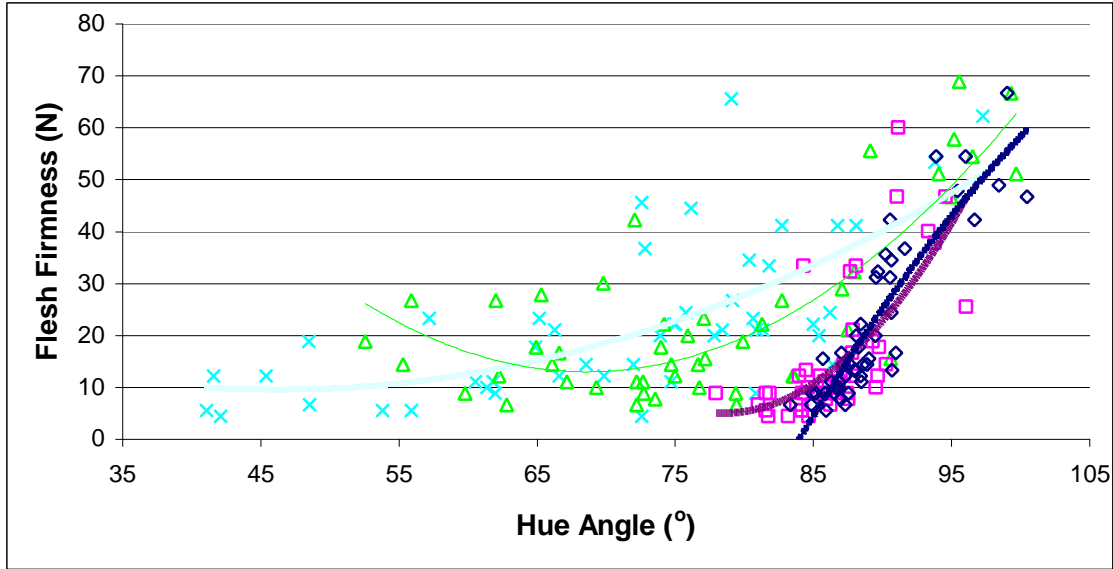


Figure 8. Hue angle (non-blush side) of fruit for 'Cresthaven' peaches harvested on four dates. Fruit were either covered with foil or non-covered.





**Figure 9.** L\* values, hue angles, and chroma values measured on the blush side of ‘Cresthaven’ fruit harvested from the inside (I) or outside (O) of the canopy with fruit either being covered or non-covered with aluminum foil.



**Figure 10.** The relationship between flesh firmness and hue angle measured on the non-blush side of ‘Cresthaven’ peaches. There was a 2x2 factorial treatment structure, where fruit from the inside or outside of the canopy were either covered or non-covered with aluminum foil 21 days before harvest. ~~~X~~~ = Non-covered/Outside ( $y = 0.016x^2 - 1.47x + 43.50$ ,  $R^2 = 0.45$ ),  $\text{---}\Delta\text{---}$  = Non-covered/Inside ( $y = 0.051x^2 - 7.048x + 254.7$ ,  $R^2 = 0.68$ ),  $\text{---}\square\text{---}$  = Covered/Outside ( $y = 0.14x^2 - 21.19x + 837.02$ ,  $R^2 = 0.50$ ),  $\text{---}\diamond\text{---}$  = Covered/Inside ( $y = 3.66x - 305.11$ ,  $R^2 = 0.80$ ).

## **Vita**

Kara Annamarie Senger Lewallen was born on 15 May 1977 in Harrisonburg, Virginia. She received her primary and secondary education in the Augusta County Public School System. In fall 1997 she entered Virginia Polytechnic Institute and State University (VPI&SU), after transferring from Bridgewater College in Bridgewater, Virginia. She received a Bachelor of Science in the Science Option of Horticulture in May 1999. Kara continued her education at VPI&SU and was granted her Master's of Science in Horticulture in May 2000.