## Characterization of laser irradiation dosage on strawberry runners

D. Soto, T. Starling, J. Jaime, S. Klosterman, P. Henry, M. Ahmadi, G. Kondo, J. Lin

The effects that red (639 nm), green (520 nm), blue (445 nm), and white laser irradiation has on strawberry plant runners (for reference, white laser is a combination of red, green, and blue lasers) are shown in Figures 1 and 2 below. The findings are used to apply appropriate irradiation dosages for in-field laser pruning operations.

The laser specifications are shown in Table 1 below.

**Table 1.** Laser specifications

| | |
|---|---|
| R \| G \| B [mW]: | 2,700 \| 2,700 \| 4,800 |
| R \| G \| B [Wavelength]: | 638nm \| 525nm \| 455nm |
| Beam Size [mm]: | 5 x 3 |
| Beam Divergence: | <1.1mrad [Full Angle] |

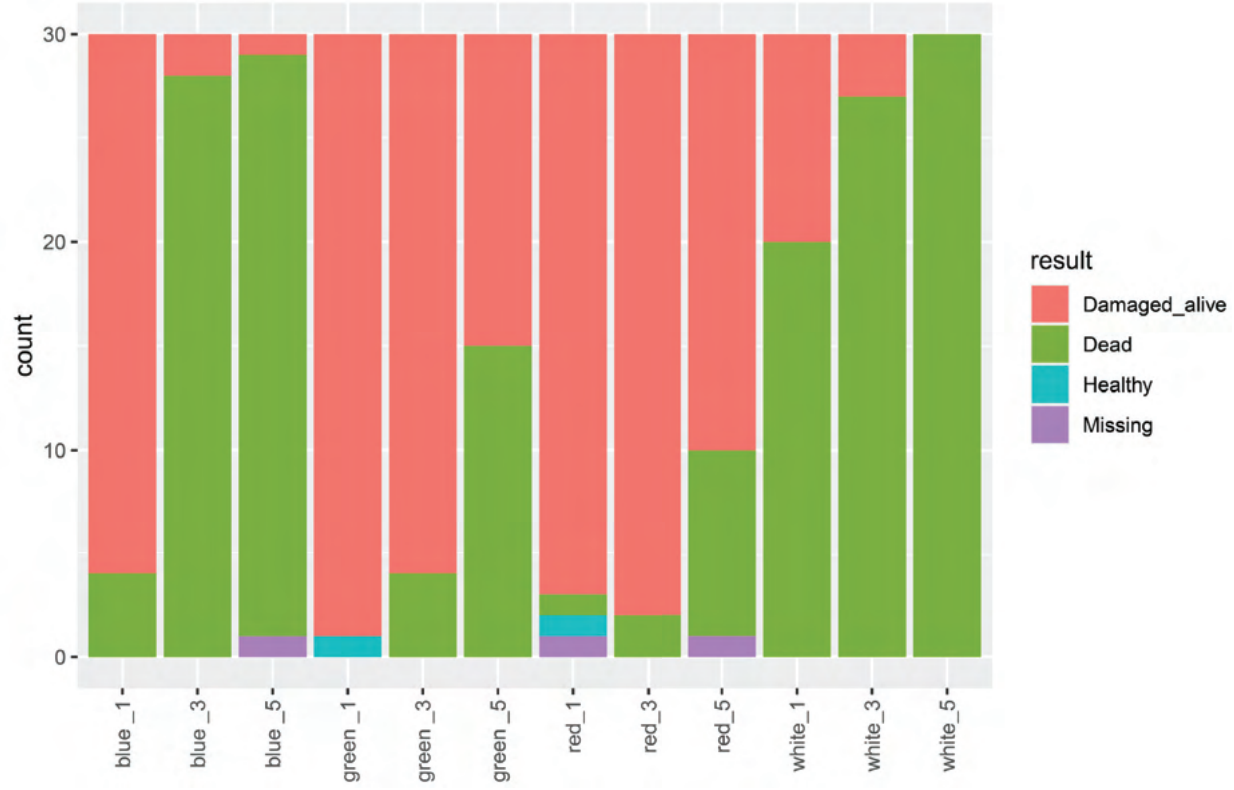


**Figure 1.** The effect of laser light on the health of runners is shown. The y-axis shows the number of runners tested; the x-axis shows the laser wavelength and irradiation duration in seconds. 360 potted plants were used (120 plants/rep, 3 reps in total). The experiment was performed from Mar 2024 to Jul 2024.


**Figure 2.** Photos of runners irradiated by laser. Photos were taken within 1 day of laser treatment.