

OBJECTIVES

The colors of dark-red sweet cherry cultivars in the PNW are related to growth and maturation. Therefore, an accurate assessment of color will also be an assessment of how much additional fruit growth can be expected. A printed, field usable product of the color-maturation profile could be useful as a decision aide support.

SIGNIFICANT FINDINGS

- Fruit color from blush to mahogany
- 2-sided plastic cards
- Sizing holes
- Developmental indices of diameter and weight
- Color index numbered to be similar to the CTIFL color chart
- Colors named
- Row size holes with metric measurement
- Inch and millimeter rulers
- Cherry color size prediction spreadsheet

METHODS

Color-maturation profiles of dark-red sweet cherry were determined for cultivars: Chelan, Bing, Lapins, Skeena and Regina located throughout the Columbia Gorge (WTFRC grant “New programs to increase fruit size and improve harvest quality”). This data was collected twice weekly for the duration between green and mature cherry fruit. Light and size calibrated images provided the average color and size used for the color-maturation profiles and printing. Paper, heavy cardstock and laminated products were printed with good color reproduction but the paper based media were too fragile to withstand field work. Attempts at adding texture to the card by mottling the colors was unsatisfactory; therefore, monochrome colors were selected for printing. A company, Plastic Printers Inc., were identified as a good candidate that could provide durable plastic prints that were die-cut for accurate hole sizing. Files for printing were prepared as PowerPoint.xps files.

RESULTS & DISCUSSION

Three versions were printed on plastic: a color test card (Fig. 1); a sizing card (Fig. 2); and a pocket ruler card (Fig. 3). Color reproduction in the test card was good; therefore a hole sizing card was devised. Some growers also wished to have a small pocket size color card without the sizing holes which we printed as well.

After the initial printing of 500 copies of version 1, extra money was provided by Northwest Cherries Inc. to defray half the cost of printing 2000 copies of versions 1 and 2. On advisement, two color names were also changed for versions 2 and 3: Cherry 2 was changed to Rose 2, and Berry 4 was changed to Crimson 4.

To help users understand how to use the card as a size prediction tool, a “How-to” video and size prediction calculator was produced by Rob Blakey, WSU Tree Fruit.
(treefruit.wsu.edu/videos/how-to-postharvest-pnw-dark-sweet-cherry-development-chart-index/)

PNW Dark-Sweet Cherry **Oregon State UNIVERSITY OSU**

| % DIAMETER | % FRESH WEIGHT |
|--------------------|--------------------|
| Blush 1 83% | Blush 1 60% |
| Cherry 2 90% | Cherry 2 75% |
| Ruby 3 92% | Ruby 3 80% |
| Berry 4 94% | Berry 4 85% |
| Currant 5 96% | Currant 5 90% |
| Merlot 6 98% | Merlot 6 95% |
| Mahogany 7 100% | Mahogany 7 100% |

Pacific Northwest Dark-Sweet Cherry Development Chart

HOW TO USE THIS CARD

- hold card up to cherry
- rank cherry color by 1 , 2, 3, etc
- indicates % of final values for diameter and fresh weight

Example: If cherry is Berry (4) color this indicates cherry is at 94% of final diameter and 85% of final fresh weight

Note: color, size and weight are average values



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Figure 1. Version 1, Feb 2017. Color and developmental index card.

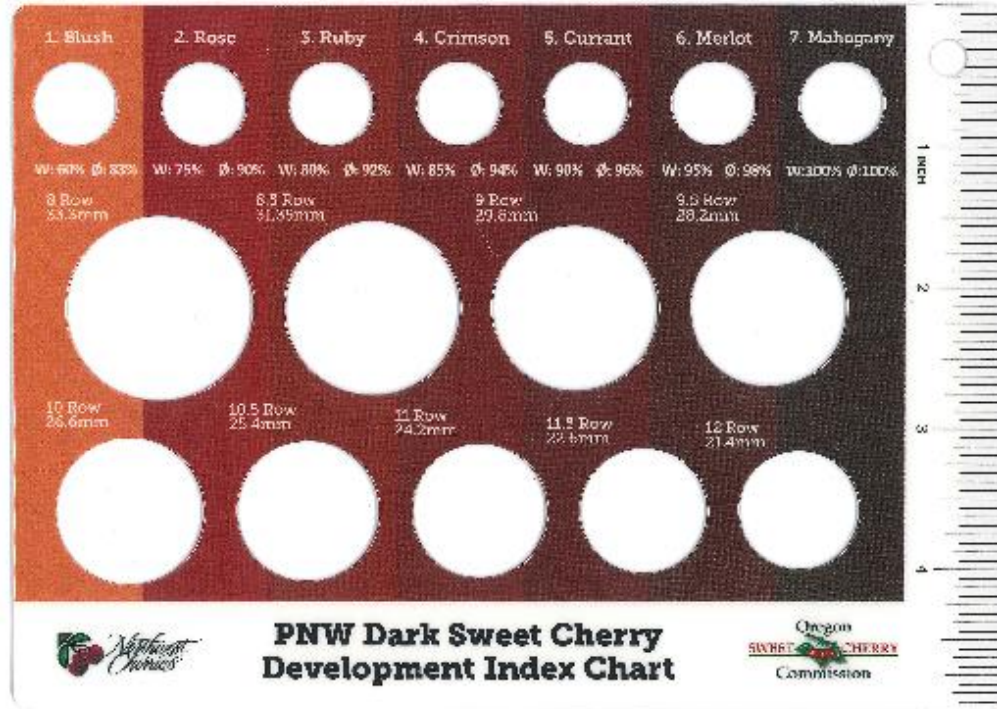
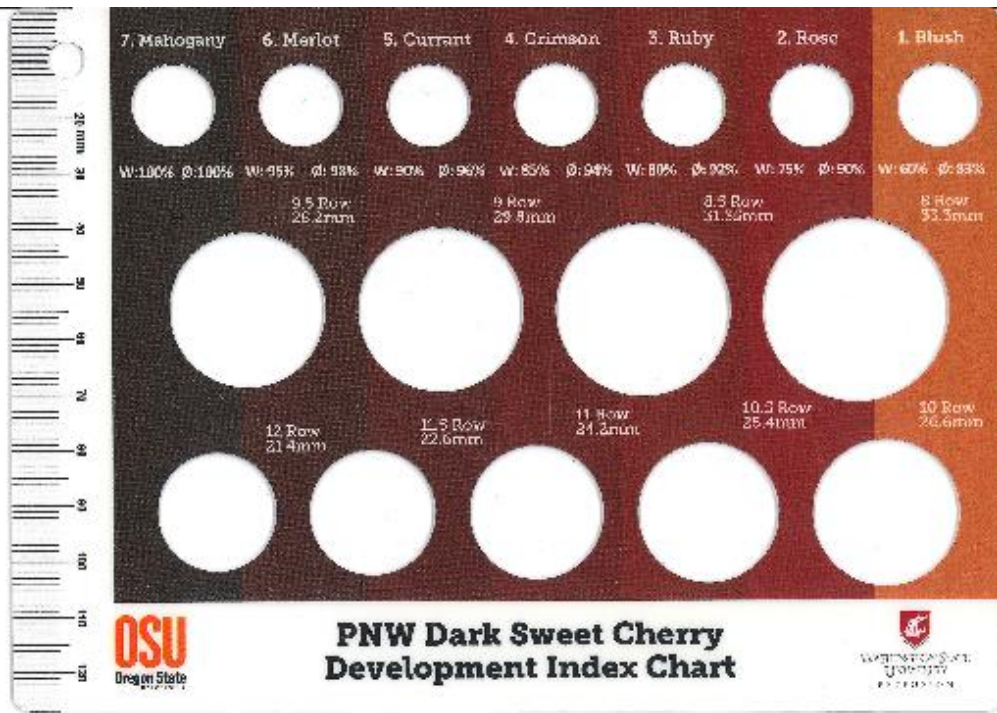


Figure 2. Version April 2, 2017. Sizing card.

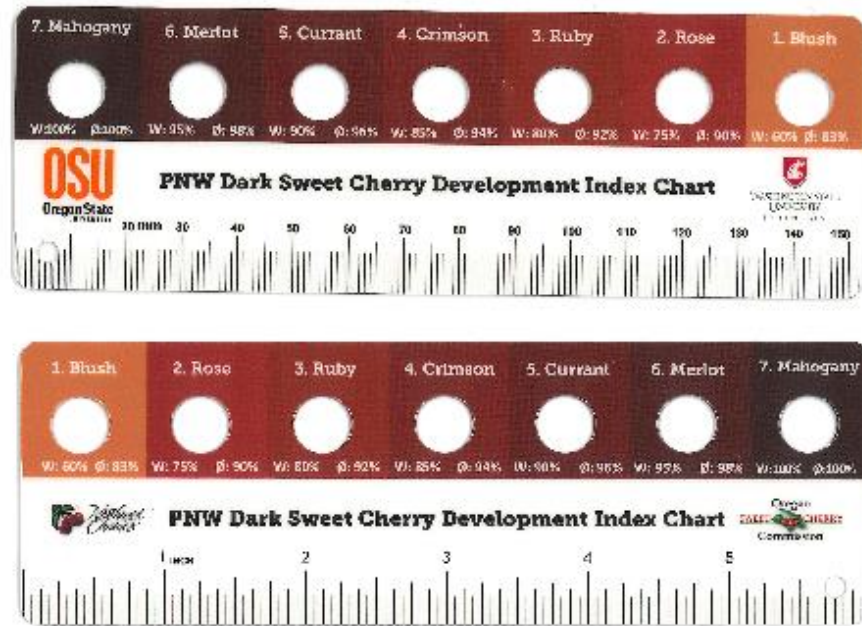


Figure 3. Version 3, April 2017. Pocket Ruler.

EXECUTIVE SUMMARY

The majority of the budget was used to cover printing costs. The second and third versions were printed and distributed at the 2016 Cherry Pre-harvest Tour organized by Lynn Long OSU Extension. Northwest Cherries Inc. provided funds for printing additional cards and Rob Blakey helped distribute them in WA.