

CULL ANALYSIS: MOVING TOWARDS A BETTER SYSTEM

Wendy Jones, Jay Brunner

WSU Tree Fruit Research and Extension Center, Wenatchee, WA

Dana Faubion

WSU Cooperative Extension, Yakima County, Yakima, WA

wendyej@wsu.edu

Currently, there is no standard method of performing apple cull analysis in Washington packinghouses. In general, the process involves dumping field bins into a water tank that leads to a wash tank and eventually to sorting. During sorting fruit are removed either by hand or mechanically based on some criteria set by the packinghouse. Mechanical elimination is normally due to a failure to meet color or size standards as the fruit pass a sensor; whereas hand sorting normally involves identifying some visible defect. In most Washington packinghouses cull analysis occurs after fruit are sorted. A technician evaluates fruit either taken from the cull belt or from cull bins when time allows. There is no set number of fruit or sampling protocol used industry wide. Each house has its own method and way of scoring defects. And each operation has a unique way of tabulating and reporting cull information back to the growers. The biggest problems related to the current system have to do with: how accurately the fruit sampling reflects the cause of fruit rejection; how accurate are the defects scored; and how do the scores reflect back to total cull fruit loss compared to amount of fruit packed.

The industry has an urgent, export driven need to improve on these cull analysis and reporting methods. We can look to examples from other countries such as New Zealand and Canada to incorporate elements into improved methods. But for changes to occur, the industry needs to agree upon and adopt a standard method of evaluating cullage, from number and frequency of fruit sampled down to how defects are scored and reported. Training courses and reference guides need to be developed and provided to the industry to insure accuracy and compliance to the adopted standards.