

This page last changed on Dec 11, 2007 by sallye.

# Multi-Pack Weight Optimizer

The Multi-Pack Weight Optimizer is smart software that enables the sizer to efficiently and accurately sort fruit for multiple pack weights at one time.

The increasing range of special pack weights and sizes creates issues of increased costs and inefficiencies for pack-houses. The Multi-Pack Weight Optimizer makes it possible to target many different pack weights and maintain these weights automatically.

The Multi-Pack Weight Optimizer is available as an optional module in the sizer software.

## The Problem it Solves

In the past when the industry required only standard weight packs with a fixed fruit count life was easy.

*For example:*

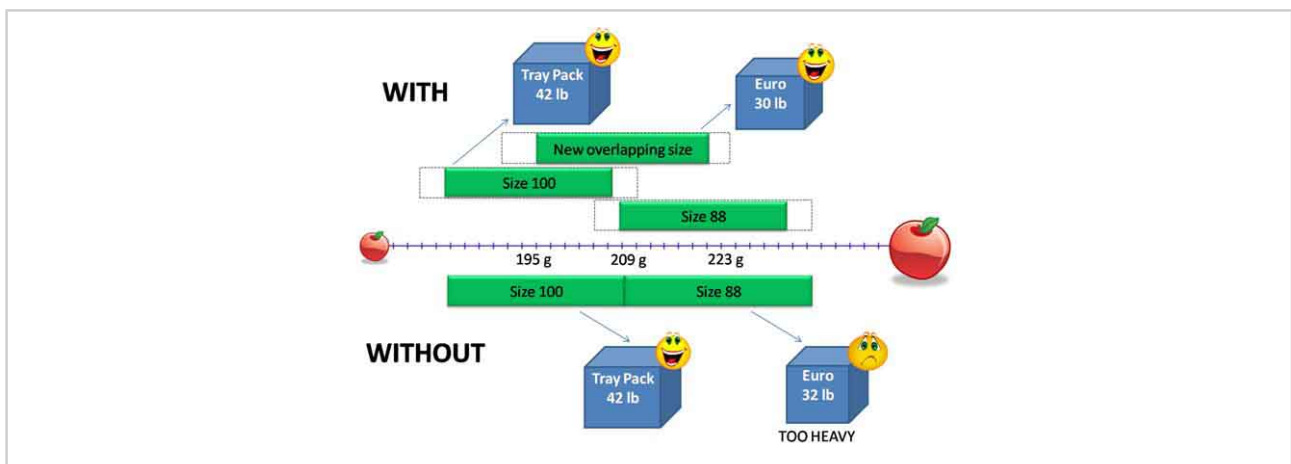
- A tray pack carton weighing 42lbs, contains 100 fruit, av fruit weight is 195g  
The size name representing this weight band is called 100s
- The next size up from this is called 88s, average fruit weight is 223g
- Both these sizes can be packed simultaneously as they are taking fruit from different weight ranges.

However problems arise when the packs require fruit from overlapping size ranges while still packing standard industry packs.

*For example:*

- The new Euro Pack weighs 30lbs, contains 65 fruit, av fruit weight is 203g  
There is no designated size with an average fruit weight of 203g
- If the packer uses fruit size 100s the pack will only weigh 28lbs (195 x 65)  
- 2lb short weight
- If the packer uses fruit size 88s the pack will weigh 32lbs (223 x 65)  
- 2lb giveaway

## Here's how it works *with* and *without* the Multi-Pack Weight Optimizer



## The Multi-Pack Weight Optimizer will enable the sizer to:

- Pack fruit from overlapping weight ranges
- Achieve the target pack weight and fruit count with all similar sized fruit  
NO MIXED SIZING
- Meet the target pack weight without costly giveaway

## Possible Fruit Uses

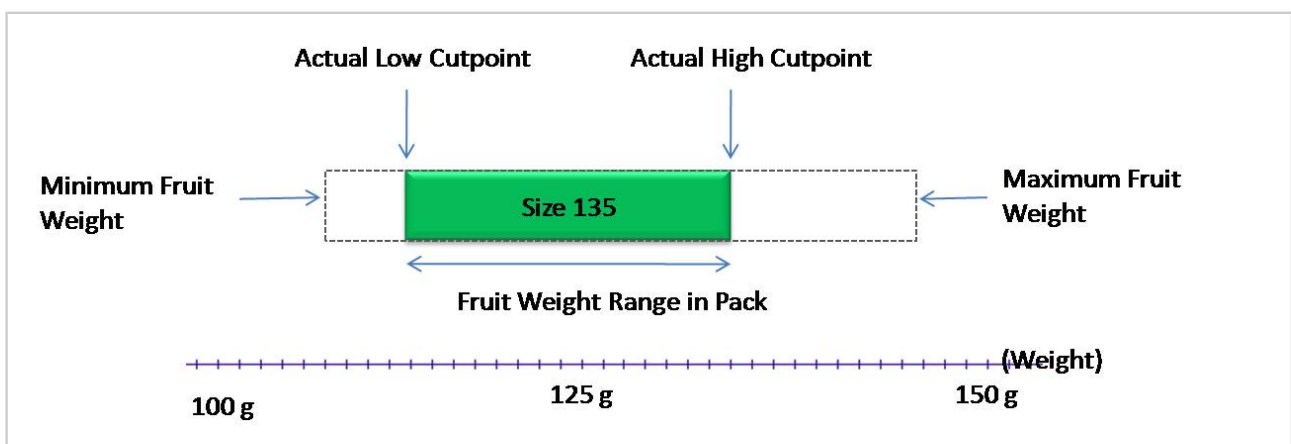
- Apples
- Stonefruit
- Wherever a fixed count and pack weight needs to be reached

## Benefits

- Achieve accurate carton weights
- All fruit within each pack is within a defined size range - no mixed sizing
- Eliminate giveaway
- Increase yields
- Simultaneous multiple pack size grading and packing (standard and specialty)
- More efficient production scheduling
- Easy operator usability

## How the Multi-Pack Weight Optimizer Works

- The Multi-Pack Weight Optimizer aims at creating pack weights as close to the desired weight as possible given the fruit distribution on the sorting machine.
- Customers will need to allow for some extra pack weight to minimize the risk of underweight packs.
- The Optimizer accomplishes its precise pack weights by adjusting the cutpoints of sizes and by allowing them to overlap. This allows sizes to be adjusted independently to suit the pack weight it is assigned to, without affecting or sub optimizing adjacent sizes. When two weight ranges overlap the Optimizer will allocate a piece of fruit to the size where it will accomplish the best pack weights.
- In addition to the fruit weight range, the Multi-Pack Weight Optimizer uses the following values:
  - The Actual Low Cutpoint and the Actual High Cutpoint are the real cutpoints of a size that the Optimizer automatically adjusts. These cutpoints are not displayed in the software, but are the values used by the Sizer to determine what size a piece of fruit is after it has been weighed.
  - The Minimum Fruit Weight and the Maximum Fruit Weight are the lowest and highest values the Optimizer is allowed to change the Actual Low and High Cutpoints of a size to.



## Customer Comments

*"Compac's new Multi-Pack Weight Optimizer was installed on sizers in our three packing plants for the 2007 season.*

*The software has proved to be a valuable tool over the season, enabling absolute accuracy and flexibility with the wide range of pack types we produce. It allows us to accurately pack a range of products both within a size and across a range of sizes and maintain very accurate target weights. This software is giving our growers an advantage in the market. In addition our sizer operators have found the optimizer easy to operate."*

*Robert Sykes, Production Manager, Whakatu Packhouse, Mr Apple NZ Ltd*

*"The Multi-Pack Weight Optimizer allows us to increase the range of market suitable products during a single production run. This is achieved by being able to run multiple pack types - some with individual count sizes and others requiring a weight band that crosses multiple count sizes. Within a predetermined size range the Optimizer can accurately weigh to within grams of the desired target weight and still keep the standard sizes around the target pack.*

*The "accuracy of the Optimizer coupled with the flexibility to produce multiple packs has given Mr Apple an advantage in meeting market demands."*

*Pernell Hartley, Operations Manager, Mr Apple NZ Ltd*

## More Information

- See [User Guide - Multi-Pack Weight Optimizer](#)
- Contact [the Sizer team](#)