



# Oakwood Fruit Farm

## Starting over after 100 years

# History:

- ▶ 1904: Albert Louis buys farm and starts Nursery
- ▶ 1934: Bill Louis ( my grandfather ) joins farm and starts planting apple trees
- ▶ 1955: John Louis ( my father ) joins farm and starts the dairy
- ▶ 1993: I return from college and join operation
- ▶ 2010: Fire on October 10 destroys entire packhouse and retail operation

## The Old:

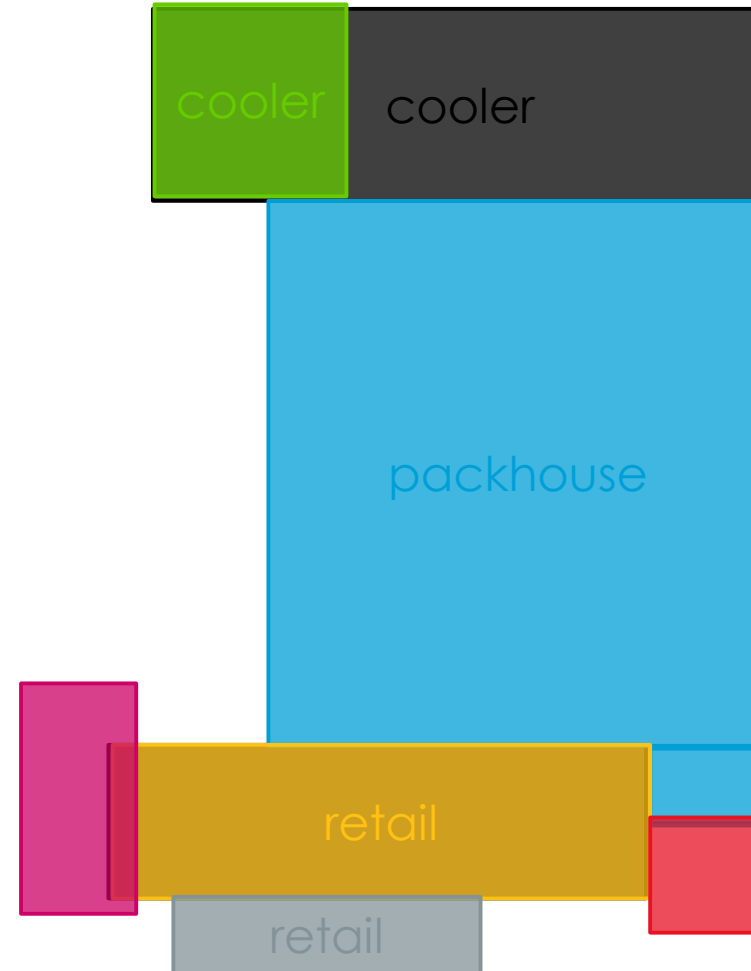
Original building still functional

A lot of wood; hard to clean

Many additions; flow not very good

Retail cut up into 3 spaces

Had just added bakery



## The Old:

Old FMC sizer

Only sorted by weight

Had to go from biggest to smallest

A lot of stopping to catch up



## The Old:

All sorted by workers

All done by hand

Lots of grey area



www.shutterstock.com · 24883390

# The Fire

10/10/10





Day After





Day After





October 15th



# History:

- ▶ 2010- December- Start building new facility
- ▶ 2011- July- Move into new facility
- ▶ 2011- Sept – Labor Day weekend- Grand reopening



January 2011





# New Facility





# New Facility





# Retail Store

- ▶ 50 % bigger
- ▶ All one big open space
- ▶ All displays are moveable
- ▶ Lighting much better





## Retail store:

Bought most of our displays  
at grocery store auctions

Tried to keep the farm market  
look



# Retail Store





# Bakery

- ▶ A tremendous addition to our business
- ▶ People come back more often, has increased sales of apples
- ▶ Twice the size of old one
- ▶ This past year we sold over 18,000 dozen doughnuts



# Bakery





# Bakery



# Packing Shed

Layout: Must be efficient and flow must be easy, as little two way traffic as possible

No storing of packed and unsorted products together

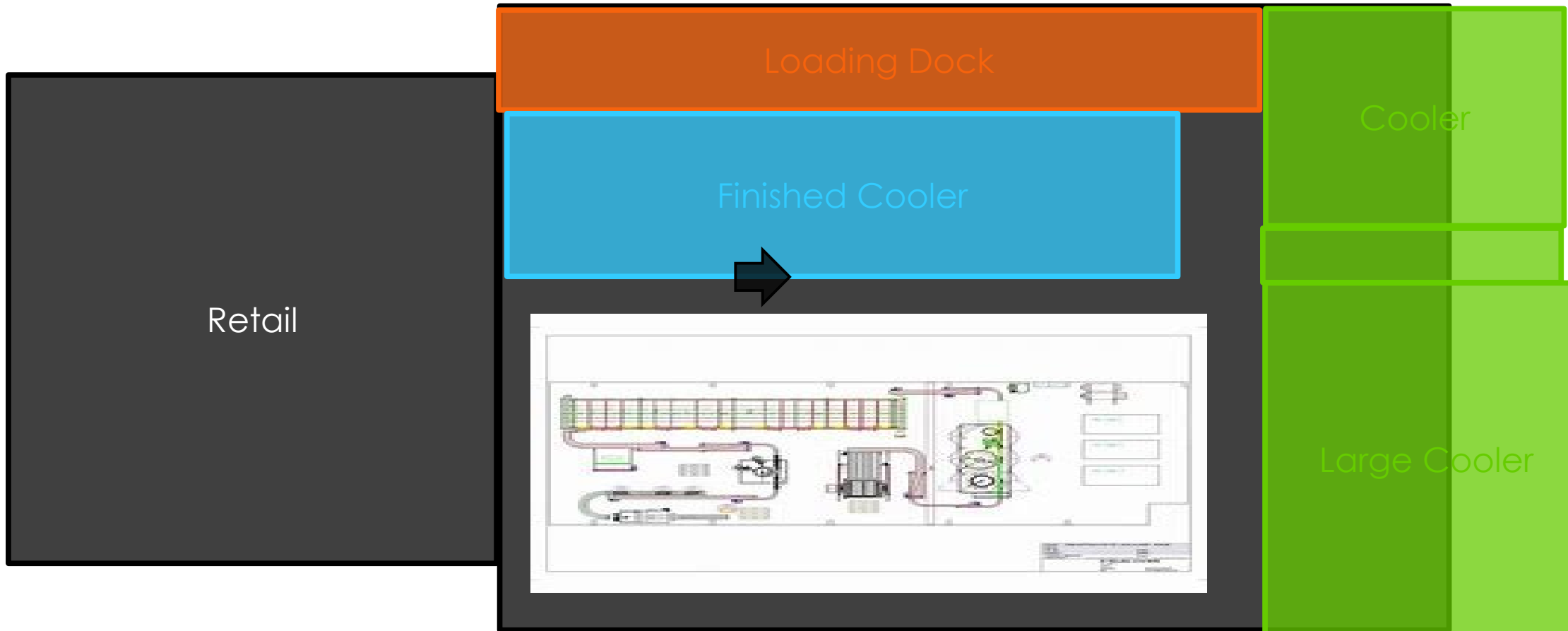
Food safety: must be easy to clean and constructed of easy to clean materials



# Packing Shed

- ▶ 120 wide by 180 long
- ▶ 3 coolers, one for packaged products, one with smart fresh room
- ▶ Hope to add another to have higher temp/ preconditioning for honeycrisp types
- ▶ Refrigeration all setup on rack system for easy expansion and energy efficiency
- ▶ Packing area is also dehumidified and cooled, Much nicer working conditions and easier to get apples dry

# Packing Shed



## Coolers:

Two coolers for picked apples

Can store about 60,000 bushel

Have one Smart Fresh room





# Packing Shed

- ▶ Fabric ceiling
- ▶ Really cuts down on noise
- ▶ Very glad we added it



## Mezzanine:

Great addition

Make boxes above and slide down right where they are needed

Created a lot of extra work space





# Float Tank



# Packing Line: Float Tank





## Heat exchangers:

Take hot gas from refrigeration racks and heats water in float tank

Set on thermostat

Needed in food safety

Get it done for free



# Packing Line





## Packing Line:

Brush bed:

Dries apples

Polishes apples





# Packing Line



## Packing Line:

Machine fills bags and trays now

Workers just do final inspect

Very consistent; same on Monday morning as Friday afternoon



# Sorting

- ▶ Looked into 3 different companies
- ▶ Went to see different lines in operation in Wisconsin, Michigan, and Pennsylvania
- ▶ Decided on Compac: liked their carriers, speed at which they could process product, and software
- ▶ We have been very happy
- ▶ Very steep learning curve



# Compac

- ▶ Two computers
- ▶ One runs the Invison programs: does the color and defect sorting
- ▶ One runs the sizer: does the allocation of drops and sets up products ( i.e. 3 lb. bags, tote bags , different size trays

# Compac:

Does:

Weight

Color

Size

Defects

IR ( great for cuts/ stem holes





## Compac:

Cameras overhead and  
sideview

Apples rotating as they go  
through

Takes 40-60 pictures of each  
apple

Makes 3-D model

Gets color and any defects



# Compac





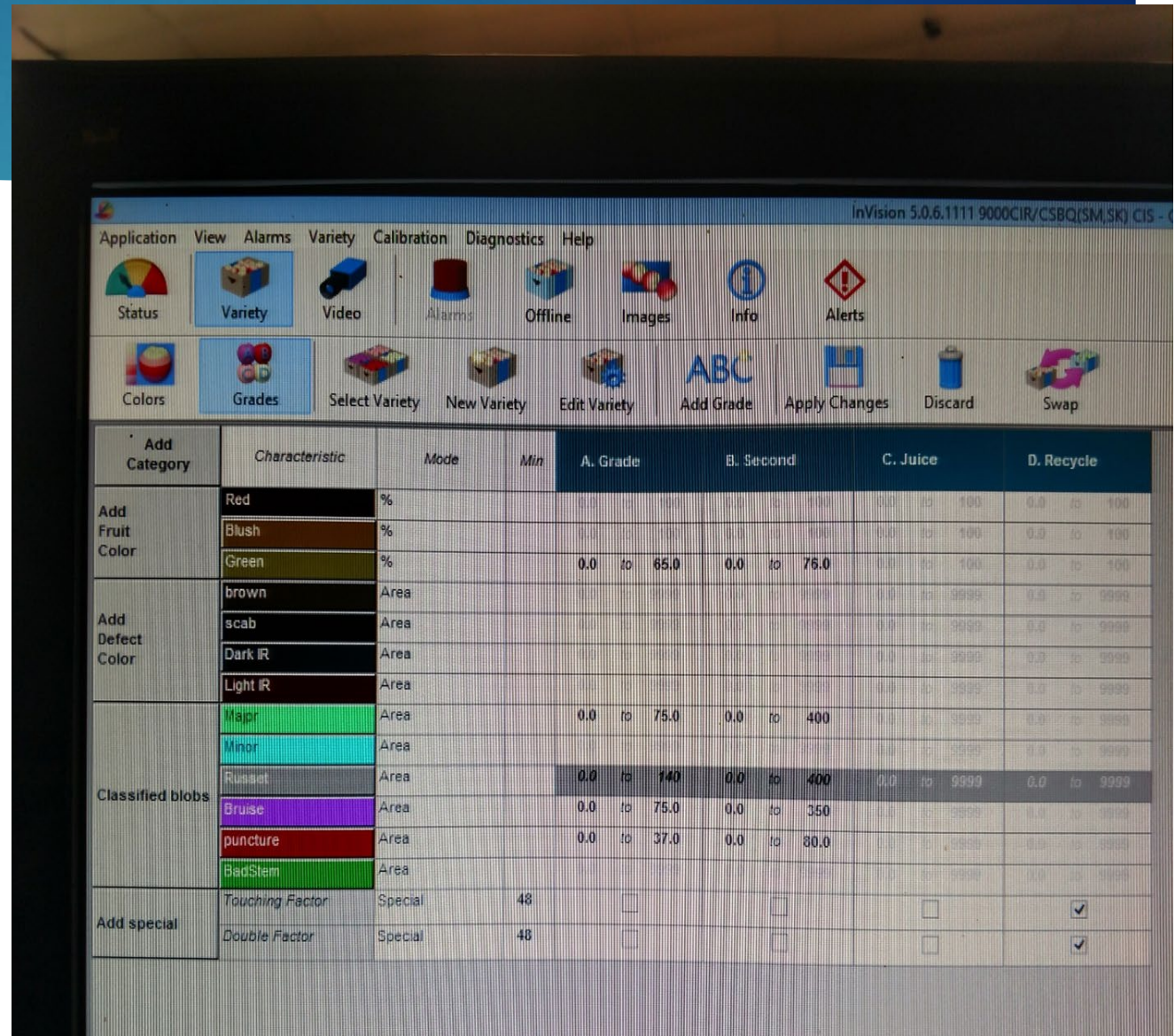
# Compac

- ▶ 28 outlets
- ▶ Pack by weight, number or both
- ▶ Has optimizer to “stretch” target packs
- ▶ When packing by weight it looks
  - ▶ For right apples to hit target weight



# Compac: Invision

- ▶ You setup all color maps
  - ▶ Nothing preset; big learning curve
- ▶ You setup all grading standards
  - ▶ What defects and size
  - ▶ Set your color standards
  - ▶ Number of grades
  - ▶ Can also add internal defect sort





# Compac: Sizer

You create your products

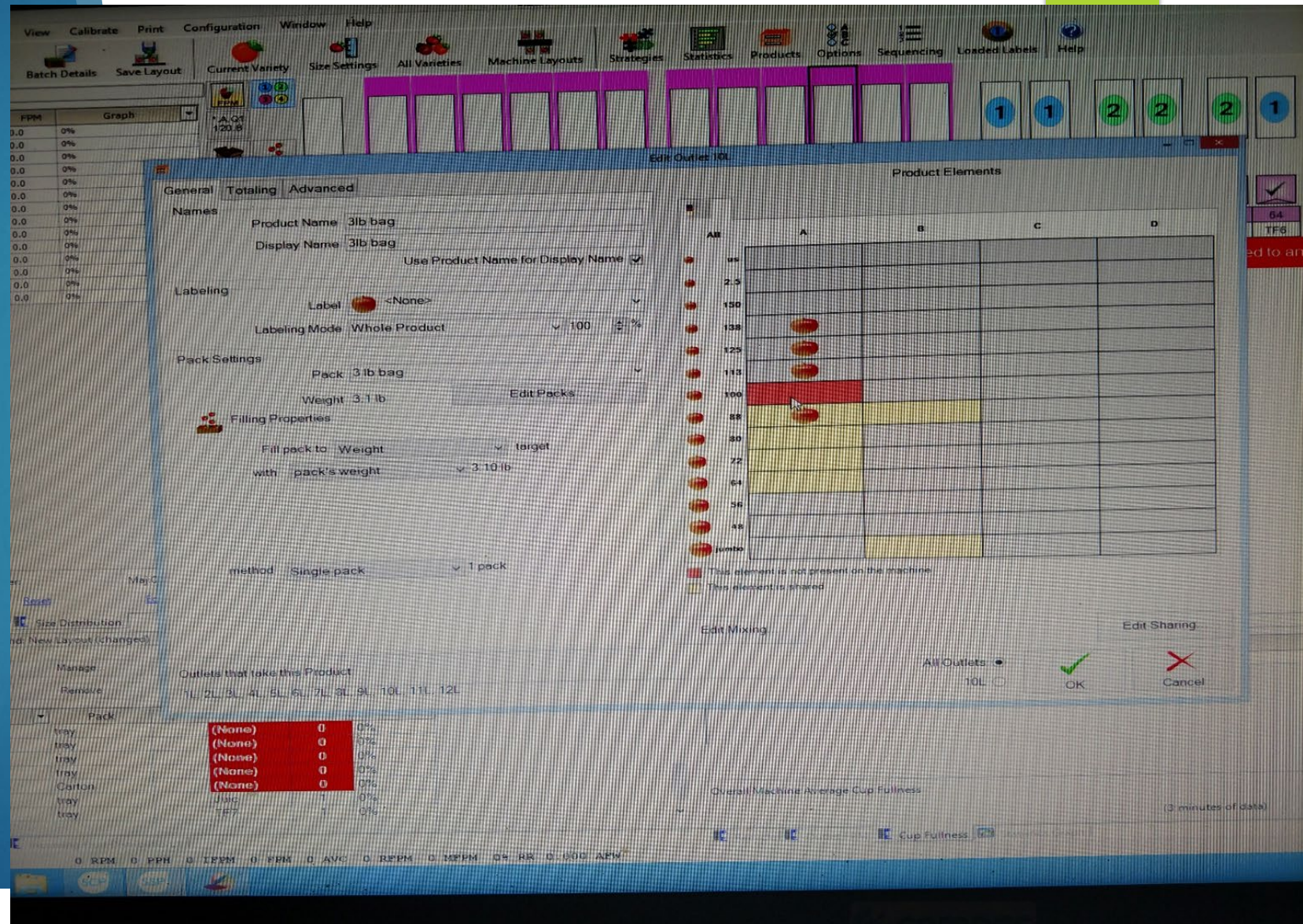
Example= 5lb bag

Create the elements that  
make up the product

Example= 125 ct. ,  
88 ct

Can share elements between  
products

Warns you if you leave out an  
element





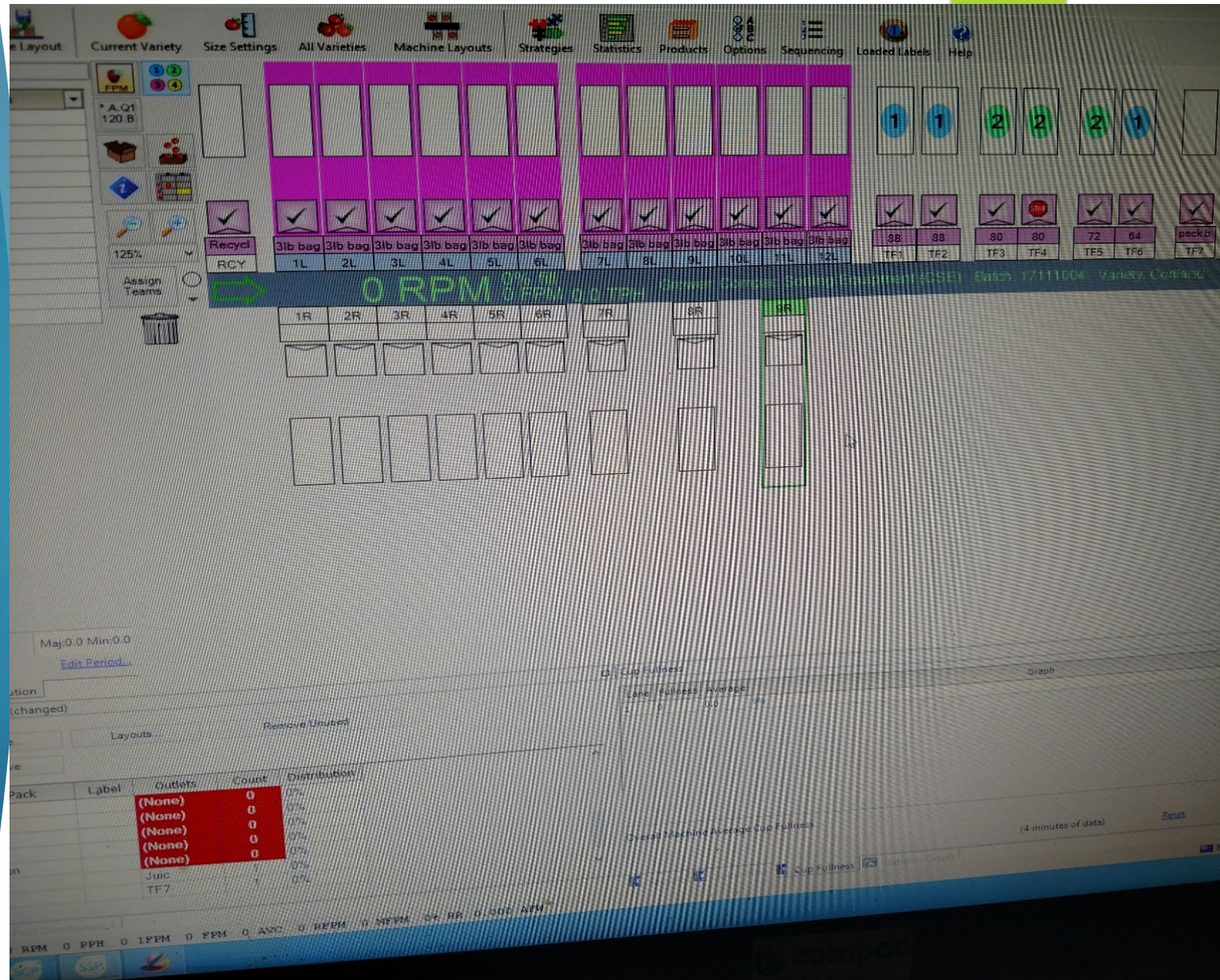
# Compac: Sizer

Decide where products are dropped

Endless combinations

Easy to "click" and add or subtract

Have up to the minute totals to watch so you can move elements to avoid overloads



# Food Safety

- ▶ This facility is mostly metal and all equipment is stainless and very easy to clean
- ▶ Use a foamer for cleaning hard to reach places like brushes, walls, or corner belts
- ▶ Fogger for sanitizing rooms
- ▶ Electronic monitoring system for dump tank sanitizer chemical levels
- ▶ Hooked up a hose on dosatron for dispensing sanitizer. Can walk around packing line and sanitize without having to mix solution.



## Food Safety:

Hand washing station very close to packing area

First aid station

All food contact surfaces wiped down every day





## Food safety:

Continuously monitors sanitizer level in float tank

Automatically adds chemical if not in set range

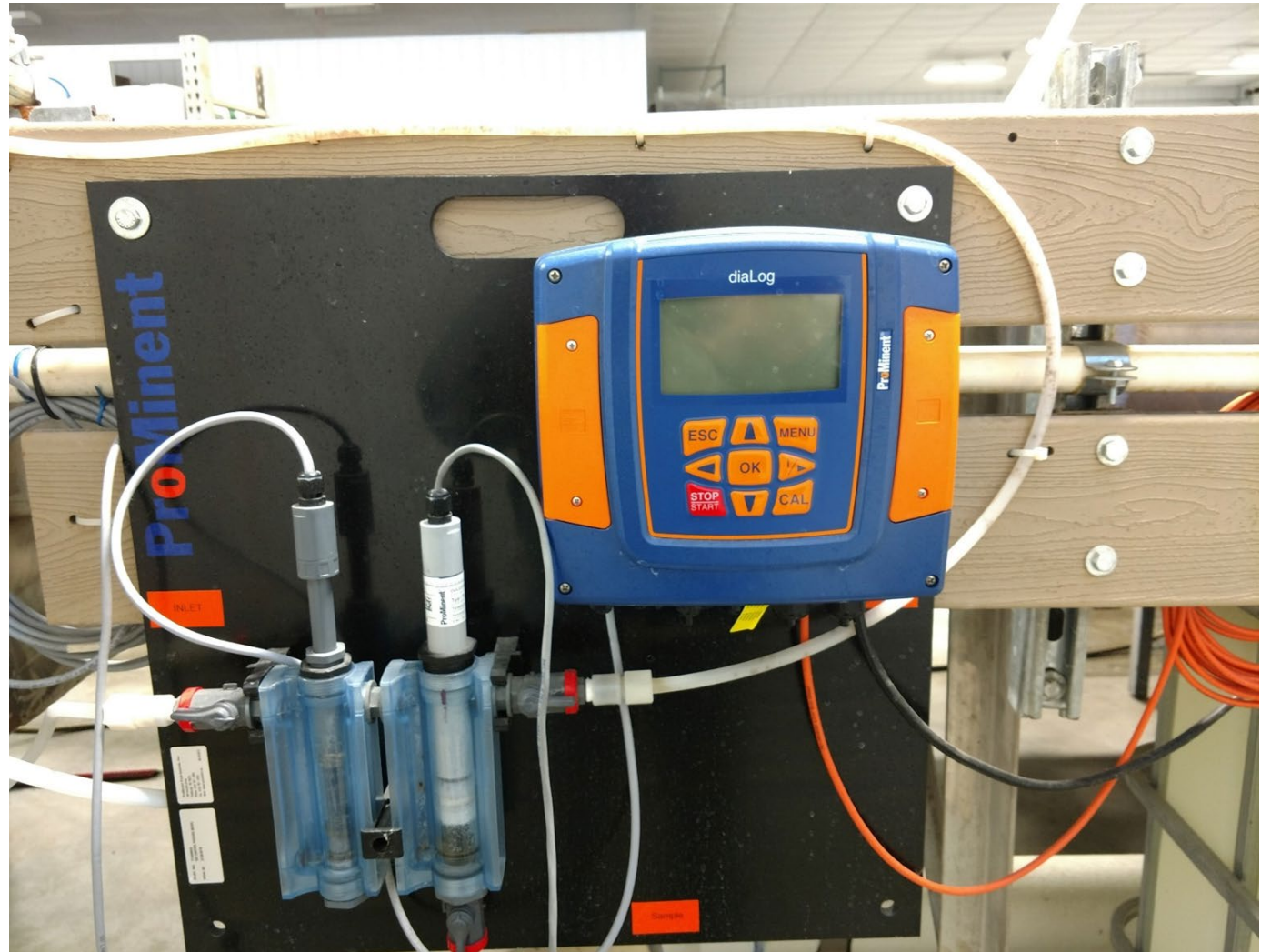


## Food Safety:

Logs chemical levels automatically for food safety records

Also monitors the sanitizer level in the spray bar and logs them

We use SaniDate: very user friendly and Organic approved



# Conclusion

- ▶ New retail store has allowed us to grow our business substantially
- ▶ Bakery has been a great addition
- ▶ Packing line is much more complicated but much more powerful and much more consistent, The same Monday morning as it is on Friday afternoon
- ▶ We are getting about 70% out of our line. Could have full time person working on it to get all of the benefits it could give us
- ▶ Food safety is much higher and much easier
- ▶ Insurance? How many of you review this yearly and then look at it in August after you know crop size and value. Our fire was at the absolute worst time.
- ▶ Future?: Extend packing season to take advantage of packing line
- ▶ May add pick-your-own: Parking?
- ▶ Look at adding Ozone for sanitation
- ▶ Add another cooler: precondition Honeycrisp and Pazazz; store at higher temps