

Setting Up On-Farm Produce Packing to Enhance Produce Safety

Adam Watson
Agriculture Agent

WASHINGTON COUNTY
UTEXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

What is Goal?

Safety

**Regulatory Compliance
(FSMA, OSHA, etc.)**

**GAP Audit
Efficiency**

This Talk is not about starting with \$500K and constructing “THE Perfect” packing house.



The science based principles that reduce risk world regardless of exact form.

Basics are Common

Every operation will have a different needs and resources, but there will be consistent elements to ensure basic GAP Food Safety Practices are followed.

Some Basic Thoughts

Packing Houses: Center of Activity

- Washing, packing, grading, cooling, shipping
- Office space
- Storage-boxes and other supplies
- Break areas(eating, drinking, tobacco use)
- Retail Space
- And more



Reduce Risks in All Packing Areas

Keep it clean Proper hygiene facilities & break areas for workers



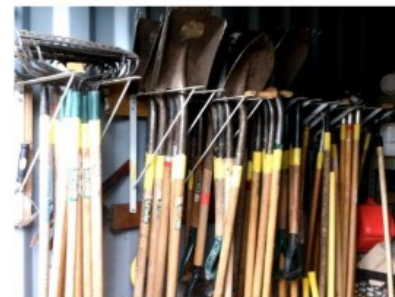
Pest management



Avoid standing water



Keep it organized



Produce Safety
ALLIANCE

Water used postharvest Must Be Potable. Potability determined by testing.

- **Wet conditions allow growth of pathogens.**
- **Adequate drainage essential**
 - **Floor drains or graveled floors**
 - **Runoff from the building**

Hand Washing

Immediately before handling produce hands should be washed.

Capacity is important.

If plumbed sinks aren't in place use a constructed hand washing station.



Image from NC State

Where do you place these? Can you witness/confirm handwashing that happens behind a bathroom door?

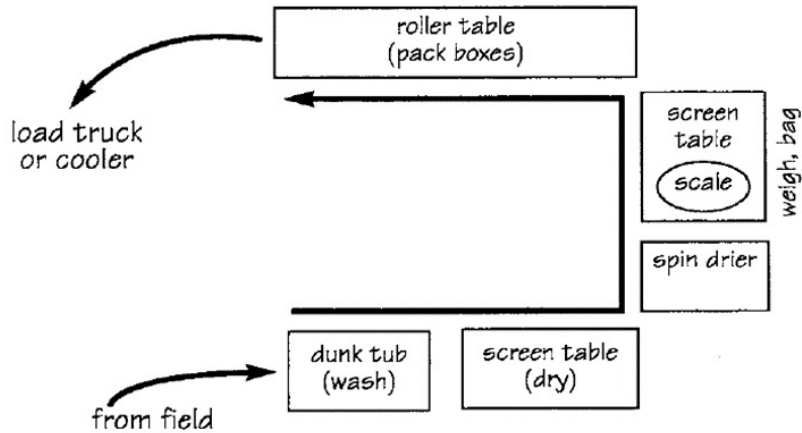
Restrooms

- How Many?
- Are employees trained on proper use?
- Are they cleaned, inspected & restocked as needed(daily)?
- Floor Drains



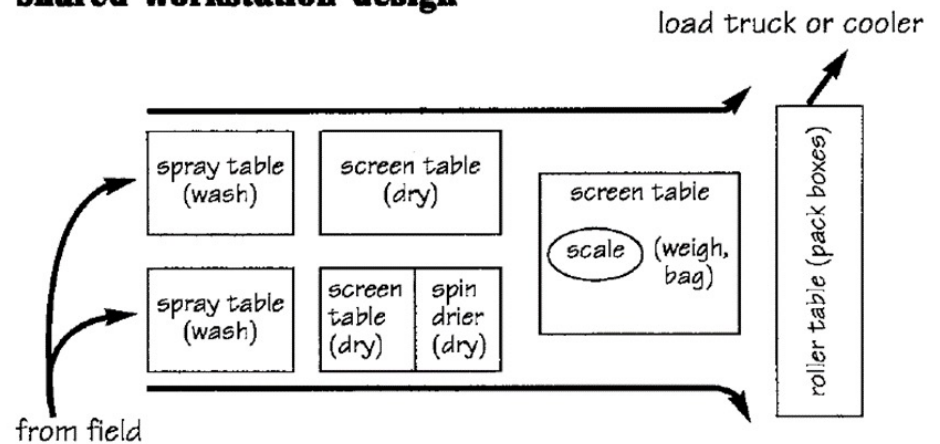
Plan Layout to Avoid Cross Contamination

U-shaped design



Images from University of Wisconsin Healthy Farmers, Healthy Profits Project

Shared workstation design



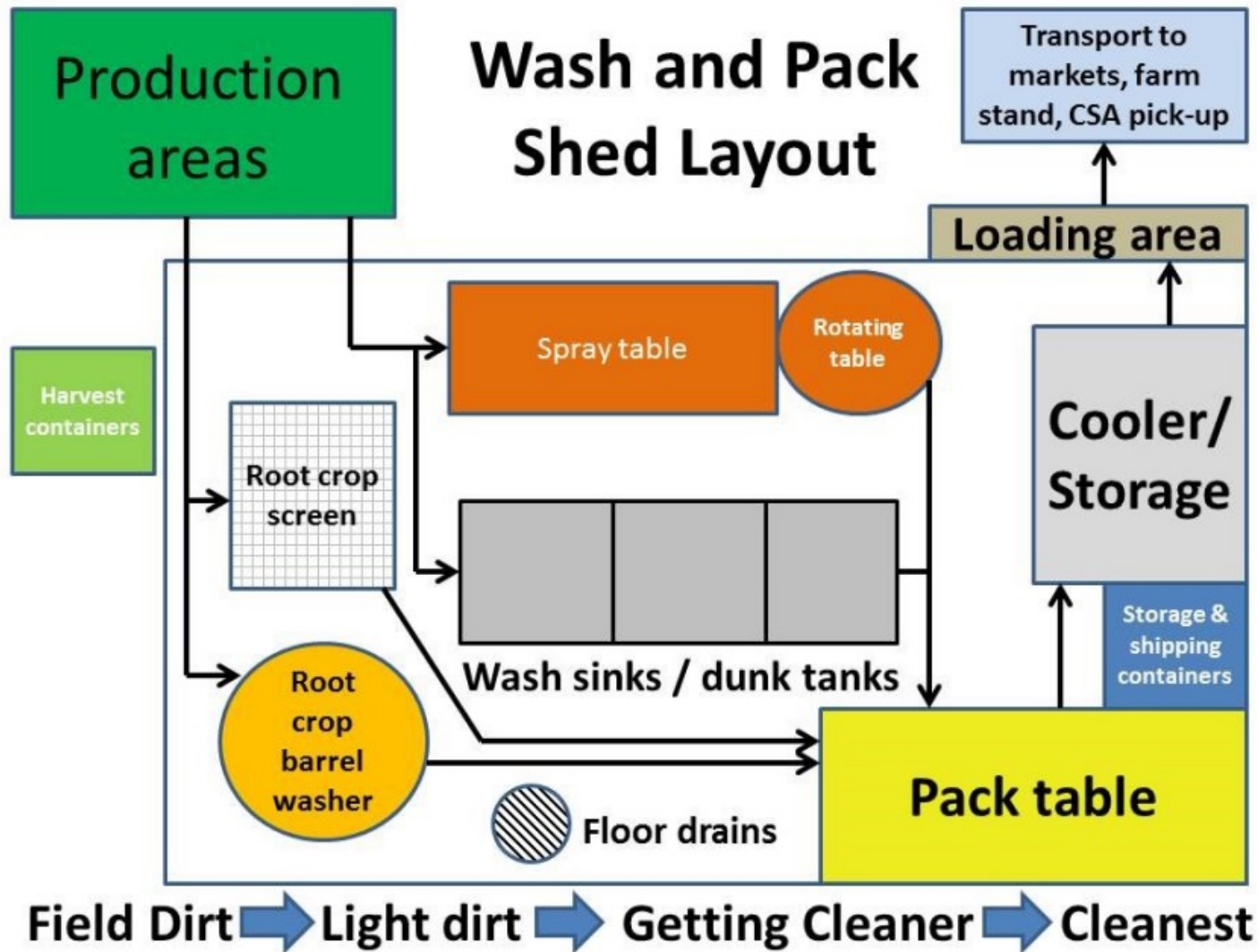
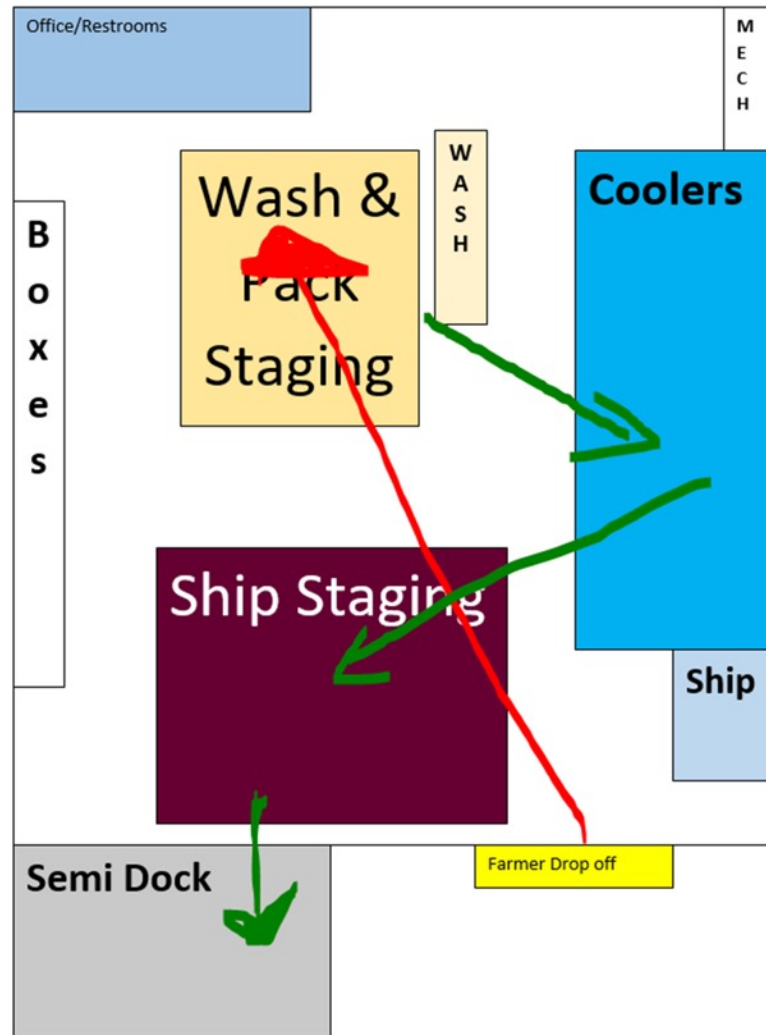
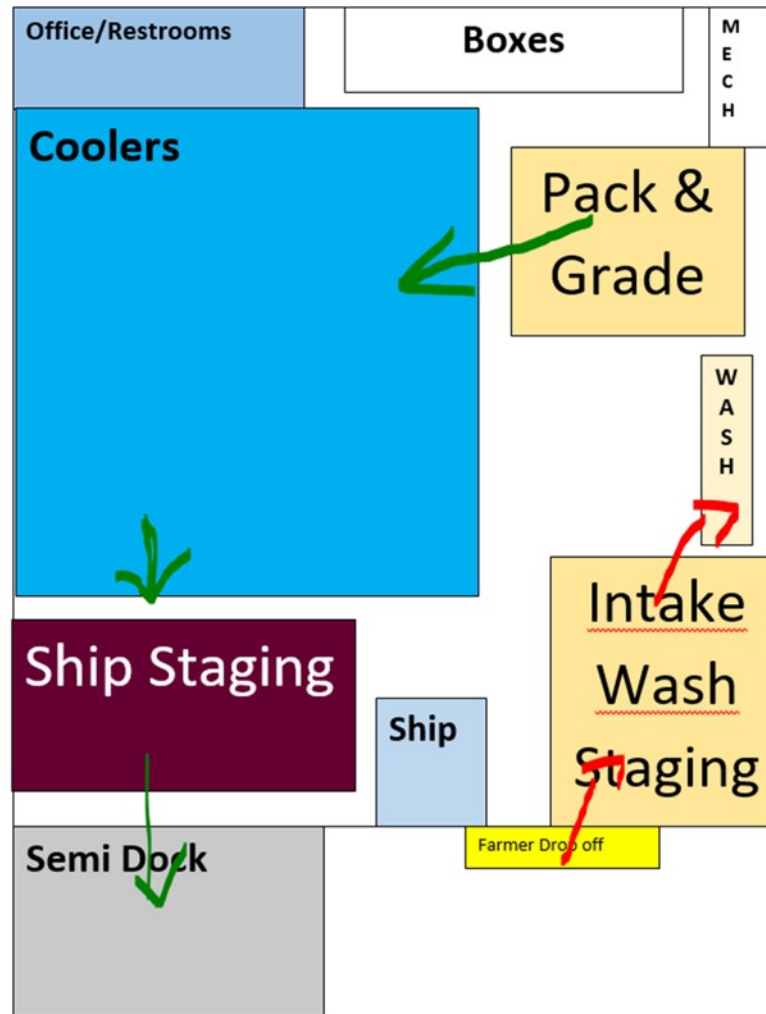


Image From University of Vermont Extension

Plan Layout for Efficiency



Plan Layout for Efficiency



Layout

- Is space adequate for the task?
- Expansion? Cooling, curing?
 - Not just square footage, think also tractor-trailer/bus access, electrical, plumbing, waste water capacity, retail space
- What about washing harvest containers? Outside?
 - Concrete, gravel aprons

Ventilation

- Plan for more ventilation than you might first think is necessary
 - Removes humidity speeds drying
 - Makes space better for employees
 - Floor fans are great, but they take floor space

Pest Control

- Control Access
- Monitor for their presence
- Don't use rodenticides in the packing house.
- Don't keep trash/culls in or directly adjacent to packing house.
- Keep dumpsters covered.
- Remove harborage



Cleaning/Sanitizing Stuff

Stuff must first be cleaned, rinsed, and then sanitized

Produce Contact Surfaces Clean/Sanitize Daily

- **Other surfaces cleaned as needed:
Wall, Floors, Ceiling/Overhead, Coolers**
- **Surface Composition(condition) Matters
Wood, Plastic, Metal**

Cleaning/Sanitizing Stuff

- **Cleaning and sanitizing is extremely important, AND also time consuming and labor intensive.**
- **The easier everything is to clean the fewer man hours.**



- **If you modify equipment make sure it doesn't complicate cleaning**

Washing Containers



Image from www.interplas.com



Image from www.rppcontainers.com



Image from University of Vermont



Sanitizing in Volume



Image from www.northerntool.com



Image from
www.homedepot.com

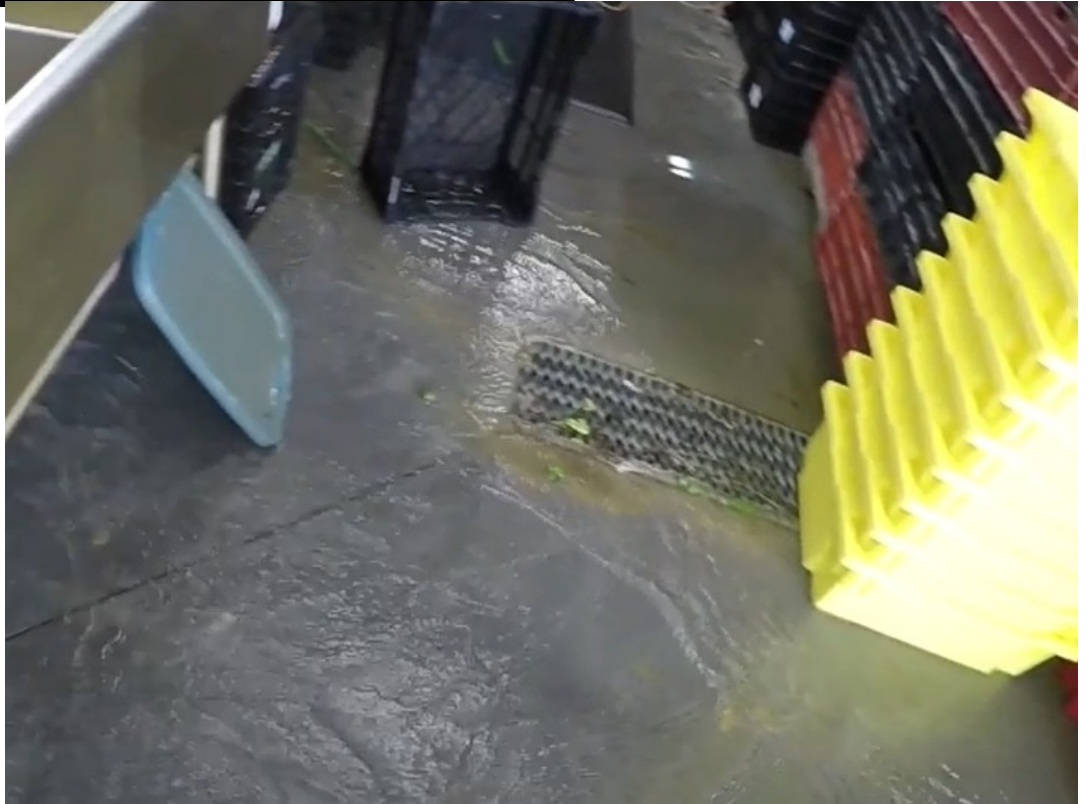


Image from
www.dosatronusa.com

Don't Have Clean Things Resting On The Floors



Image from www.interplas.com



Screen Capture from University of Vermont

Targeted Things As You Go

***The more enclosed a facility is the more control over the potential entry of contaminants.**

If seeking GAP certification then consult scoring rubrics to prioritize bang for your buck.

Questions

Adam Watson

watson@utk.edu

