

Implementing GAPs at a Research Facility

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Iowa State Horticulture Research Station

Ames, Iowa

Iowa State University Horticulture Station

- 230 acres
- 90 projects/year
 - Horticulture Research
 - Ornamentals
 - Fruit and vegetable research
 - Environmental Research
 - Turtles and fish
 - Birds and bees



IOWA STATE UNIVERSITY

**Horticulture
Research Station**

Est. 1967



Food Safety at a Research Facility?

- Why do we need to food safety?
 - Three distinct groups selling produce grown at the Station
 - Student Organic Farm
 - Hort. 465 Class
 - Produce from research projects
 - Produce Sales help keep research fees low
 - ~\$50,000 in produce sales in 2014
 - Customer health

Reputation



“Local Peppers”
on display at Hy-Vee

Our Markets

- Wholesale
 - ISU Campus Dining
 - Local Farmers
 - Student Club Fund Raisers
- Retail
 - Web site sales



Our Markets

The screenshot shows a web browser window with the URL <https://foodlo.cals.iastate.edu>. The page header features the Iowa State University logo and the text "Horticulture Research Station and Top Shelf Farm Community Produce". A search bar is located in the top right corner. On the left side, there is a "Main menu" with links for "Home", "Produce A to Z", "Horticulture Research Station", "Top Shelf Farm", and "This Week on the Farm". Below the menu is a login section with fields for "Username *" and "Password *", a "Request new password" link, and a "Log in" button. The main content area is titled "Welcome" and contains the following text:

This week marks the last week of sales on foodlo.cals.iastate.edu. We have appreciated your business and feedback throughout the first year of our website sales. Your continued support has served as an educational experience for our students enrolled in Horticulture Enterprise Management (Horticulture/Ag EdS 465) and has been beneficial for the Iowa State University community.

We hope to continue to receive your business in future production seasons. We look forward to the next growing season with the highly anticipated Horticulture Research Station strawberry harvest, in June. Late spring will also bring a variety of vegetable crops to our product list; including vegetables grown by Student Organic Farm and the Horticulture/Ag EdS 465 class.

Produce pickup is each Friday from 11:30 AM to 1:30 PM in the headhouse at Horticulture Hall, just inside the east loading dock.

Products available for purchase are sourced by various Horticulture Department research projects, classes, and multi-department student organizations. All produce for sale is grown at the Horticulture Research Station and is freshly harvested.

Where are we at with our current practices ?

- What we do now
 - Education
 - Field and Harvest
 - Storage facility
 - Wash equipment
 - Wash and/or Sanitize Produce
 - Deliveries



Education starts on day one



In the Field

- Im
- Co



In the Field

- Rules for harvesting
 - No cell phones
 - No Sick students
 - Separate harvest and delivery lugs



Punishment for using your cell phone while harvesting



Scout before harvesting

- Look for animal scat



Wikipedia



Harvest when it is cool



Storage Considerations

- Remove Field Heat (ASAP)
- Never wash warm produce
- Store washed and unwashed produce separately



Keep Equipment Clean



Washing produce

- Three methods to wash produce
 - Dunk tank
 - Apple washer/sorter
 - Drum root washer



Dunk Tank



Dunk Tank





Apple Washer/Sorter



Apple Washer/Sorter



The Drum Washer

Mostly made from repurposed parts
donated or scrounged.

Donated Parts

Composting machine

Donated by Dr. Thomas Glanville
Professor in Agricultural and Biosystems Engineering



Donated Parts

24" Corrugated pipe

Donated by ISU Research and Demonstration
Farms



Scrounged Parts

- Wood
- PVC
- Caster
- Sheet metal
- V-belt



Purchased Parts

- Metal (~\$75)
- Spray parts (optional)
- Drive Pulleys (~ \$100)
- Mud flap (\$15)



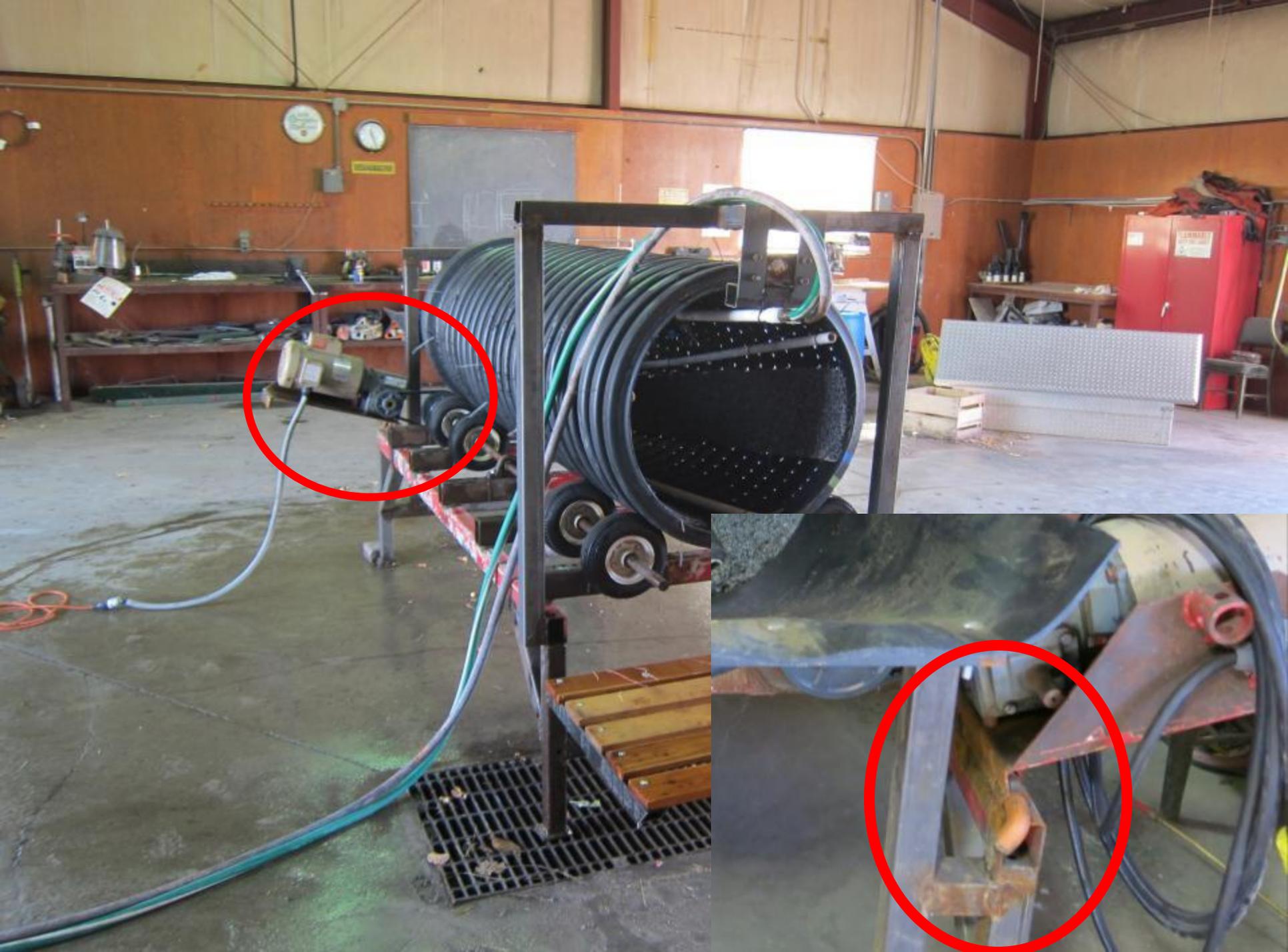
Our Build

and ideas to make your own drum
washer

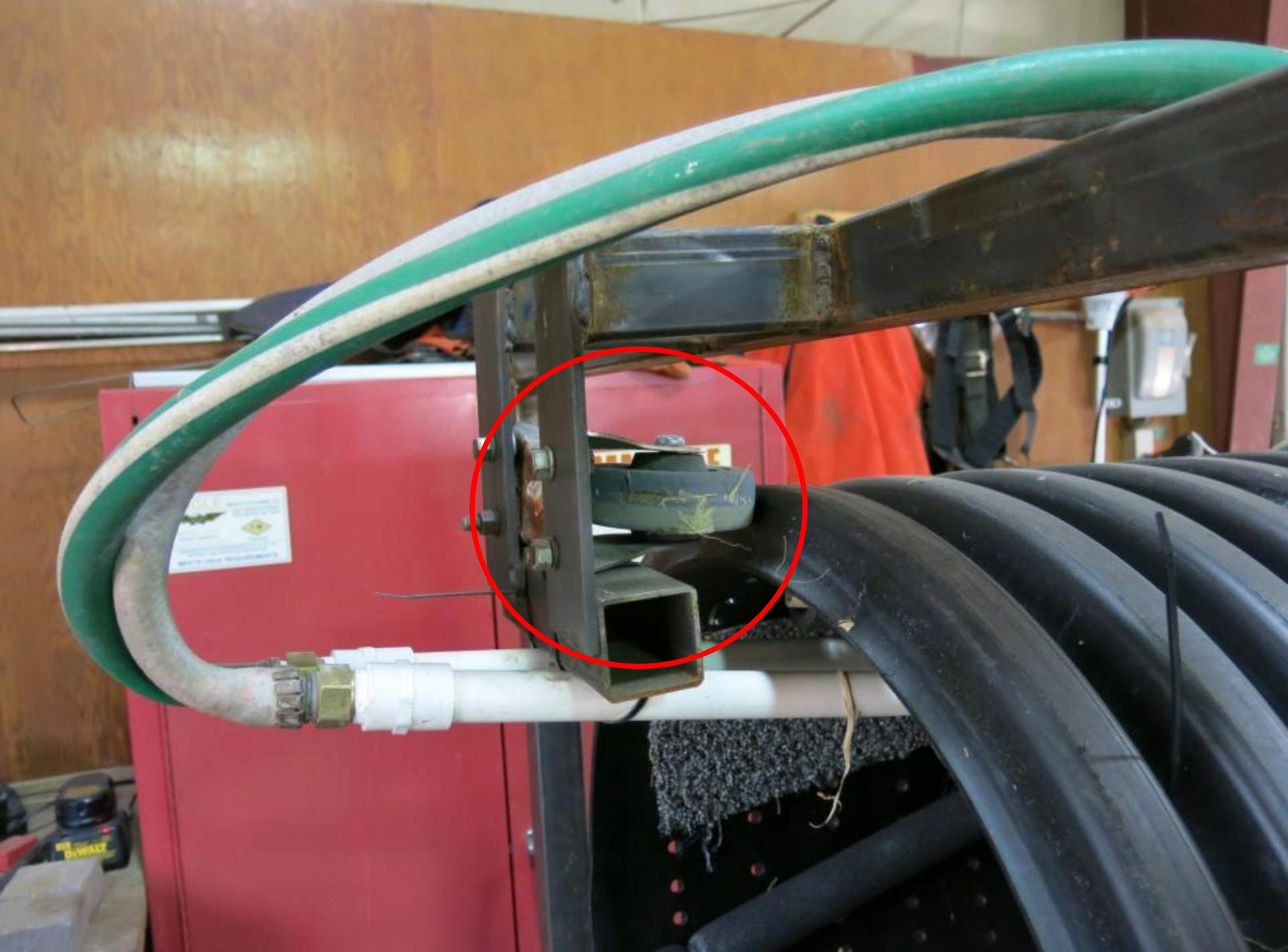








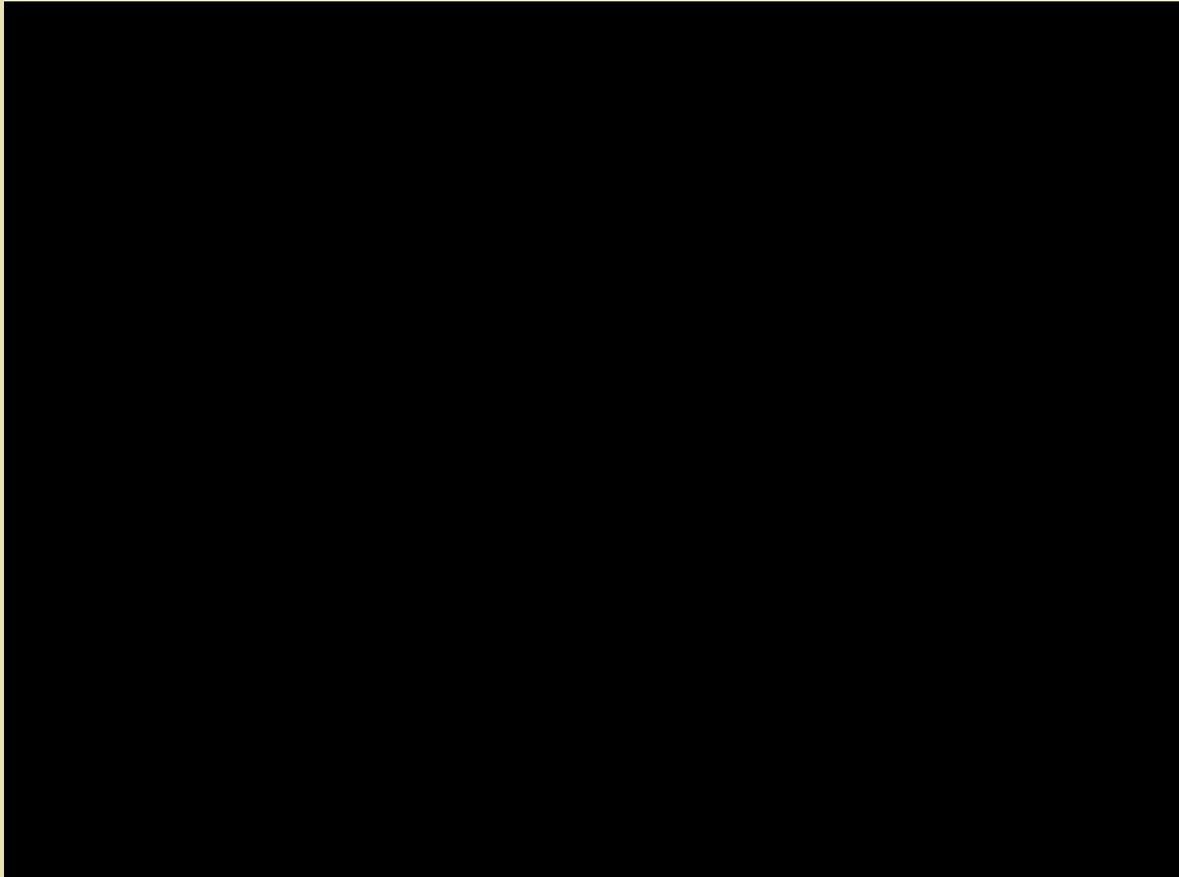








So...Does it work?



Improvements



More Improvements



Even More Improvements



Ideas to Build Your Own

- Parts needed
 - Frame
 - Motor
 - Casters
 - Barrel
 - Water pipe



Parts



\$250.00 Ebay



\$12.00 Theisens



Barrel Free?

Copy Others



<http://www.leopold.iastate.edu>

Turn Key Units and Kits



<http://www.deliciousmusings.com>

Specifications

Component	Spec
Barrel	30" x 96" Common Pine, Steel Hoops
Base	30" x 96" Aluminum (no legs)
Motor	<i>Choice of...</i> <ul style="list-style-type: none">• Fixed speed 1/4 hp 120v Baldor with gear reducer, direct chain drive to barrel.• Variable speed 1/3 hp 120v DC with variable speed.
Nozzles	3/4" Copper tubing with 1/16" holes for washing, hooks up to garden hose.
Weight	Approximately 250lbs.
Shipping Weight	350lbs.
Price	<ul style="list-style-type: none">• Fixed speed \$2,550• Variable speed \$2,950• Fixed speed kit \$2,150• Variable speed kit \$2,550

**Prices quoted are FOB Pulaski, NY.*

[Contact us for more information about ordering root crop washers.](#)

What needs improvement?

- Our plans for the future
 - Develop SOP's for all crops
 - Water testing
 - Better tracking
 - Record keeping
 - Sanitize all produce
 - New equipment



Thank You

