

Best of Brushes, Brooms, Bins & Beyond

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Ag
ENGINEERING

Containers: Totes, Lugs, Cartons, Bins, Boxes

- What crops?
- How much?
- Drain holes or a solid bottom?
- Vented sides?
- Cleanable?
- Durability
- Can you easily label?
- Light blocking and UV resistance
- Stacking/Nesting?
- Different colors?
- Is the container ergonomic?



Bulb crates

- Very common
- Typically rigid
 - Collapsible options available
- Typically 1 to 1-1/9 bushel
- Stack easily and well when used
- Secure
- Vented sides and bottoms
 - Cooling
 - Draining
- Easy to clean
- **Take up a lot of room when not in use since they don't nest very well**



\$5-10 per crate new for rigid style
(as low as \$1-2 per crate used from bulb dealers)
\$15-30 per crate for collapsible
("RPC" = returnable plastic crate, "multi-use", "shellfish box")



go.uvm.edu/totes

Bulb Crates

Solid



Collapsible



Harvest Containers



Harvest Tote



Harvest Tote



Harvest Lugs



Fish Baskets

“Red” and “Yellow” Lugs

- Stack easily and well when used
- Nest when not in use
- Secure
- Open or vented sides and bottoms
 - Cooling
 - Draining
- Easy to clean



“Agricultural container”, “Harvesting container”, “Agricultural baskets”, “Lugs”

Available from Brookdale

Red \$16.50

Yellow \$13.50



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Storage Containers (Flip top totes)



Buckhorn



Global - Plastic Hinge



Handle Shape



Textured Bottom

Flip-top totes

- Increasingly popular
- Rigid body with hinged butterfly lid
- Stack easily and well when used
- Nest when not in use
- Secure
- Open or vented sides and bottoms
 - Cooling
 - Draining
 - Retain humidity
- Easily labeled
- **Moderately easy to clean**
- **More expensive than some other options**



“Buckhorn”, “Handheld containers”, “Attached Lid Containers”

New: \$10 per tote direct, \$5,000 min order.

Local Resale: \$13-16 (new, surplus from a grower order)

Online retail: \$15-17 (Global, etc.)



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TOP OUTSIDE L"	TOP OUTSIDE W"	TOP OUTSIDE H"	TOP INSIDE L"	TOP INSIDE W"	H"	CAPACITY LBS. ALONE	CAPACITY LBS. STACKED	STACK QTY.	HINGE TYPE	COLOR	IMAGE	MODEL	PRICE
19-5/8	11-9/16	7-1/4	17-11/16	9-7/8	6-1/4	35	175	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$13.50
21-7/8	15-1/4	9-11/16	20-1/8	14-5/16	8-3/16	45	225	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$14.75
21-7/8	15-1/4	12-7/8	19-11/16	14	11	50	250	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$15.50
27-1/4	17-1/8	12-1/2	25-1/8	15-1/2	11	50	250	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$18.00
17-3/8	13	14-5/16	15-3/16	11--13/16	13-1/2	40	200	5	Metal Hinge	Gray		T9F270281GY	as low as \$18.25
22-3/8	13	13	20	11-5/16	11-3/4	45	225	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$18.25
21-7/8	15-1/4	17-1/4	20-1/8	14-5/16	15-3/4	45	225	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$18.50
23-7/8	19-1/2	12-1/2	22-1/8	18-1/8	11	50	250	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$19.00
25-1/4	16-1/4	13-3/4	23-1/4	14-1/2	12-1/4	45	225	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$21.00
28-1/8	20-3/4	15-5/8	26	19	14	60	300	5	Plastic Hinge	Multiple Options		Multiple Models	as low as \$32.95

Pallet Bins



Decade



Foldable



Macro Bins



Decade



Macro Bins



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Review Videos



The image displays three video thumbnails arranged horizontally. Each thumbnail features a man in a green shirt demonstrating a product. The first thumbnail shows him opening a grey insulated box. The second shows him holding two mesh baskets, one orange and one blue. The third shows him handling a grey storage tote. Each thumbnail includes a title, a description, and a duration.

Video Title	Description	Duration
LIVIRI IMPRESSIONS	Durable, Shippable, Insulated Produce box by...	8:01
HARVEST CONTAINERS	Harvest Containers for Produce Farms	22:19
FLIP TOP TOTE REVIEW	Storage Containers For Produce Farms	11:22

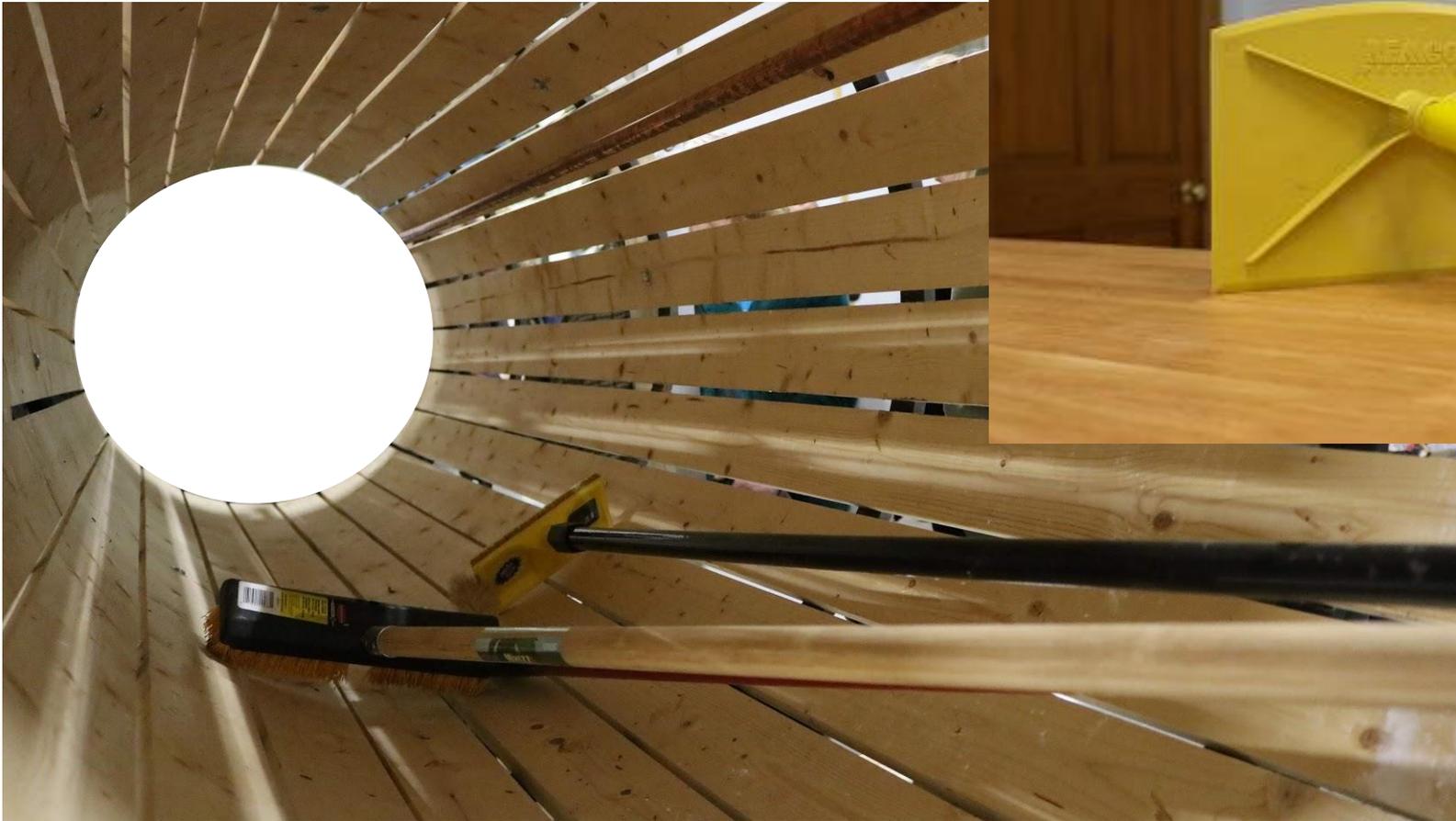
Bins - Cleaning and Sanitizing

- Have a plan and a procedure
 - Determine the need for cleaning
 - Scheduled?
 - Visual observation?
 - Quick “reset” cleaning SOP
 - Deep Clean SOP
- Keep tools, cleaners, and sanitizers in a known spot.
- Tools should be dedicated to the cleaning and sanitizing task, and should be cleanable themselves.
- Pay close attention to hard to reach spots, nooks and crannies.
- Allow for complete air drying.
- Keep under cover and away from contamination sources such as birds and rodents.



... and 5. Dry!

Food Hoe



go.uvm.edu/barrelwasher



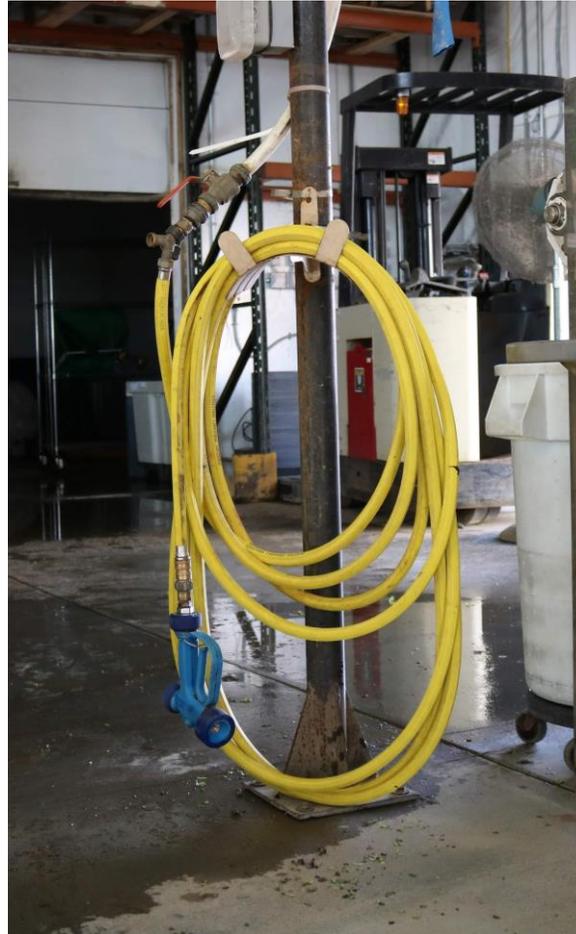
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Sieve Shovel

Hoses & Nozzles

- Consider quality for point of use
- Hose diameter/Flow Rate
- Use of Quick Connects





Hose Trolly's & Reels

Wheels

Ergonomics

Quality

Eases mobility for:

- Loading/Unloading
- Relocating
- Cleaning
- Multi-use dollies
- Carts





Conveyors: Box or Roller Conveyor

- Shelves
- Spray Tables
- U-boats/dollies
- Cart



Wire Racking

Cleaning tools

- “*What are you cleaning?*”
- Tools should be cleanable
- Consider color coding
- Easily accessible
- When to replace?



Cleanable Cleaning Tools



“UST” from Vikan, Remco, Nelson James, etc. \$10-80.

Cleanable Cleaning Tools



“UST” from Vikan, Remco, Nelson James, etc. \$30.

Full List of Useful Tools



- Brushes
- Brooms
- Scrapers
- Squeegees
- Mops, Sponges & Scrubbers
- Buckets & Caddies
- Accompanying Tools
- Labeling
- Color Coding
- Purchase Locations
- Video Overview



Vikan/Remco Tools



Cleaning Tools for Pallet Bins



Cleaning Tools for: Flip-Top Totes

Bottle/Tube Brush

Narrow Bristle Brush



Cleaning Tools for: Harvest Lugs

Short handled
brushes



Cleaning Tools for: Bulb Crates

Round handled brush

Variable stiffness





Brooms “Deck Scrubbers”

Cleaning Tools for: Drains



Cleaning Tools - Tube Brushes



Squeegees

- Water happens
- Drying is important
- Aides in drying
- Slip/trips/falls



Cleaning Tools: Squeegees



Organization



Suggested Color Codes For Produce Farms

-  Green – Wash Line Equipment
-  Yellow – Packshed (Floors, Walls)
-  Blue – Cold Storage
-  White – Product Contact
-  Black – Drains
-  Orange – Animal Area
-  Red – Bathrooms
-  Grey – Trash
-  Purple - Kitchen/Break Area
-  Pink/Lime – Custom/Free Choice

Go To
Recommendations
from Produce
Growers



Farmer's Favorites: Cleaning Tools

- User Reviews
- Best bang for the buck
- Specific use cases
- Harvest Crates
- Pallet Bins
- Sinks, Tanks & Tables
- Rinse Conveyor
- Packshed
- Drains

Post Harvest Case Studies

13 farms

3 formats: Blog Post PDF Video
(starting to use 360° photo tour)



“A behind the scenes podcast where we visit with farmers and learn what it takes to be a sustainable produce grower across people, profits and our planet.”

A collage of black and white photographs of various farmers and growers, arranged in a grid-like pattern around the central text. The photos show people in various settings, some wearing hats and sunglasses, representing the diverse voices featured in the podcast.

The FARMER'S Share

with Andy Chamberlin

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Contact Us

- Questions
- Comments
- New Ideas
- Packshed Innovations
- Put our suggestions to use?

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