## Bags, Liners and Bins

Chris Callahan Andrew Chamberlin Hans Estrin ...and the Growers of the VVBGA! December 2, 2020

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# **Recurring Questions on the Listserv**

- What kind of bags do people use for
- Where do you get them?
- How much \$?



# **Key Points**

- Depends on the crop, scale/volume, movement, and storage plan.
- Plan way ahead on purchases.
  - Often involves quotes and shopping around for best price, selection, and availability.
  - Buddy buying can help bring cost down, but can also be a real drag.
- What is your plan for cleaning and sanitizing?



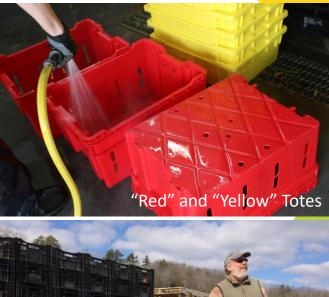
#### **Containers: Totes, Lugs, Cartons, Bins, Boxes**

- 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?

go.uvm.edu/totes











#### **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

go.uvm.edu/totes

- 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'")



### **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
- go.uvm.edu/totes



"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.)

EXTENSION

TOP OUTSIDE L"	TOP OUTSIDE W"	TOP OUTSIDE H"	TOP INSIDE L''	TOP INSIDE W''	Н"	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	VIII	Multiple Models	as low as <b>\$13.50</b>
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 <b>\$14.75</b>
21-7/8	15-1/4	12-7/8	19-11/16	14	11	50	250	5	Plastic Hinge	Multiple Options	W	Multiple Models	as low as <b>\$15.50</b>
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 <b>\$18.00</b>
17-3/8	13	14-5/16	15-3/16	1113/16	13-1/2	40	200	5	Metal Hinge	Gray	h	T9F270281GY	as low as <b>\$18.25</b>
22-3/8	13	13	20	11-5/16	11-3/4	45	225	5	Plastic Hinge	Multiple Options	T	Multiple Models	as low as <b>\$18.25</b>
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 <b>\$18.50</b>
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 <b>\$19.00</b>
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	The second se	Multiple Models	as low as <b>\$21.00</b>
28-1/8	20-3/4	15-5/8	26	19	14	60	300	5	Plastic Hinge	Multiple Options		Multiple Models	as low as <b>\$32.95</b>

#### Global Industrial (<u>www.globalindustrial.com</u>)

#### "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

EXTENSION



#### **Pallet bins**

- For larger volume, bulk storage.
- Beyond handheld!
- Stack easily and well when used
- Collapsible options available
- Open or vented sides and bottoms
  - Cooling
  - Draining
- Difficult to clean well, but generally easier to clean than wooden bins



"Macrobin", "Decade bin", "Intermediate Bulk Container (IBC)" \$130-170 per bin typically Rental options are available

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#### **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 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.



#### **Bags and Liners**

- Storage vs. Marketing
- Size Capacity
- Solid vs. Vented
- Clear vs. Opaque
- Material
- Closure
- Reuse
- Liners as a Food Safety Practice





### **Clear Poly**

• Available everywhere...

...even where we don't want them.

- Lots of sizes and options
- Gusseted vs. flat? 3 dimensions vs. 2.
- Side gusset vs bottom gusset
- Can be used as liners in bins



2 or 4 mil polyethylene or polypropylene. Loads of sizes. New via ULine, etc. \$0.01 – 0.10 per bag in qty's of 500 or 1000. Cheaper/higher quantity – Atlantic Poly, etc.



#### **Perforated or Vented Storage Poly**



"We source our 25lb bags from intro pak in Quebec (http://www.intropak.com/). A very nice perforated bag at a good price. We just put bag holders on a floor scale and bag right into that. Bags are tied with copper bag ties..."

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FXTFNSI



#### FreshZip Vented zipper standup pouch.

\$32.99 for 250 from Webstaurant.com. (\$0.13 per)

#### **Plastic Woven**





"poly woven" " woven poly" "woven plastic" "sand bags" "grain bag"
New: ULine (photos, 14"x26", 50 lbs) \$39 per 100 (\$0.39 per bag), Gemplers: \$1.00 per bag in qty of 25 (18"x30").
Used: Often used for shipping seed. Lawes Ag "has 1000's that we throw away each year, would like to find a useful purpose for them."

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#### **More Sustainable Options?**

Biodegradable

Compostable

#### Non-single use plastic

nashvillewraps.com





clearbags.com

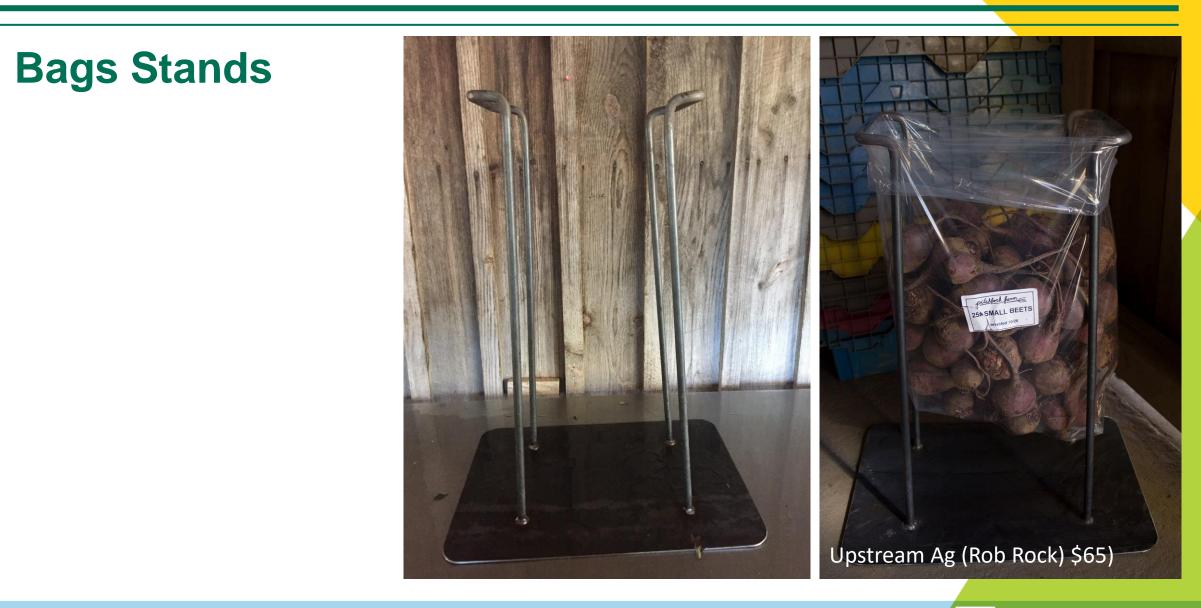
Gusseted vs flat? 3 dimensions vs. 2



Typically corn or wood derived polymer. Polylactic acid is one. Often not clear, but can be.

\$25.99 for 200 dog poop bags. \$0.13 per bag from byndgrn.com \$31.35 for 100 6"x3"x13" from ClearBags \$0.31 per bag \$14.95 for 100 5"x2.5"x11" from Nashville Wraps. \$0.15 per bag.







#### Weighing / Bagging Tables



Stainless steel tables and a kitchen scale. \$400.



DualPack Weighing / bagging table from Charlie's Machinery & Supply. \$7,000.



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