Low Cost Rodent Control in storage

VVGBA January, 2015
Mighty Food Farm
About Mighty Food Farm

• Pownal, Vermont (SW corner)
• 18 acres mixed veggies and strawberries
• High tunnels for spring, summer, winter production.
• CSA, farmers markets, wholesale
• Certified Organic
• 8 years running
• 9 seasonal, 2 full year employees
Why we had rodents and how bad it was.

• OLD FARM!
• Farm had been “abandoned”
• No infrastructure in beginning for proper storage
• Poor overall infrastructure; old barns, cracking, and failing floors.
• Rats running around during daylight = big problem.
• Especially problem in farmhouse basement where we had root cellar storage.

• Tons of produce disposed of.
  • Winter squash
  • Potatoes
  • Sweet Potatoes
  • Carrots/Beets in coolers
  • Tomatoes in barn
  • Chicken grain (when we did layers)
Sometimes it felt like this is what we were up against.....
Tried *Lots* of traps, baits, etc... *No* Luck!

- Snap traps
- “Organic” rat killer
- Sticky traps
- Milk buckets
- Have-A-Hearts
- Paint them White? (Farm Show)
- Cat and Dog

*Our old farm cat “Petunia.” Preferred rabbits.*
Incorporate Infrastructure to Exclude

• Hardware cloth = new best friend
• Lined storage spaces in barn with metal flashing and renovated some floors/walls
• Built “rat cages” in basement to store sweet potatoes, squashes, & potatoes.

Image shows outside of barns; poor stone foundation and rotting wood. Cute baby chicks.
Exclusion Cages

• Up front cost not too bad
• Had tried everything else
• Do not own property or have long lease so... not going to build barn, also too much $$$.
• Solution that was fiscally appropriate for us.
• Starting to grow more acreage and needed secure storage for produce.
• Food Safety
Cage Specs

• 3 winter squash cages, 1 “insulated cage”
• 17’ x 41/2’ x 8’ = 612 cubic ft.
  • (L x W x H)
  • 497 square feet
  • Fits 4 standard pallets (40” x 48”)
  • 40 crates x 4 pallets = 160 crates or 6,400 lbs.
• 6,400 lbs. @ $1.25/lb. = $8,000.00
Cage Costs & Materials List

• About 500 square feet

• **LUMBER** (pine, rough cut)
  - 2 (4x4x18s) = $16.00
  - 1 (4x4x16) = $14.00
  - 18 (2x4x8) = $68.40
  - 4 (3/4 x 2 x 12) = $8.00 (optional)

• **HARDWARE CLOTH**
  - (1/4”x 48”x 50’) = $51.50/roll + ship
  - = $405.05 (for 4 rolls and shipping)

• Hinges and locks for doors = $30
• Screws (1 ½”) = $25
• Staples & Staple gun = $45
• Galvanized or other wire = $5
• **TOTAL** = $605.45
  - $0.99 cents/cubic foot
  - $1.21/square foot
Cage Building

• Build structure to fit space/easy access to produce
• 4x4s on the bottom for strong base, hardware cloth on bottom of cage.
• 2x4s for structure
• Using staple gun/wire cutters attach hardware cloth
• Attach hardware cloth pieces using wire to hold together
• Make sure no space is left open
• Optional – use ¾ trim to line edges
Basement with produce in cages
Staples

lots of them...

...Not Rocket Surgery
“ROOT CELLAR CAGE”

- Lined with Tekfoil
- Tekfoil stapled to lumber on inside
- Outside wall of stone foundation – spray foam insulation.
- Different temp.zone for onions and spuds.
- Largest “cage” – (24’ by 24’)
  - 15,000 lb. onion
  - 15,000 lb. spuds
Inside Root Cellar
- Spray foam
- Window = temp ctrl.
- 40 degrees/70 RH
Pros & Cons

**Pros**
- No rodent damage
- Time consuming to build but virtually maintenance free
- Low cost
- Great for smaller grower with poor infrastructure

**Cons**
- Hardware cloth difficult to work with
- Does not kill rats
- Cannot move once built, *unless design is smarter than what I did*
- Staple guns jam often
Ongoing Controls

- Dogs and cats
- Setting traps – chart
- Killer Bait
- Sanitation
- Cage checks for holes
Best control on farm, ...(GAP certified)
Thank You for listening!