

Building Better Shelters For Your Flock

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Our Topics

- Keys to pasture production
- Overview of Pastured Poultry Production Types
- Salatin shelter
- Hoop houses
- Egg Mobiles
- Layers, Turkeys
- Economics

Keys to Pastured Production

- Managed pasture rotation
 - Rotation is critical
- Outdoor production expected
- Low stocking densities and low stress
- Balanced feed (more than forage) and clean water

Pastured Poultry Require

- Shelter
- Predator protection
- Efficient feeding and water systems
- Fresher pasture = greater consumption AND health
- “Just pasture is not enough. It must be fresh.”
- Source: Pastured Poultry Profit\$ by Joel Salatin

Advantages of Pastured Production

- Supplemental forage
- Low stress densities
- Ensures hygiene —the rotation keeps the birds on clean pasture
- Prevents denuded areas
 - Dust in the dry heat
 - Mud in the rain
 - Pathogen laden
 - No forage gain

Welfare Considerations

- Protection from predators
- Protection from weather, including shade
- Well ventilated
- Enough space to accommodate entire flock
- Roosts where appropriate
- Nest boxes for layers/breeders
- Ability to move birds to unsoiled pasture often

Fixed Housing

Pros

- Good brooders
- Winter housing

Cons

- Unrotated pastures —bird and pasture health concerns
- Too small or too big to efficiently graze
- If rotation possible, not scalable
- Litter Labor —more of it and removal

“It is better to totally confine the animals in a well-lighted, well ventilated facility than to confine them in a barn with continual access to an adjacent exercise yard.” —Joel Salatin, Pastured Poultry Profit\$

Day Range Housing

Pros

- Less daily labor
- Slightly more dense
- Promotes “feel good free range” image
- Works well for layers and turkeys
- Works well in uneven or forested pastures

Cons

- Easily turns into fixed housing
- High avian predation risk
- Denuded high traffic areas
- Requires portable fencing and chargers
- Need to add shade structures
- Guard animal strongly encouraged
- Worse FCR

Daily Move

Pros

- Maximize fresh forage
- Precision manure management
- Predator protection
- Ensures pasture rest
- Naturally shaded
- Better FCR

Cons

- Easy to under/over build shelter (too light, too heavy, unmovable, too small)
- Daily labor to move shelters
- May require large # shelters

Stocking Density Guidelines

- Daily move housing
 - Broilers: 1.5 to 2 sq. ft. to 8 weeks; 3+ sq. ft. at 16 weeks
 - Layers: 3-5 sq. ft.
 - Turkeys: 6 to 8 sq. ft.
- Day range
 - Paddock offers additional space
 - Shelter should provide enough space for birds to all be under cover for roosting or protection from weather
- Experience and pasture influence density

The Salatin ~~Pen~~ Shelter

- 10'x12'x2'
- Broilers, layers and turkeys (30" high)
- Approximately 75 broilers
- Teaches us key points about building shelters:
 - Reduce weight by using bracing
 - Portable, inexpensive shelters key to success
 - Overbuilding is as bad as underbuilding
- Many people start here, but fail the build
 - I did

Salatin Shelter Build

- Lightweight, strong bracing:
 - 1x6 ripped in half for long sides
 - 1x6 ripped in thirds for all braces (front, back, sides, top)
 - 2x4 ripped in half for front and back boards on bottom
 - Bottom wire connects sides to prevent bowing
- One end enclosed w/aluminum roofing
- Other end is open with 1" poultry netting
- Open end is two doors on top
 - 1 with netting, 1 with roofing
- Requires dolly

Dolly Specs

- Many shelter design makes use of this dolly
- It's a lever on an axle
- 4x4 constructed of ½" pipe
- 8" wheels
- Axle only a couple of inches off ground
- Move a pen in 30 secs
- Source: *Pastured Poultry Profit\$*

Salatin Shelter



Shelters at Polyface. Solid back faces west. Door in front. Ripped 2x4 diagonal braces. Note the water and feed staged near shelters.

Salatin Shelter Improvements

- Ventilation in hot weather
- Smaller foot print for ease of handling/transport
- Creative Growers design with peaked roof

Other Takes on Salatin



Creative Growers design used for brooding here. Able to stand up.



Variations of custom fabricated shelters built from angle iron. Shown w/ turkeys. Needs dolly or machinery.



John McAuley's shelters. 8x8 with a 2x4 top frame; eliminates wire cross brace. Can be handled by young kids. Lift up panel in back to collect eggs; add ventilation for broilers.

Improved Salatin for Breeders/Hens in Texas

- 12x12x4 shown with Delaware breeder flock
- Roost in middle
- Nest boxes mount on side; roof of nest box lifts up to collect from outside. Not pictured.



Still a rectangle.

Cattle Panel Hoop Houses

- Forms high arched roof
- Easy to ventilate
- Inexpensive, lightweight, and easy to build
- Multi-purpose
 - Broilers, layers, turkeys, ducks
 - Rabbitry
 - Pasture shed
 - Brooder
 - Day range or daily move
- Modular designs
 - Add panels to make larger
 - Remove panels to make smaller

Two Favorite Cattle Panel Designs

- Two favorite designs
 - Plamondon hoop house
 - 8x9 foot print (50 broilers)
 - Skid design can be moved w/o dolly!
 - <http://www.plamondon.com/hoop-coop.html>
 - Hansen cattle panel
 - 8.5 X 12 (65 broilers)
 - Inexpensive, easy to build
 - <http://apppa.org/pastured-poultry-articles>



Cattle Panel Build



My Shelters



Hoop house worked so well, I put it on wheels for some hens. Note the feeder heights.

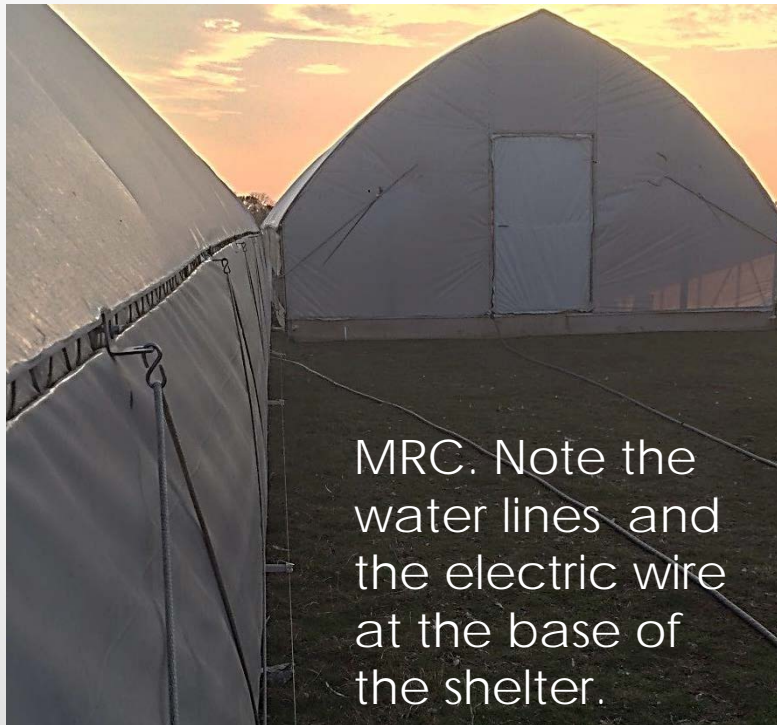
Hansen Cattle Panel

- Longer (12') front/back creates a lower arch
- Original design did not have door
 - step hog panel front
- Uses dolly/wheels



Large Scale Daily Move

- Mobile Range Coop —Cobb Creek
- Prairie Schooner —Featherman Equipment
- Up to 600 broilers, 200 layers



More Range Coops



Harvey's Homesteader A-Frame

- Courtesy of Harvey Ussery
- Complete build in "*Small Scale Poultry Flock*"



8' 3" x 9' A-Frame design. Can be used for day range or daily move. Holds 50 hens in a day range setup.



Withstands wind and weather well.

Day Range: Egg Mobiles

- Repurpose many items: running gear, old campers, craigslist trailers, wagons, etc.
- Dense birds per sq. ft. (1 bird per sq. ft.)
- Protect from predators: dogs, geese, fence,
- Intensive and extensive models at Polyface



Layer Considerations

- Roosts: 8" per hen; bars 12" apart; height < 3' at same height
 - 200 birds requires 1600" or 133' of roosts
- Automatic doors (2)
- Supplemental light
- Roll out nests boxes
- Wood slatted floors



Egg mobile at UC Davis. Roll-up tarps provide ventilation and weather protection. This egg mobile doubles as brooder.

<http://tinyurl.com/hek6ms2>

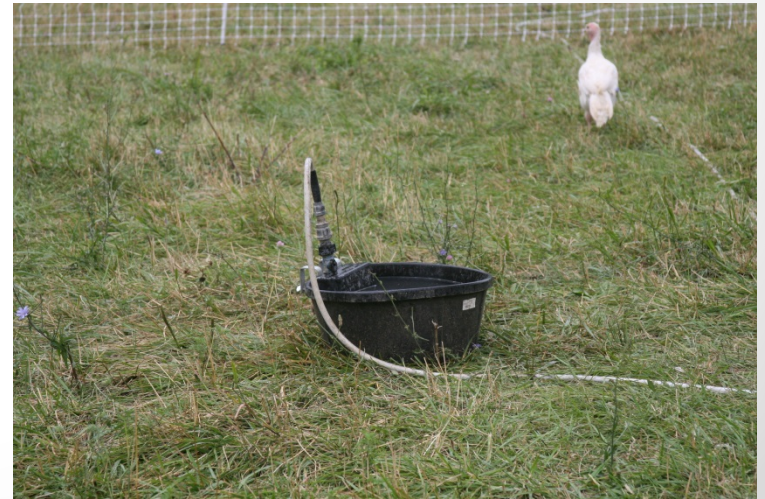
Clever Roll-Outs

- This a day range in a semi movable house
- Shown for the clever 5 gallon pail roll-out nests



Turkeys on Range

- Turkeys roosts at Polyface
- Brood for 3 weeks; daily move shelter till 6-7 weeks; on range 7 weeks to slaughter
- Minimal needs after 7 weeks



Economics of Housing

- Mike: Tends 150 broilers (3 shelters) in 30 mins./day
- Grady: Tends 600 broilers (1 shelter) for 20 mins./day
- Polyface: Tends 70 broilers (1 shelter) for 5 mins./day
 - 1 min move, 1 min water, 1 min feed, 2 minutes in evening
- *Your printouts have some typos!!*

First Year Return On Investment

- Hoop House
 - \$150 in materials and labor to build hoop house
 - 1 batch of 50 broilers x \$3 profit = \$150
 - 4 batches per year x \$150 = \$600 profit per hoop house
 - \$150 returns \$600
- Mobile Range Coop
 - \$7500 total cost
 - 1 batch of 600 broilers x \$5 profit = \$3,000
 - 3 batches x \$3,000 = \$9,000 (recovers cost)
 - 10 batches/year in each MRC = \$30,000 profit
 - \$7,500 investment returns \$30,000
 - Numbers courtesy of Grady Phelan

Value Added Construction

- Recycled billboard tarps
- Never nail; use drywall screws
- DIY rollout nest boxes
 - <http://apppa.org/pastured-poultry-articles>
- Portable wheel systems (not an endorsement)
 - Detachable wheel system from Planesight
 - <http://planesights.com/detachable-wheel-system-p-45.html>
 - Egg Cart'n wheel lift
 - <http://www.eggcartn.com/wheel-lift-unit>

Featured Resources

- Pastured Poultry Talk Podcast
 - www.pasturedpoultrytalk.com
- American Pastured Poultry Producers Association
 - www.apppa.org
- Processing and Production Equipment
 - www.millsidefarm.com
- Books Referenced
 - *Raising Poultry on Pasture* (See Mike for a copy or apppa.org)
 - *Pastured Poultry Profit\$* by Joel Salatin
 - *Small Scale Poultry Flock* by Harvey Ussery