

POULTRY PLEASURE OR PROFIT

CURT CAMPBELL

PURDUE EXTENSION EDUCATOR

ANR

WABASH COUNTY





N





How did the farmer meet his wife?



EXPERIENCE

- 4-H POULTRY JUDGE – 20 YEARS
- COACHED POULTRY JUDGING TEAMS 15 YEARS
- RAISED POULTRY AT HOME 18 YEARS
- AG TEACHER AT SOUTHWOOD HIGH SCHOOL – 30 YEARS
- Purdue Extension – since 2008

BEFORE YOU START

- Any local restrictions
- What type of birds?
 - Meat
 - layers

DECIDE YOUR PURPOSE

- Provide fresh eggs or meat for family use?
- Hobby?
- MAKE A PROFIT?
- Marketing Plan ?

Range Production vs Traditional

Meat birds ?

Layers ?

Free Range Production



Free Range Systems

- Fixed House - Can be large in size – not moved - access to pasture
- Portable Houses – Small since they are built to be moved regularly. At least once a week.

Define Free Range

- USDA has no specific definition except eggs labeled “free-range” must submit a brief description of the housing to USDA to determine that the poultry have access to the outdoors for at least half their lives.

Guntrup Farms Free Range



Guntrups



3 week old broilers



Gunthrop Farm

<http://www.gunthorpfarms.com>



Chicken Tractor



Chicken Tractors



Garden





Nest Boxes



Shipshewana



Cadillac chicken Tractor



NESTING BOXES



Hawkins Family Farm

<http://hawkinsfamilyfarm.com/>
Pizza on Friday night



Organic Poultry

- Organic Program requires outdoor access as well as use of organic feeds, preventive health care practices, and prohibits use of antibiotics.



Organic Poultry

- Organic corn
- No mammal or poultry protein
- Roasted soybeans or expeller processed soybean meal
- Mineral & vitamin supplements
- Fish meal (but no synthetic antioxidants)
- No non-organic animal fat
- Organic oils (soy oil from organic beans)
- No medications in feed

Traditional Housing

- Location on property
- Potential threat of predators: dogs , raccoons, coyotes, opossum , etc.
- Fencing: small enough to prevent mink , weasels, etc.
- Availability of water and electricity
- Chicken house already on property

SPACE NEEDED

- PER BIRD = 3' x 3'
20 BIRDS WOULD NEED
180 SQFT WHICH WOULD
EQUAL 10' x 18'

This is needed if your are raising them indoors.

Broiler Contract production

- Contact Miller Poultry
- **1-800-532-4186**
- <http://millerpoultry.com/potential-grower-information/>

Miller Poultry – New Broiler Grower Projected Income Statement* One, Two and Three Barn Scenarios

	One Barn	Two Barns	Three Barns
Gross Income (6.5 flocks/year) (Does not include sale of manure)	\$76,474	\$152,948	\$229,422
Utility Cost/Month (Estimated)			
Heat (Miller fuel allowance covers this)	\$0.00	\$0.00	\$0.00
Electric \$500	\$6,000	\$12,000	\$18,000
Misc. Costs/Month (Estimated)			
Supplies/Repairs \$35	\$420	\$840	\$1,260
Property Expenses/Annual (Estimated)			
Taxes \$3,000	\$3,000	\$6,000	\$9,000
Insurance \$1,350	\$1,350	\$2,700	\$4,050
<hr/>			
Cash Available for Debt Service	\$65,704	\$131,408	\$197,112
Debt Service (4.5%, 10yrs) **	(\$49,841)	(\$106,000)	(\$162,159)
Net Cash Flow	\$15,863	\$25,408	\$34,953

**Estimated loan terms for illustration purposes only. Financing is the responsibility of the contracted grower.

Miller Poultry – New Broiler Grower Projected Capital Investment* One, Two and Three Barn Scenarios

	One Barn	Two Barns	Three Barns
Broiler Chicken Barn	\$225,000	\$450,000	\$675,000
Excavation (Estimated) ***	\$25,800	\$51,600	\$77,400
Well	\$8,000	\$16,000	\$24,000
Barn Equipment (Feed/Water lines, Environmental control equipment etc.)	\$170,574	\$341,148	\$511,722
Generator	\$15,000	\$30,000	\$45,000

Total Estimated Capital Investment	\$444,374	\$888,748	\$1,333,122
---	------------------	------------------	--------------------

***All figures are for demonstration purposes only. The figures above are representative of current average costs and earnings as of May 2014. Actual figures will vary based on actual feed conversion rate and actual costs.**

What does Mean Cage-free, free-range , organic

Cage-Free eggs

- Cage-free eggs are eggs from birds that are not raised in cages, but in floor systems usually in an open barn. The hens have bedding material such as pine shavings on the floor, and they are allowed perches and nest boxes to lay their eggs. However, they may still be at close quarters with many other hens -- just not in cages. That depends on the farm.

Free-Range eggs

- Free-range eggs are laid from hens that have the opportunity to go outside. Smaller farms may keep birds outside under a canopy area. They may travel in and out of a barn at free will or spend some portion of their day roaming outdoors.

Organic eggs

- Organic eggs are laid from hens that may be kept in any kind of caging system, but generally are cage free. They eat an organic feed and don't receive vaccines or antibiotics .
- In order to qualify for USDA organic certification, the grains used for the hens' diets must be produced on land that has been free from the use of toxic and persistent chemical pesticides and fertilizers for at least three years.
- Genetically engineered crops are not permitted, and hens must be maintained without hormones, antibiotics , and other intrusive drugs.

Pasteurized eggs

- Pasteurized eggs are eggs in their shell that have been put through a pasteurization process where they are heated to 140 degrees Fahrenheit for three and a half minutes. Eggs are not required to be pasteurized.
- Pasteurization completely kills bacteria without cooking the egg. The process can also be done for packaged egg whites used in cooking.
- Eating pasteurized eggs is recommended for young children, the elderly, and people with weakened immune systems so they can reduce the risk of contracting a salmonella infection.

Where to get info

- **What is ATTRA?**

ATTRA - National Sustainable Agriculture Information Service is managed by the National Center for Appropriate Technology (NCAT) and is funded under a grant from the United States Department of Agriculture's Rural Business-Cooperative Service. It provides information and other technical assistance to those involved in sustainable agriculture in the United States. (ATTRA was formerly known as the "Appropriate Technology Transfer for Rural Areas" project.)

ATTRA WEB SITE

- www.attra.ncat.org/livestock.html#poultry
- Or google “attra ncat”

Reference book

- “Free-Range Poultry Production & Marketing” by Herman Beck-Chenoweth
- Go to website at:

www.Back40Books.com

My chicken houses

Run of the mill hens &
embryology

Breeder pen



Cages with Silies



White Rocks



Seeding Pasture

- Per acre – ½ - 1 lb Ladino Clover
 - 6 lb Medium Red Clover
 - 2 lb Alsike Clover
 - 6-8 lb Bromegrass
- Medium red clover, Kentucky bluegrass and orchard grass is a good mix

CHOOSING A BREED

Buff Orpington



EGG PRODUCTION

Breeds: Australorp

White Leghorns

Golden Comets

Rex Sex Links – Isa Brown

White egg layers - white ear lobe

Brown egg layer - red ear lobe

Eggs & Meat

- Breeds:

- Plymouth Rocks
- White Rocks
- Barred Rocks
- Wyandottes
- Orpington

LAY REASONABLY WELL AND LARGE
ENOUGH FOR MEAT PRODUCTION

Isa Brown

cross between Rhode Island Red & Rhode
Island White



Sources of Isa Brown

Townline Hatchery

4198 96th Ave, Zeeland, MI 49464

MEAT

- BREEDS

- CORNISH CROSS (WHITE CORNISH AND WHITE PLYMOUTH ROCK)

They reach 4-5 pounds in 6 weeks

And 6-10 pounds in 8-12 weeks

Alternatives to Cornish X

- Breeds - Freedom ranger – Red Ranger
- Delaware/Cornish Cross
- Advantage - Less legs problems

Make better use of pasture

Withstand heat better

Said to be better tasting?

Red Ranger /Freedom Ranger

- Freedom Ranger Hatchery
<http://www.freedomrangerhatchery.com/>
- Murray McMurray Hatchery
<https://www.mcmurrayhatchery.com/index.html>
- Cost about \$2.50 /bird less than 100 or about \$2.10 for more than 100

Alternative Broiler

- Noll's Poultry Farm, Kleinfeltersville, PA.
717-949-3560

white meat maker cross

- J.M. Hatchery, 178 Lowry Rd, New Holland, PA 17557 ; 717-354-5950

www.jmhatchery.com

WATER

- Most neglected and overlooked nutrient
- Always available
- Clean water : May contain millions of bacteria
- Clean weekly with chlorine like product to kill bacteria

Water

- 85 % of weight of young birds
- 65-70% of weight in adults
- 65% of egg weight





Water

- Requirements:
 - 1.5 to 3.5 parts water / 1 part dry feed
- Factors influencing consumption
 - a) salts
 - b) fiber content
 - c) ambient temperature
 - d) medications
 - e) disease state
- Quantitative (available & accessible) vs. Qualitative

WATER

- Winter : keep from freezing
- Summer : keep water cool or they will not drink.
- Summer is also a time of increased microbial activity – keeping water clean is more important.

APPLE CIDER VINEGAR

- ANYONE USE IT ?
- PROS & CONS ?

Choosing the right feed

<u>Minimum requirements</u>	<u>Protein %</u>	<u>Calcium %</u>	<u>Phosphorus %</u>
<i>Broilers</i>			
Starter (0-6 weeks)	23	0.9	0.5
Finisher (6 weeks to market)	10	0.8	0.5
<i>Pullets</i>			
Starter (0-8 weeks)	20	0.9	0.5
Developer (8 to 20 weeks)	14	0.8	0.5
<i>Laying Hens</i>			
Layer	16	3.0	0.5

Should I BUY or MIX my own DIET?



Forms of Feed

- Crumbles - chicken's favorite
- Pellets – less waste
- Mash – have option of mixing ingredients. Less cost ground in larger quantities

Purdue rations – Make your own

- Layers

corn (grind) , 70%

Soybean Meal 20%

Limestone 7%

Dicalcium Phosphate 2%

Microingredients 0.5%

Salt 0.4%

DL- Methionine 0.1%

Broiler Diets

- First two weeks

Corn (grind), 60%

Soybean meal 20%

Fat Inclusion (5% spent restaurant grease)

Limestone 2.1%

Dicalcium Phosphate 1.9%

Microingredients 0.5%

Salt 0.4%

DL- Methionine 0.1%

2-4 weeks (broilers)

- Corn (grind), 65%
Soybean Meal 25%
Fat Inclusion (5% spent restaurant grease
would be fine)
Limestone 2.1%
Dicalcium Phosphate 1.9%
Microingredients 0.5%
Salt 0.4%
DL-Methionine 0.1%

BROILER (4 weeks to slaughter)

- Corn (grind), 70%
- Soybean Meal 20%
- Fat Inclusion (5% spent restaurant grease would be fine)
- Limestone 2.1%
- Dicalcium Phosphate 1.9%
- Microingredients 0.5%
- Salt 0.4%
- DL-Methionine 0.1%

My Layer Ration

- Coarse Rolled corn – 400 lbs
- 38% Poultry Base Supplement – 160 lbs
- Calcium - 50 lbs
- This is what I get ground at elevator

Kent Feeds 38% Poultry base

Crude Protein, min	38.0%
Lysine, min	2.2%
Methionine, min	0.9%
Crude Fat, min	3.0%
Crude Fiber, max	4.5%
Calcium (Ca), min	2.5%
Calcium (Ca), max	3.5%
Phosphorus (P), min	1.45%
Salt (NaCl), min	1.1%
Salt (NaCl), max	1.6%

- Crude protein (CP)min 26%
- Lysinemin 1.5%
- Methioninemin 0.5%
- Crude fat.....min 6.0%
- Crude fibermax 4.0%
- Calcium (Ca)min 1.1%
- Calciummax 1.5%
- Phosphorus (P)min 0.8%
- Saltmin 0.4%
- Saltmax 0.5%

Selling Eggs

- If you sell directly from your house you do not need certification/license
- Selling at Farmers Market or other license is needed.
- Indiana State Egg Board Website:
<http://www.ansc.purdue.edu/iseb/>

Cleaning eggs ?

- Should all eggs be washed?
- Water temperature ?
- Soak or rinse ?

Proper Handling of eggs

Good reference from Virginia Tech :

http://pubs.ext.vt.edu/2902/2902-1091/2902-1091_pdf.pdf

Processing broilers

- From Cornell University : On-Farm Poultry Slaughter Guidelines : <http://smallfarms.cornell.edu/resources/>
- Handout with Local Processing meat bird processing

New Poultry and Egg Bill

- Producers must be slaughtering/processing fewer than 20,000 birds in the calendar year to qualify for this exemption. Producers slaughtering/processing up to 1,000 birds in the calendar year do not need to be registered with the Indiana State Board of Animal Health. Producers slaughtering/processing between 1,000 and 20,000 birds in the calendar year must apply for the 20,000-bird exemption. This exemption contains the same requirements as the 1,000-bird exemption with additional requirements for a facility to be approved and inspected biannually by the Meat and Poultry Inspection Division of the Board of Animal Health. *IC 15-17-5-11; IC 16-42-5-29*

Website for Selling Poultry meat :

<https://secure.in.gov/boah/2721.htm>

Added benefit / compost



Compost



Hatching eggs

- Storage – Don't store for more than 1 week
- Stored at 50-65 °Vegetable section of refrigerator
- Clean eggs – dirty eggs can contaminate other eggs but don't wash eggs – allows bacteria to enter through shell.

Hatching eggs

- Setting the eggs – hatch in 21 days
- Don't move eggs straight from storage to incubator allow to warm to room temperature first.
- Temperature of incubator 99-100
- Relative humidity 60-70% Increase to at least 65% last three days

Hatching eggs

- Don't touch eggs the last three days
- Don't open incubator the last three days and wait until all birds hatch on 21st day.
- Chicks hatched after 22nd day will not be healthy and vigorous.
- After chicks have fluffed up you can remove them.

Hatching eggs

- Turning eggs 3 to five times per day. I suggest getting an automatic turner.
- However the last 3 days they should not be turned.
- If turning eggs by hand make sure they are clean and not greasy

Incubators

- TSC/Rural King/Big R
Styrofoam incubators
Suggest you get egg turner & air circulator
- [Little Giant - 10200 Circulated Air Egg Incubator](#)
- **Price: \$82.00**
- [Little Giant - 6300 Automatic Egg Turner](#)
- **Price: \$46.75**



GENESIS Hova-Bator

Cost with Turner about \$180



Chicks



Where do I get Chicks?

- Locally Big R / TSC / Feed stores
- Internet – Google
- Poultry magazines
- I've had good luck with
 - Ideal Poultry 254-697-6677
www.idealpoultry.com
 - Murray McMurray 1-800-456-3280
www.mcmurrayhatchery.com

Chicks

- Most require you buy at least 25
- Straight run - means chicks aren't sexed – pot luck on males/females -
Cost less

Caring for Young chicks

- Localized brooding (localized heat source and access to cooler, unheated area)– needed for 3 weeks
- Best if arranged in circular boundaries
- Cardboard box can be used for small #'s

Temperature

- Very Important
 - 1-7 days - 90-95
 - 8-14 days - 85-90
 - 15-21 days - 80-85
- Too cool – huddling
- Too hot - panting

Additional tips

- I use old towels/T-shirts on floor rather than newspapers (to slick)
- When first starting I sprinkle feed on floor to get chicks started.
- I use electrolytes in water
- May want to get poultry grit

Indiana State Poultry Assn

Lots of good information

Website:

<http://inpoultry.org/btsonline.cfm>

Magazines

- Backyard Poultry – phone 1-800-551-5691
\$21 / yr Address: 145 Industrial Dr.
Medford, WI 54451
- Hobby Farms - www.hobbyfarms.com
Phone 1-800-627-6157
\$20/ yr