

A photograph of two men standing in a vegetable garden. The man on the left is wearing a dark blue baseball cap with a white letter 'A', glasses, and a light-colored jacket. The man on the right is wearing a light-colored baseball cap, glasses, and a blue denim shirt with 'Utah State UNIVERSITY EXTENSION' printed on it. They are both holding a large white chicken. The background shows rows of vegetable plants in a garden under a cloudy sky.

# CHICKENS IN THE VEGETABLE GARDEN

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Why did the chickens cross the garden?



# Why Chickens in the Garden?

- Benefits of chickens in the garden
  - Organic insect control
  - Organic fertilizer
  - Organic weed control
  - Meat with the vegetables



# Problems with Chickens in the Garden


- Death loss
  - Skunks, Raccoons, Dogs, Cats, Hawks, Weasels
- Vegetable damage
  - Chickens scratching and eating plants
- Expenses
  - Feed, water, shelter
- Processing/Winter care
  - Broilers need processing
  - Layers need winter feed and care

# Project Concept

- Garden fallow area
  - Take 1/3 of garden out of production
  - Grow chickens in fallow area
  - Use portable electric fencing to keep chickens safe and away from garden plants
- Rotate fallow area each year
  - Increase soil nutrients
  - Decrease weeds and insects



# Project Overview

- Spring 2009
    - Brood 60 broilers and 10 layers
    - Set up 2 garden enclosures
    - Pre sample soil and weeds
  - Spring/Summer 2009
    - Place 30 broilers and 5 layers in each enclosure
    - Grow broilers for 9 weeks
    - Process broilers
    - Post sample soil, weeds, and insects
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# Soil Nutrients

- Pre-samples
    - Routine plus Nitrogen and Organic Matter
    - Analyzed at USU soil lab
  - Post-samples
    - Inside chicken pen
    - Control area
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# Garden #1

NUTRIENT	G <sub>1</sub> PRE-SAMPLE	G <sub>1</sub> INSIDE	G <sub>1</sub> CONTROL
PH	7.25	7.2	7.12
SALINITY	0.88	1.26	0.8
PHOSPHORUS	93	122.6	106.9
POTASSIUM	240	403	292
NITROGEN%	0.12	0.15	0.14
CARBON%	1.52	2.1	2.02



# GARDEN #2

NUTIENT	G2 PRE-SAMPLE	G2 INSIDE	G2 CONTROL
PH	7.51	7.52	7.07
SALINITY	1.12	1.7	1.15
PHOSPHORUS	151	159.5	158.7
POTASSIUM	768	900	640
NITROGEN%	0.19	0.23	0.16
CARBON%	3.72	4.33	3.39

Garden #1 had 20% weed cover at chicken placement





Garden #2 had 40% weed cover at chicken placement



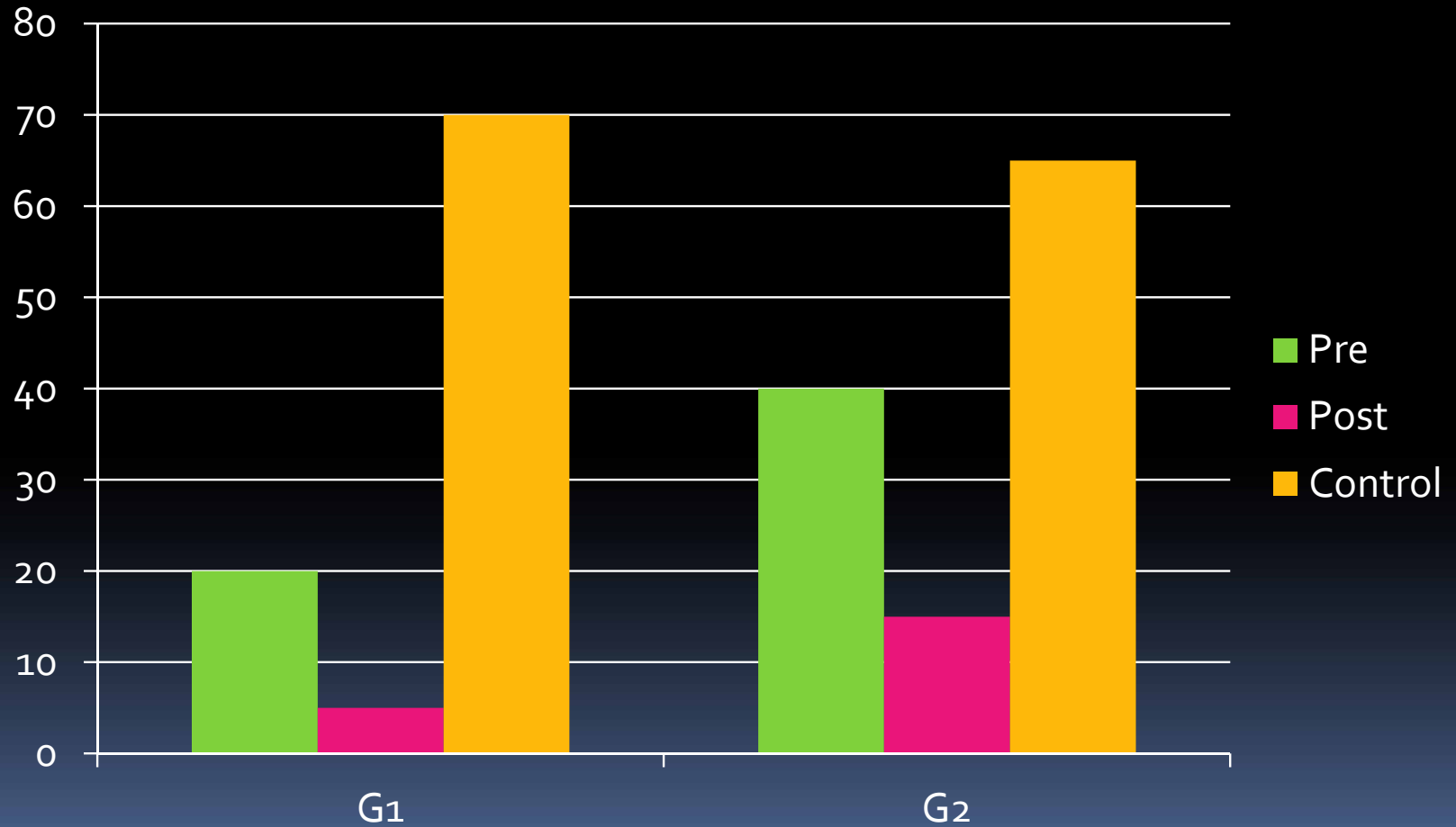


# Control vs Enclosure





# Weed Cover %





# Chicken Weed Control Observations

- Weeds controlled well
  - Field bindweed
  - Prickly lettuce
  - Blue grass
  - Storksbill
- Weeds partially controlled
  - Mallow
  - Whitetop
  - Scotch thistle







# INSECT COUNTS

	G1 Inside	G1 Control	G2 Inside	G2 Control
Sweep 1	1	8	0	5
Sweep 2	3	4	2	7
Sweep 3	0	7	0	8
Sweep 4	1	11	4	6
Total	5	30	6	26

# Pest Control Observations

- Chickens chase anything that moves
  - Ants
  - Worms
  - Caterpillars
  - Grasshoppers
  - Beetles
- Layers forage well



# Processing

Processed at 9 weeks



Averaged 4lb/bird



# Production/30 chicks

- Fixed Costs = \$562
  - Fencing, shelter, brooding and feed/water equipment
- Variable Expenses = \$210
  - Chicks, feed, processing
- Labor = \$740
  - 74 hours @ \$10/hr
- Meat Value = \$216
  - 27chickens \* 4lb = 108lb @ \$2/lb



# Bottom Line

- It will cost \$2/lb for the variable expenses
- It will cost \$2.50/lb to include fixed costs
  - Fixed costs with a 10 year depreciation
- It will cost \$14/lb to include fixed costs and labor
- Value for organic manure, weed control, and insect control?

Now you know why the chickens crossed the garden!

