

## **Utilizing back yard poultry production to reduce weeds and insects while providing soil nutrients and home grown food.**

### **Project Personnel**

Project Leaders:

Matt Palmer           USU Extension Agent in Sanpete County

David Frame           USU Extension Poultry Specialist

Collaborators:       Centracom Interactive

### **Situation**

Back yard gardening is very popular in central Utah. Most home lots have enough room to accommodate a vegetable garden. A great number of home owners grow vegetables in the garden to supplement family meals. Over the past few years, the cost of commercial fertilizer, herbicides, and insecticides has greatly increased. Also, many home owners desire to reduce or eliminate the use of commercial fertilizers and pesticides. Because of current economic situation there is an increasing number of people and communities exploring raising chickens in small acreage environment. Reason is to reduce dependency on outside food source. There are undocumented comments in popular literature touting that raising of free range chickens substantially reduces or eliminates need to provide commercially-prepared feed. We get questions from constituents asking if there is information that verifies or refutes this claim.

Findings of our previous study suggest that chickens raised in a garden 1) increased soil nutrient content, 2) decreased insect population, 3) decreased weed growth, and 4) provided additional high quality protein.

The purpose of this project is a follow up of last year's study. We will repeat the experiments performed last year using already available material in order to increase confidence in results. Two broods will be placed at each locale to increase statistical significance. Additionally, we will compare feed cost of meat production between raising chickens under free range conditions in the garden vs. confinement (i.e. lack of access to insects and weeds).

### **Objectives:**

Continue using the sustainable demonstration garden plots developed and employed in the previous year's tests. The report of findings and education of backyard gardeners and would-be chicken raisers will be an integral part of the project.

### **Procedures**

<b>Task</b>	<b>Completion Date</b>	<b>Responsible staff</b>	<b>Description</b>
Purchase Equipment	April 2010	Matt Palmer and David Frame	Screening, chicken wire, feed.

<b>Task</b>	<b>Completion Date</b>	<b>Responsible staff</b>	<b>Description</b>
Purchase Chicks	May 2010	Matt Palmer and David Frame	Purchase 70 chicks to place 35 at each demonstration garden twice, during spring/summer.
Pre-sampling	May 2010	Matt Palmer and David Frame	Take soil nutrient samples, weed survey, and pest survey
Plot set up	June 2010	Matt Palmer and David Frame	Set up electric fence shelter, feed and water troughs and place chicks.
Produce Garden show and DVD	June-August 2010	Matt Palmer and David Frame and Centracom Interactive Channel 10	Shoot video footage of the demonstration gardens and begin running the program on The Garden Show.
Garden Field Day	June 2010	Matt Palmer and David Frame	Invite local gardeners to garden sites to teach about IPM and Sustainable gardening
Post-sampling	September 2010	Matt Palmer and David Frame	Repeat soil nutrient samples, weed and pest surveys
Produce a fact sheet and PowerPoint presentation	October 2010	Matt Palmer and David Frame	The fact sheet will be put on the USU website and the USU Small Farm web site and the presentation will be presented at small farm workshops and extension meetings

#### **Data Analysis :**

Soil nutrient content, feed consumption, feed conversion, broiler weights, and insect numbers will be analyzed by unpaired t-test or other applicable statistical methods. Weed control will be compared and presented by graphs and photos.

#### **Presentation of Results:**

The data collected will be incorporated into the Garden Show production, PowerPoint presentation and the fact sheet. Centracom Interactive will air the video production on the Channel 10 garden show throughout the coming years. The PowerPoint presentation will be presented at USU Extension meetings and will be available for small farm workshops. The fact sheet will be placed on the USU Extension website.

#### **Evaluation:**

Gardeners that attend the garden field day will be expected to complete an evaluation form that will measure the knowledge and skills gained on a 1 to 5 scale. This will also be utilized at the small farm programs. We will utilize the evaluation information in conducting other garden IPM and sustainability programs. We will also utilize the projects equipment to continue to evaluate the usefulness of poultry in sustainable back yard garden production.

**Educational Products:**

We will add a 10 minute update to the previously produced 30 minute garden show on the project with Centracom Interactive. We will also produce a factsheet and a PowerPoint presentation.

**Educational Outreach**

The Garden show production of this project will be aired throughout the coming years on the Centracom Interactive local Channel 10 which is broadcasted into about 5000 homes in central Utah. The fact sheet will be sent to the County Extension Agents in Utah and placed on the USU Extension website. The PowerPoint presentation will be presented at the UACAA summer meetings and at USU Extension Annual meetings and available for small farm workshops throughout the state.

**Budget:**

Item	Description	Budget	
		Grant	In-kind/Match
Electric Net Fence	2 roles @ \$200 each		
Electric Charger	2 units @ \$130 each		
Broiler Chicks	140 Chicks @ \$2 each	\$280	
Shelter	mesh and screening	\$50	\$50
Feed	1200lb @ \$0.35/lb	\$420	
Soil Samples	8 @ \$25	\$200	
Garden Show Production	10 min @ \$200/min		\$2000
Chicken Management	5hr/wk @ \$10/hour – two broods		\$800
Processing Supplies	Bags, cleaning agents, knives, table covers	\$50	
<b>Total</b>		<b>\$1000</b>	<b>\$2850</b>