Utah IPM/SA Mini-Grant Final Report Format for 2010

1. **Project Title**: Utilizing back yard poultry production to reduce weeds and insects while providing soil nutrients and home grown food.

2. **Location of Project (Counties in Utah)**: Sanpete County

3. **Total Grant Award**: $1000

4. **Principal Investigator**: Matt Palmer, USU Extension Agent in Sanpete County

5. **Co- Principal Investigator(s):** David Frame, USU Extension Poultry Specialist

6. **Cooperators:** Nate Palmer, Centracom Interactive Marketing Manager

7. **Objectives of Project**: Develop two sustainable demonstration gardens in Sanpete County to document and teach back yard gardeners about the use of poultry in organic gardening.

8. **Methods of Project:** 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. The design of this project is to incorporate poultry into a sustainable back yard garden setting aimed at reducing commercial fertilizer, herbicides and pesticides normally utilized in gardening. 140 broilers where brooded and placed into two garden enclosures. Soil nutrient levels of phosphorus and potassium increased inside the enclosures. Percent weed cover and insect numbers where greatly reduced inside the enclosure. Educational programming included a field day and project garden show on a local cable channel.

9. **Results of Project:** 140 broilers where brooded and placed into two garden enclosures at about 30 square foot/ bird. Twelve broilers died during brooding. Each enclosure had two sets of 27 broilers (Spring brood and a Summer brood). Broilers where processed at 9 weeks. Two Soil samples were taken, once before chicken placement and once after chicken processing. In general the soil nutrients of phosphorus, potassium and organic matter increased inside the enclosures to levels that would sustain a garden for 2-3 years. Percent weed cover and insect numbers where greatly reduced inside the enclosure. Weed cover estimates (% weed cover) where conducted on the chicken run plot and the control plot. The garden enclosures had a 50-60% decrease in weed cover compared to the control plot. A sweep net was used to determine the insect counts. The chicken enclosures averaged 7 insects per sweep while the control plot averaged 1.4 insects per sweep. It was also observed that the majority of insects in the chicken run plot where flies while the control plot had mostly plant consuming insects. Chicken meat yield was 4lb per broiler yielding 512lb total. A local market for all natural chicken is about $15/bird. Total value would be roughly $1920. Chicken can be utilized to reduce weeds and insects while improve soil nutrients and providing valuable chicken meat in a sustainable organic garden setting.

10. **Evaluation and Impact:** describe how you evaluated the project, and the impact (number of acres,

people, or other appropriate units affected) of your project. Also include:

1. What changes in knowledge and skills of professionals and/or stakeholders were measured as a result of this project?

This project has help educators and producers develop a greater understanding of Sustainable gardening practices.

2. What potential changes are foreseen in your county extension programs as a result of this project?

This project has increased the knowledge and use of biological agents to reduce pests in the garden and landscape.

11. Educational Outreach:

1. What was done to assure distribution of educational products and related project materials to other agricultural professionals and stakeholders in the state?
2. At what professional/producer meeting(s) did you present?

I have developed a presentation of this project and have taken it to national, regional and state extension agent meetings. All attending the meetings receive an abstract of the project. I have also distributed the presentation to extension agents with interest in the project. The video of the project has been shown to 5000 home in Central Utah and is available on the web site: local10.tv.

12. Educational Products Produced – list the educational products produced from this project (PowerPoint, fact sheet, poster, published article, etc.) (Electronic versions required).
I have developed: PowerPoint, Garden show/web video, abstracts.

Provide Final Report in the format above with:

- **Attachments:** All materials produced by this grant need to be in an electronic format (handouts, power-points, posters, news articles, journal manuscripts, etc). Digital pictures of events and other project related items are welcome.

- **Required Western SARE survey questionnaire results or original paper copies (see next page)**

and send to: Marion Murray, marion.murray@usu.edu by December 31, 2010.

<u>This form is to be completed by all participants and applicants and is to be sent in as part of the final report.</u>

Evaluation Form: Sustainable Agriculture Projects

Western Region Sustainable Agriculture Research & Education

IPM/SA Mini-Grant Project Title:

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Everyone **<u>Please circle</u>**

Improved my awareness of the topics covered	Yes		No		
Provided new knowledge		Yes		No	
Provided new skills		Yes		No	
Modified my opinions and/or attitudes		Yes		No	

How many people do you estimate you will share some aspect of this project within the next 12 months?
_____

Producers – In the next year I am likely to use some aspect of this project to

Adopt one or more of the practices shown	Yes		No	
Increase the operation's diversifications	Yes		No	
Reduce my use of purchased off-farm inputs	Yes		No	
Increase my networking with other producers		Yes		No
Incorporate value-added into some aspect of my operation	Yes		No	

Professionals – In the next year I am likely to use some aspect of this project

In an education program that I plan or participate in	Yes		No	
As a resource I will make available to producers		Yes		No
As a professional development tool for my peers		Yes		No
To improve advice/council I give to producers		Yes		No

Professionals – Please describe how you are likely to use some aspect of this project for an educational purpose?