



NC State University  
NC Department of Agriculture & Consumer Services

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# North Carolina Specialty Crops Program Newsletter

Tammy Baysden, NCSCP Program Assistant  
Editor

## Featured Farmer

***Donna and Bill Makuch  
The Specialty Farmer, Inc.  
Waxhaw, NC***



The North Carolina Specialty Crops Program (NCSCP) newsletter features a farmer of the month that has benefitted from the program. For the month of November, I traveled to Lincolnton, NC in Lincoln County to visit with Bill and Donna Makuch, The Specialty Farmer, Inc.

The Makuch's farm in both Lincoln and Union Counties and currently reside in Waxhaw, NC with plans to relocate to, and expand their farming operation in Lincoln County in the near future. They have been farming for about five years and selling at local farmers markets and to restaurants. Bill recently retired from the banking industry and the couple is now ready to farm full-time. While growing up, Bill worked on different farms and gets his love for growing from his father but says that Donna has as much, and often more, passion for growing as he does. The Specialty Farmer, Inc. follows a diversified production strategy and currently grows approximately 100 varieties of vegetables, herbs, and flowers. Each year the Makuch's increase or decrease the amount of each variety they grow based on

[www.ncspecialtycrops.org](http://www.ncspecialtycrops.org)

their prior year's experience and their anticipated demand in the current year. Their strategy also calls for annually introducing new offerings that are normally not found at area farmers markets. The Makuch's believe that whenever you can satisfy more of your customers' shopping needs their satisfaction will grow and the likelihood of a continued shopping relationship throughout the year is increased. This is the first year that the Makuch's have cooperated with the North Carolina Specialty Crops Program and say that given the opportunity they would definitely participate again.

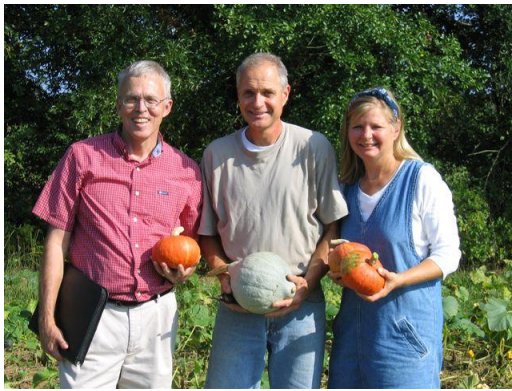
The Makuch's grew about a dozen different varieties of specialty winter squash on their farm in Lincoln County. Based on taste, appearance, yield, and customer satisfaction they will definitely add Sunshine (Kabocha) and Sweet Dumpling to their annual offerings of winter squash. The Makuch's were very pleased with their sales at the Waxhaw Farmers Market and figure that they sold approximately 80% or more of the specialty winter squash that they offered there. Donna said that many of these specialty squashes do double duty since they are both delicious to eat as well as attractive for fall decorating.



The program also gave the Makuch's the opportunity to try different watermelon and potato varieties. Their customers really liked a seeded yellow watermelon also named Sunshine, the Caribe blue potato, and the Russian Banana fingerling potato. Their sales on these varieties were essentially 100% of what they grew.



The Makuch's are pleased with the help obtained through the NC Cooperative Extension and Kevin Starr, Extension Agent. "Kevin took care of everything and made it straight forward for all area farmers to participate. We greatly appreciate his initiative, communication, and coordination on this." said Bill.

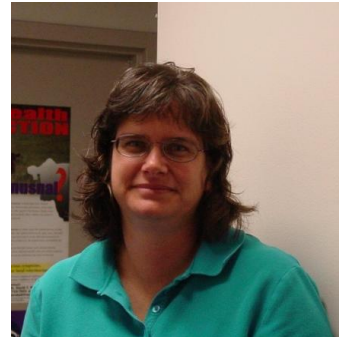


The Makuch's stated that the program works great with their business strategy of crop diversification and continually trying new production ideas. The program offers an excellent learning experience designed to help farmers try many new things on an experimental scale, which in turns takes some of the risk out of farming. They added that by encouraging farmers to try new varieties the program helps farmers better satisfy the rapidly growing demand for fresh produce caused by North Carolina's population growth and the local food movement. North Carolina's climate allows year-round production and this program also helps farmers discover ways to more fully develop this. Bill went on to say, "The grant encourages farmers to diversify what they grow and this leads to an expanded selection of fresh locally grown produce for consumers. The result is increased customer satisfaction, more successful farmers (and farmer's markets), less food dollars leaving the local economy, and a decreased

dependency on others for something as important as our food supply."

**Current Extension and Research Projects**

*Kathryn Holmes, NC Cooperative Extension Agent, Richmond County*



Kathryn received a grant from the NC Specialty Crops Program to cooperate with farmers and grow Sprite Melons. Kathryn cooperated with two farmers in Rockingham County.

Barbara Joyce, one of the farmers that cooperated with Kathryn was very pleased with the results of her test trials. Barbara stated that given the opportunity she would cooperate with the NC Specialty Crops Program again. Barbara sold approximately 80% of what she grew at the local farmers market.

Kathryn also cooperated with Allen Fulp. Despite high yields, Allen was not successful in selling his Sprite Melons at the local farmers market. Allen sold 50% of what he grew; as a result Allen does not feel it would be beneficial for him to cooperate with the NC Specialty Crops Program again growing Sprite Melons.

**Pumpkin and Gourd Field Day**





The Pumpkin and Gourd Field Day was held on October 16, 2008 at the Mountain Research Station in Waynesville, NC. Approximately 20 growers, industry consultants and technical people were in attendance.

Dr. Jonathan Schultheis, Professor and Department Extension Leader, NCSU, cooperated with the NC Specialty Crops Program. In his study, there were 26 varieties of pumpkin and 15 observational pumpkins planted.

Researchers from the University of Tennessee and the University of Georgia cooperated with NC State and Dr. Schultheis on this project. Each variety was introduced and history was given on that particular variety. Some of the varieties were repeats from last season and some were new to Dr. Schultheis' study.



Greg Hoyt, Professor & Extension Specialist, NCSU also had a trial study from a NC Specialty Crops Program grant, at the Mountain Horticultural Crops Research and Extension Center in Mills River, NC. Below is Greg's report about his study.

### **CULTURAL PRACTICES CAN AFFECT PUMPKIN, SQUASH, AND GOURD PRODUCTION**

G. D. Hoyt and R. J. Gehl

Soil Science Department, North Carolina State University  
Mountain Horticultural Crops Research and Extension Center

455 Research Drive, Mills River, NC 28759

An experiment designed to look at pumpkin, squash, and gourd yield from cultural practices commonly used in the U.S. was conducted at the Mountain Horticultural Crops Research Station, Mills River in 2008. Pumpkin cultivars planted in this experiment were Magic Lantern, Field Trip, Knuckle Head, and Goose Bumps. A winter squash (Sweet Dumpling) and a gourd (Gremlin) were included in the experiment. The fruit yield and quality of these cultivars were evaluated under three cultural management systems (black plastic [no fumigation], bare ground, and no-till). Field plots for black plastic and bare ground were plowed and disked. A small grain winter cover was grown in the no-

till treatment until about 3 weeks preplant, at which time the cover crop was killed with a herbicide. All management systems were trickle irrigated weekly to supply 1 inch/acre of water by either rainfall or trickle irrigation. Nitrogen fertilizer was applied by preplant broadcast application (80 lbs N/acre), banded under plastic or near row at planting (50 lbs N/acre), and through the drip system 1 time during the season (5 lbs N/acre) to achieve a total final N rate of 135 lb N/ac. All pumpkin cultivars were planted at 18 sq. ft. per plant, while the squash and gourd plants were spaced at 9 sq. ft per plant.



Each of these three production systems produced an excellent stand and harvest of pumpkins, squash, and gourds for the summer of 2008. Plant counts were taken three times (5, 8 and 10 days after planting) as an indicator for relative germination rates among the different treatments. Five days after planting most of the plant cultivars in the black plastic treatments had germinated, with lower counts in the bare ground and no-till. These results indicate time to germination was reduced by using black plastic mulch, likely a response to increased soil temperature. However, by 10 days after planting all cultural practices had relatively good plant germination (data not shown).

Marketable harvest pumpkin fruit numbers per acre were relatively high, with Field Trip fruit numbers exceeding 10,900 per acre in the black plastic treatment (Figure 1). Generally the black plastic treatment resulted in the greatest pumpkin fruit number per acre, and there were no significant differences in fruit numbers (per acre) between the bare ground and no-till treatments (Figures 1 and 2). The exception to this was Magic Lantern, where there were no differences in fruit number regardless of treatment. Gremlin gourd and Sweet Dumpling squash had no significant differences in fruit number among any of the management treatments (Figure 3), although numerically higher numbers of Gremlins were recorded in the black plastic treatment.

With the exception of Knuckle Head pumpkins there were no differences in fruit weight per acre for any of the varieties grown, regardless of treatment. However, all pumpkin varieties tended to have greater pounds of fruit



per acre in the black plastic treatment and similar but lower yields in the bare ground and no-till treatments (Figures 4 and 5). For the Knuckle Head pumpkins, yields were significantly less in the no-till plots compared with the black-plastic. Squash and gourd yield weights followed a similar pattern of slightly greater weights in the black plastic (Figure 6).

We used various varieties of pumpkins to show how these distinctly different types and sizes of pumpkins would respond to the three production systems. This experiment produced results showing that the use of black plastic mulch management in pumpkin, squash, and gourd production will generally maximize yields (number and pounds per acre) when comparing these currently available management practices. Although costs of black plastic will be considerably higher than the bare ground or no-till management systems, potentially higher yields may offset these costs. In years or locations where droughty weather can reduce yields, black plastic management with drip irrigation should reduce risk associated with these conditions. If black plastic is not an option as a cultural practice, no-till is a viable means of production for maintaining fruit yields (compared to bare ground). Potential benefits of no-till include increased soil moisture retention, improved soil physical conditions, reduced erosion, and cleaner fruit.

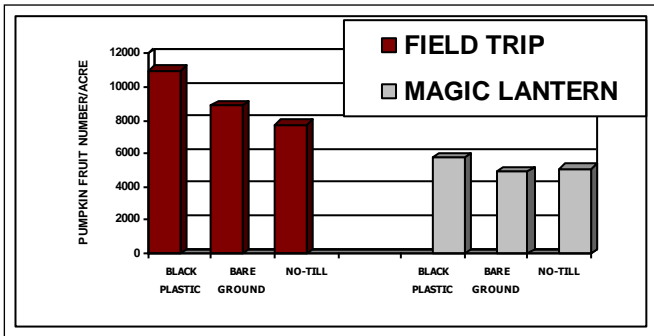


Figure 1. Field Trip and Magic Lantern pumpkin marketable fruit number per acre for three management systems.

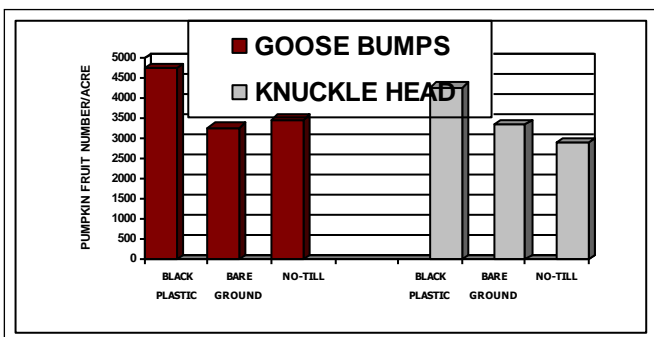


Figure 2. Goose Bump and Knuckle Head pumpkin marketable fruit number per acre for three management systems.

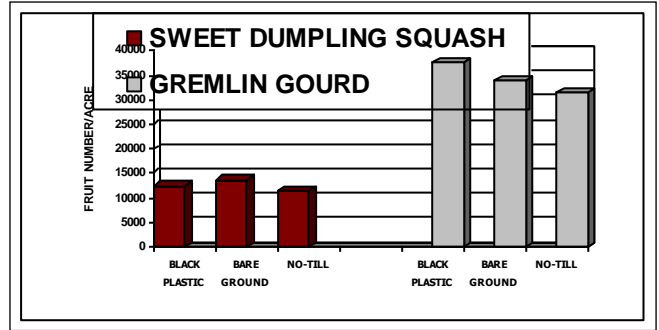


Figure 3. Sweet Dumpling squash and Gremlin gourd marketable fruit number per acre for three management systems.

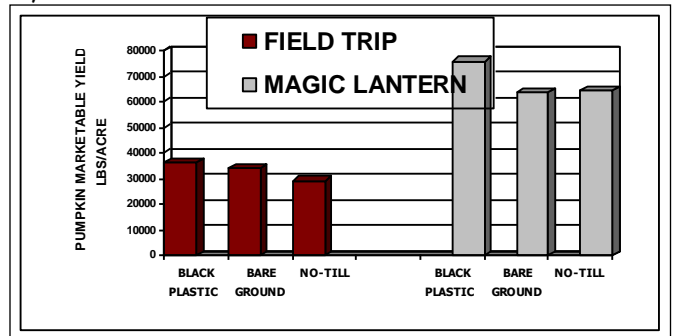


Figure 4. Field Trip and Magic Lantern pumpkin marketable yield (lbs/acre) for three management systems.

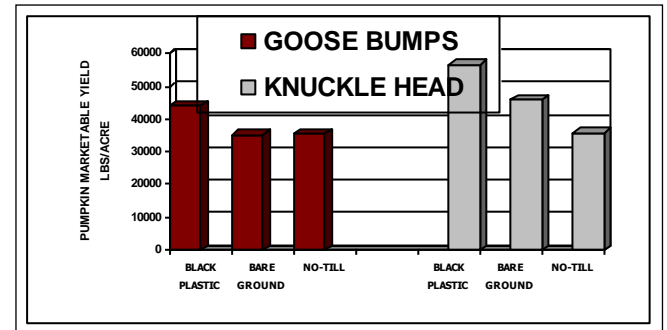


Figure 5. Goose Bumps and Knuckle Head pumpkin marketable yield (lbs/acre) for three management systems.

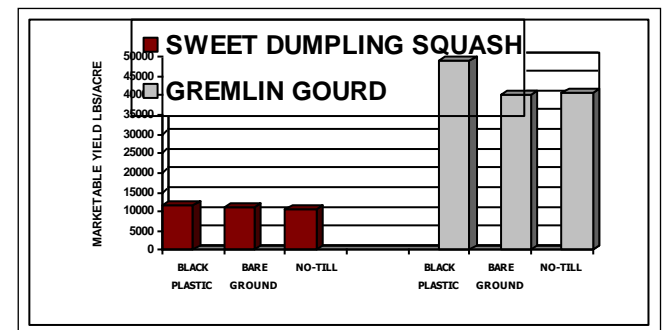


Figure 6. Sweet Dumpling squash and Gremlin gourd marketable yield for three management systems.



## Upcoming Conferences

December 2-3, 2008  
 23<sup>rd</sup> Annual Southeast Vegetable and Fruit Expo  
 Myrtle Beach Convention Center, Myrtle Beach, SC  
 for additional information visit [www.ncvga.com](http://www.ncvga.com)

## The Marketing Perspective

### *Roasted Winter Vegetables with Basil Oil*

[http://www.tonytantillo.com/recipes/vegsides\\_rec.html](http://www.tonytantillo.com/recipes/vegsides_rec.html)

This dish is so substantial it could be the main part of the meal. Feel free to substitute other winter vegetables.

**Makes 4 servings**

*3 medium red-skinned potatoes washed, but unpeeled*  
*3 small turnips, peeled*  
*3 medium parsnips, peeled*  
*1 1/2 pounds butternut or other winter squash, peeled and seeded*  
*3 medium carrots, peeled*  
*1/4 cup [Chicken Stock](#) or [Vegetable Stock](#)*  
*2 tablespoons basil oil or extra-virgin olive oil*  
*2 teaspoons kosher salt*  
*1/2 teaspoon freshly ground black pepper*  
*8 to 10 small onions, peeled*  
*Olive oil cooking spray*  
*1 tablespoon chopped fresh basil or 1 teaspoon dried (omit if using basil oil)*

1. Preheat oven to 400°F.
2. Cut potatoes, turnips, parsnips, and squash into 1 1/4- to 1 1/2 inch-square chunks.
3. Cut carrots into 1 1/2 -inch lengths.
4. Mix stock with 1 tablespoon of the oil and half the salt and pepper.
5. In a large mixing bowl, pour mixture over vegetables and toss.
6. Put potatoes, turnips, parsnips, carrots, and onions in a large roasting pan greased with olive oil cooking spray. Roast 15 minutes.
7. Add squash and cook 30 to 35 minutes longer, stirring a few times, until nicely browned and easily pierced with a fork.
8. Toss with remaining oil, salt and pepper, and basil.

### **Cooking Tip**

One of the great ways to get intense basil flavor when fresh basil isn't in season is to use basil oil. (Yes, fresh basil is often available year-round these days. But winter basil doesn't have the intensity of flavor that summer basil has.) I like the basil oil by Consorzio best, but Loriva also makes a credible one. If you use either, eliminate the dried or fresh basil.

For information or to subscribe to the SCP newsletter email Tammy Baysden at [tammy\\_baysden@ncsu.edu](mailto:tammy_baysden@ncsu.edu)



Have a Safe and Happy Thanksgiving!