**Reduced Tillage Project Verification Form**

Participant Name:\_\_\_\_\_\_Michael Candella\_\_\_ Farm Name: \_\_Candella’s Farm\_\_\_

Mailing Address: \_\_\_\_\_\_9256 Old River Rd., Marcy, NY\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_315-269-3741\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_Dec 2011\_\_

Years using RT: \_\_2\_\_\_ Total Veg. Acres: \_\_\_\_\_\_ RT Veg Acres: \_between 3 and 10\_

Plan to expand vegetable acreage Reduced Tilled: YES \_X\_ NO \_\_\_

If yes, to how many acres: \_\_\_all plots of sweet corn, brassicas (unknown acreage), pumpkins and winter squash (~3 acres)\_\_\_\_\_\_

Make/Model of Reduced Tillage Equipment Purchased/rented:

Estimated Costs:

|  |  |
| --- | --- |
|  | **Costs per acre ($)** |
| **Item** | **Conventional** | **Reduced Tillage** |
| Fuel for primary and secondary tillage | 3-4 passes, needing more hp | 2-3 passes, needing less hp |
| Labor for primary and secondary tillage |  | ~1 less pass |
| Equipment Costs for tillage |  |  |

Yield Estimates:

|  |  |  |
| --- | --- | --- |
|  |  | **Yield per acre ($)** |
| **Crop** | ***P. capsici* present?** | **Conventional** | **Reduced Tillage** |
| Sweet corn |  Yes | Lower yield than DZT | Higher yield than conventional |
| Cucurbits, brassicas |  Yes | Similar yields to RT | Similar yields to Conv |

Benefits observed of reduced tillage system for vegetables:

Challenges or concerns of reduced tillage for vegetables:

Other comments:

Mike Candella of Candella’s Farm borrowed our Unververth Zone Tillage Unit, using it with 2 straight leg shanks for deep ripping on his ~100 horsepower tractor. He started with DZT last year on sweet corn and reported that the crop fared better than the conventional areas. He conducted a zone tillage trial this year on sweet corn, cabbage, brussel sprouts, other cole crops, pumpkins and winter squash. The cabbage and brussel sprouts were only zone tilled so there was no paired comparison, but he said that the crops were comparable to the years he had tilled the soil conventionally. He conducted deep zone tillage on half of his pumpkin and winter squash acreage (~3 acres); the other half was conventionally plowed. He sprayed roundup to manage weeds and oats stubble. He found that he had issues with weed management, but that it was equally distributed across the conventional and deep zone tilled plots. His farm was hit by Hurricane Irene before he was able to harvest, but he said that the the DZT plots produced a good crop and could see no difference between it and the conventional plots. He noted that all crops with DZT produced similar if not the same yields as the conventional.

 Mike’s typical tillage practices consist of one pass for plowing, disking twice and possibly pulling drags over the soil after disking. With DZT he made two passes, unless the ground was especially silty. He said that he saw reductions in fuel usage as it didn’t require as much energy to pull the zone tiller through the soil. He said that DZT with fewer passes helped him with timing issues, as he didn’t have the help or the time needed for plowing when the weather allowed for ideal conditions. Mike wants to continue using DZT to improve drainage for the years with heavy rainfall as his soil has a lot of clay and sod. Mike has *Phytophthora capsici* present though he could not tell if it would have presented much of an issue as he lost many plots to the hurricane. He said that it did not affect his pumpkins. He would like to purchase a 4 row zone tilling unit but is unsure whether it would be financially viable at this time. He has looked into retrofitting an older unit.