**Reduced Tillage Project Verification Form**

Participant Name:\_\_\_Jim Ward\_\_\_\_\_\_\_\_ Farm Name: Ward’s Berry Farm

Mailing Address: 614 South Main Street, Sharon MA 02067

Phone: \_\_781-784-3600\_\_\_\_ Email: wardfarm@aol.com\_\_\_ Date: \_11/29/11\_\_

Years using RT: \_10 (no-till) Total Veg. Acres: \_150\_\_ RT Veg Acres: \_~7\_\_

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

If yes, to how many acres: \_\_\_n/a\_\_\_\_\_\_

Make/Model of Reduced Tillage Equipment Purchased/rented:

Estimated Costs:

|  |  |
| --- | --- |
|  | **Costs per acre ($)** |
| **Item** | **Conventional** | **Reduced Tillage** |
| Fuel for primary and secondary tillage | Plow, disk, plant2 passes with tine weeder2 passes with finger weeder1 pass with sweeps | 1 pass for rye1 pass for planting3 passes for herbicide this year on squash |
| Labor for primary and secondary tillage |  |  |
| Equipment Costs for tillage |  |  |

Yield Estimates:

|  |  |  |
| --- | --- | --- |
|  |  | **Yield per acre ($)** |
| **Crop** | ***P. capsici* present?** | **Conventional** | **Reduced Tillage** |
| Sweet corn | N/A | 190 bags/A | 190 bags/A |
| Winter squash | No | 20,000 lbs/A | 14,000 lbs/A |

***Benefits observed of reduced tillage system for vegetables:***

Probable increase in soil health over time, fewer passes through the field if weeds can be managed

***Challenges or concerns of reduced tillage for vegetables:***

Weed control has been the major challenge with RT on crops other than sweet corn. We have had to make multiple herbicide applications, which bring our production costs up as well as stunting our plants in some cases.

***Other comments:***

Weed control in the winter squash was largely difficult because they couldn’t use the cultivating equipment that they were used to, as it balled up the residue. The system might actually work better for them with a lower residue, winter killed cover crop that would allow them to run cultivation equipment through it. The available herbicides for cucurbits just aren’t adequate for them, and they burned the plants putting on sandea. The corn was less of an issue, as the atrazine + callisto regime they use works well with RT. There was also some reduction in stand in the DZT blocks, but they believe this was an artifact of learning how to use the machine – the first few passes were spotty but it evened out toward the end when they had the machine tweaked adequately.

If the weed control issues were worked out the system would be good for them. They have a good no-till system they’ve been using in their corn, but the DZT works just as well. The potential advantage of DZT over straight no-till for them is that it should be easier to adapt DZT to other crops. Corn-cucurbits are an important rotation for them, so it would be ideal if the weed control issues could be worked out for the vine crops. In addition, they are interested in trying it in beans and some brassica crops. They are also interested in doing a 3-way comparison in corn between conventional, DZT, and no tillage. They are also interested in the idea of doing DZT field prep in the fall.

Jim grows ~35A of late corn that could potentially be moved into DZT. The barrier to him adopting DZT on more acreage is weed control on crops other than corn. If we can work out good systems for cucurbits and at least one other crop, I think it likely that Jim would move a significant portion of his acreage into DZT. He didn’t indicate plans to expand the acreage on this sheet, but after talking with him he is going to use it again in corn (as a 3-way trial) and try it in beans and/or a brassica crop in 2012.