

Cover Crop and No-Till / Minimum Till Practices Summary 2015 – 2017

Keith Wilcox and Sons

We have been interested in learning the advantages and disadvantages of using cover crops and no-till and minimum tillage practices on our farm for several years. After attending workshops and demonstrations of the practices and expected results, we have been experimenting on our own ground and crop rotations. We wanted to know just what are the best practices that will be sustainable for us?

We have demonstrated that the soil health can be improved and fewer inputs required when using cover crops and minimum tillage. We have not been as successful as we hoped in some areas such as in a potato-grain-grain rotation because the ground required working for our potato crop. However, it is beneficial for the soil health in general. We are seeing improved yields in our grain rotation and savings in the potato crop inputs compared to other fields on our farm. Each field must stand on its own for fertility and crop protection inputs. However, we have not perfected this measuring and documenting process yet.

Our normal practices in tillage have been successful in minimizing soil erosion and runoff. Therefore, we have not seen much difference in erosion control on the Rexburg Bench ground using cover crop/no tillage compared to our other ground. However, savings can be realized by not working the ground.

One of biggest problems we have encountered with these practices stems from hordes of voles and mice in the soils that have not been worked. We have had to treat the problem with Zinc Phosphide pellets to gain any control and save a spring planting of grain. (Hungry little varmints). Another problem experienced was rotting of potato seed in the ground when we waited until late spring to work the ground following a cover crop that did not winter kill. The cover crop plants were two to three feet tall, and there was a large amount of green manure worked in just before planting the potatoes. Wherever the clumps of green manure came into contact with the seed potato there was rotting seed.

We feel that with these lessons learned, there is a place for these practices in our operation. We are incorporating them into our other farms as much as possible each year now.

No-till dry-farm grain is a big winner for us because of less erosion and increased soil moisture. We think we are seeing yield increases of 10 -15 bu. /per acre mostly because we are not losing any moisture working the ground. We are using the no-till drill on irrigated ground but have not seen the benefits as much there. However, it looks to be saving fuel with similar yields and quality.

I have entered the National Wheat Yield Contest two years now and have placed 2nd in the Nation both years in the Irrigated Spring Wheat category. The contest factors in your yield with the historic county average, and the winner is determined by how far one's yield is above that average. Both years we entered fields planted in WB 9668. It has high yield potential, good milling qualities, and excellent protein potential.

There are several factors important in achieving a high yield. The genetic potential of the wheat, the current seasons climate, no hail or untimely hard winds, soil testing of fertility, timely fertilizer applications, soil structure and organic matter, adequate and timely irrigation or rain, and a little good luck.

Both years I entered fields that had been in the program of minimum till / no-till with a cover crop following grain in the rotation, then potatoes. The following year was wheat again and the contest was entered with this crop. A five- acre plot within the field was measured, harvested and weighed. The first year that plot yielded 179.75 bu/acre. This year was only 143.91 bu/acre. Most growers experienced lower yields this year, but I was surprised to even place with a yield 35 bushels lower than last year. We had several fields that had good yields, but none were any better than the ones in the no-till/cover crop program.

We have appreciated working with the NRCS and the Madison SWCD benefitting from their help. Thanks to all who have been involved and worked with us.

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