

## **Growing Pumpkins Using Zone-tillage**

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I grow all my pumpkins using Zone-tillage. I have 5 reasons why I use Zone-tillage. I would like to tell you about each of these points.

The first is that this method is just easy. To establish the crop, I make 4 trips through the field. The first is with my sprayer spraying Round-up. the second is with my zone-till cart. This rototills the soil in the seed zone and adds a mix of liquid fertilizer to either side of the row. The third trip through the field is with the planter. The planter places the seed into the zone and adds dry fertilizer to the zone. The last trip is again with the sprayer, spraying Gramoxone just before the plant comes out of the ground.

The second reason that zone-tillage is good for us is that it is so consistent in producing a quality crop of pumpkins. I can get the crop in quickly and it grows well. Using Zone-tillage has other benefits that allow us to increase management practices. These include scouting for weeds and insects and timely sidedressing.

The next reason that Zone-tillage is successful for us is that it is so good for the soil. I use Zone-tillage for pumpkins on all types of soil. When we start fields new to us, I often start them with pumpkins. I kill the existing sod with Round-up in the fall and follow the same routine as other fields that have been in our rotation program for years. Starting a field with Zone-tillage shows a quick response to the benefits that can take four or five years to show up when you change from a tillage program to a no-till or Zone-till system.

The soil benefits from Zone-till are many but include a big reduction in erosion. The increased soil quality from using Zone-till is substantial. The structure of the soil is a big part of this. When soil structure is in large aggregates, it has more benefits. These large aggregates allow better water absorption. Root growth is easier for the plants. The exchange of oxygen into the soil is much more rapid with large pores. The benefit of crop residue on the soil surface is beneficial to water retention during dry spells. When harvesting pumpkins and sweet corn, we keep all vehicles on the spray rows to help with getting through wet fields and to avoid compaction.

The fourth reason I like growing pumpkins using Zone-tillage is that they fit very well into our rotation program. All of our crops are no-tilled or Zone-tilled. Our rotation goes like this: one year of cucurbits, two years of sweet corn, one year of winter rye. The rye is grown for seed and straw but we leave at least 8 inches of stubble, and usually enough seed escapes the combine so that we do not need to reseed the rye to get a stand to aid in weed control for our following crop.

This rotation works well for a number of reasons. The first is weed control. Having crops of broadleaf, cool-season grass and corn, a warm season grass makes a good mix to rotate herbicides and other weed control measures. Having different types of crops offers us a chance to use herbicides with different modes of action. This keeps weeds under control with minimum rates of herbicides and avoids build-up of problem weeds. We definitely see a big advantage since going to a four-year rotation in all matters, especially in disease control for cucurbits. This has worked so well that I am now experimenting with growing

forage soybeans. These have potential to help in weed control and plant nutrition if grown between the cucurbits and the sweet corn.

The fifth and last reason that Zone-tillage works so well is that the system works to pull all the components together. This point is almost a recap of all the other reasons I have cited. This system works to benefit all components of our cropping system and help our farm overall. If I look back at what I set out to accomplish in 1988 and successive years, the original goals that I was looking to make work better were time management and erosion. As I learned how to make these goals work with no-till, I transformed my system to one of Zone-till. By 1995, I also learned of the other advantages I have told you about and many others. In 1995, I was confident enough to purchase a Rawson Zone-Till Cart. I now can't imagine spending time on a tractor plowing, harrowing and picking rocks.

One of the benefits that you may be interested in is the dramatic reduction of tractor use and wear and tear on them. A tractor lasts much longer now. Over the last few years I've put more hours on my sprayer tractor than all others.

Overall, growing pumpkins using Zone-till is the best system for me.