

## Producing Healthy Brassicas Spring Through Fall with Biocontrols & Rotation

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Clear Brook has been in existence since 1994. Over the years, demand for all forms of brassicas has risen so that other than sweet corn it is the family of veg that occupies the most land of any crop on our farm. Our farm is certified organic. We grow about 4 acres of mixed brassicas ranging from broccoli and kale to Brussels Sprouts and napa cabbage.. and everything in between. If we include leafy greens (mesclun, arugula, radish etc) our acreage probably increases another 2 acres. With this proportionally large amount of our land going in to brassica production, the onslaught of bugs and disease is pretty fierce on this crop family. Hence, planning and rotations are key to successful brassica crops throughout the season.

Probably the most advantageous and important part of our brassica strategy lies with us having three separate fields. Our home farm is in the middle and about 3/4-1 mile both north and south we have other substantial fields. This allows us every year to plan our brassica plantings so that one field will get the first 4-6 plantings of brassicas, then another field gets the next 2-3 and the final field gets the last 4 plantings. Our long term brassicas like storage cabbage and Brussels Sprouts go in the field with our last plantings even though they may be transplanted 6-8 weeks before any other brassicas are in that field. This past year due to miscommunication the storage cabbage was planted right next to the early coles, and we payed the price with lots of disease on those late cabbages and basically a un-harvestable crop.

We sell most of our produce retail through our farm stand, farmers market and CSA and so we try to have certain cole crops all season. Brassicas that we aim to have all season long are broccoli, kale, cabbage and then we also try to have cauliflower for all but mid-season. If we throw-in brussels, rutabagas, Gilfeathers, bok choi and napa cabbage we are pretty much seeding some brassica every 7-10 days from late march through July for transplants and through mid-October for leafy greens that are direct seeded. A greenhouse seeding of transplants will have anywhere from 8-18 128 flats (we do Brussels Sprouts in 72s). We generally are able to maintain a consistent supply of coles with this schedule.

**Insect threats:** Our insect threats can often start in the greenhouse or cold frame where flea beetles have been known to run rampant. Our last 3-4 plantings can sometimes have cabbage moths larvae of one type or other making swiss cheese of brassicas in plug flats! In the field our insect threats consist of flea beetles, various caterpillars and sometimes aphids can get totally out of control. For **flea beetles** on leafy brassicas that are direct seeded we use remay. However, for our brassica transplants we have started relying on a pre plant dip into Surround with a spreader sticker. This often gives us a good week after transplanting out without too much damage. In a bad year we will keep spraying with surround using our boom sprayer. As long as we use a sticker and are on the spraying every 7-10 days Surround does work for us. If things get away from us we occasionally use Pyganic, but it never really seems to work that well for us. Occasionally we will cover a planting with remay but.... well its the love hate thing as far as remay goes.

**Loopers** etc: Those larvae things we scout for and generally use Dipel and occasionally Entrust. Though this past summer I am pretty sure we had some Dipel resistance early on and then it seemed to work... maybe bad spray coverage???? **Aphids**... we try botaniguard and pyganic.... never really very effective for us but I know some folks have good luck.

**Disease:** We have had a lot of problems over the years with alternaria on our brassicas. This is one of the main reasons we started breaking up the year's plantings between our three fields. We used to spray some copper for that, but really did not like using that material more than necessary (tomatoes). So last year we started using Regalia fungicide. Regalia is (if i'm not mistaken) an extract from Japanese Knotweed. It is supposed to boost the immune system of plants and act as a fungicide. This is strictly anecdotal but for the past two years our amount of alternaria which seemed to be getting worse every year, really became "manageable". Our Brussels sprouts are a lot less effected and the same goes with our fall cauliflower. We used to be able to pick maybe the first 2 fall cauli plantings that were pretty clean, but then the later plantings would just get a build up of the disease. Now Cauli can hold in the field for at least an extra 2 weeks per planting before getting spots. We generally spray every 7-10 days (once again using a boom sprayer) until mature. Sometimes we will add Serenade for a "cocktail".

If we really had our wishes, we would have another 20-30 acres an extra 1/2 mile away to make crop rotation of brassicas even more manageable. Nevertheless we do feel fortunate that we have three significant fields scattered about so that we do get some "rotation" both spatially and temporally. We have considered just *not* growing mid season brassicas mainly to break up the plantings both spatially and temporally. Still, they are an important attraction to our farm stand. With the advent of seemingly successful organic "fungicides" maybe we can beat the odds more consistently now and have cole crops all season.