



LAKEVIEW ORGANIC GRAIN
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MANAGING OPEN POLLINATED (OP) CORN ORGANICALLY

WHAT the differences between hybrid and open pollinated (OP) corn? Hybrids are more uniform, with many modern traits such as higher standability (higher lignin fiber). Open pollinated corn varieties tend to lower in lignin, which makes for more digestible silage, but also for lower standability. Hybrid corn generally is smaller with shorter stalks and less leaf area than OP and must be planted at higher populations to achieve maximum yield. Silage yields between hybrid and OP corn are very comparable with hybrids generally having a higher percentage of grain and OP corn generally having more leaves and more digestible stalks.

Modern hybrid corn varieties have been selected to need a high fertility soil, and may not be as tolerant to organic conditions, including weed competition and cultivating equipment damage. OP corn will usually thrive well under organic conditions. OP corn usually stands well while it is green, but as it dries, the standability declines especially at higher populations.

The biggest difference of OP corn is that seed can be saved and re-used the next year. However, just saving seed without some intentional selection is a bit like letting cows breed randomly, rather than selecting the best bulls each year. Both degenerate rather rapidly, leading to a predominance of certain characteristics that may not be desirable. The result is that you can grow two strains of an OP variety like Wapsie Valley and see very different characteristics, even though they have the same basic parentage.

At Lakeview, we work with Dr. Margaret Smith and other corn breeders at Cornell University to select the seed stock for our Wapsie and Early Riser varieties for desirable characteristics, such as low placed full ears, strong stalks, uniformity, mature high quality grain and stalks that will handle well in modern harvesting equipment. Our seed production blocks are also carefully isolated to prevent contamination from possible drifting neighborhood GMO corn pollen. We harvest the OP corn gently as cob corn, avoiding the physical damage of combining and work with the good folks at NY/Cornell Seed Improvement to have the corn cleaned, conditioned and graded to high commercial-quality standards with stringent segregation from non-organic seed.

When growing OP corn -

The soil temperature is very important, especially with untreated corn seed. If the soil temperature at seeding depth is below a reliable 55°F, the seed will germinate and emerge slowly and be much more susceptible to insects and diseases which can weaken the seedling or even kill the young plant. Using a probe thermometer before and during planting is valuable. Highly selected OP varieties like Lakeview's Wapsie Valley often have much larger kernels than hybrid varieties. Large kernels must be planted deeper than small kernels when the soil is very dry to insure uniform germination.

Depth control is important. More yield is lost due to improper or non-uniform planting than at any other step. Get off the tractor and check seeding depth regularly, especially as soil conditions change. Corn should be planted 1.75 – 2" deep, small grains should be planted 1.25-2" deep, soybeans should be planted 1-2" deep. Seed that is planted too shallow or too deep will show non-uniform emergence and may have poor vigor. It is especially important to check planting depth carefully in the drier and cloddy parts of a field. Many corn planters actually place seeds much shallower in dry or lumpy soil. Older John Deere 7000 planters with worn disk openers and improperly adjusted gauge wheels sometimes lay seeds almost on top of the ground in rough spots while planting correctly in soft and moist soil.

Wapsie Valley corn requires a lower population than hybrid corn. Planting more than a 18000 final stand (20,000 to 21,000 seed count) for grain reduces standability. OP corn for silage can safely be planted at higher populations.

As with hybrids, uniformly spaced plants are important for maximum OP corn yields. A final stand at the optimum population will give you the best grain yield but only if the plants are correctly spaced. Doubles often result in 'nubins' and large skips don't produce any grain at all. Adjacent plants can compensate for a missing stalk or two with bigger ears or even some second ears but when skips are greater than 2 feet long, some yield will be lost.

