



Cytoplasmic Male Sterility & Demeter Farm Certification



Cytoplasmic Male Sterility plant breeding (CMS) is a technique sometimes used in commercial seed production of certain varieties of Brassicas (cabbage, Chinese cabbage, broccoli, cauliflower, kale, kohlrabi, rutabaga, turnips, Brussel sprouts, Asian greens) and chicory. Cell fusion technology is another name for CMS. This technology results in a breeding plant with sterile male pollen that will produce seeds when pollinated by pollen from another plant. The result is a hybrid seed (NOTE: not all hybrid seeds result from this technology). This certainly is a convenient and time saving technology for the plant breeder, but it is accomplished by genetically disabling a plant's archetypal impulse to produce viable pollen. The Demeter Biodynamic Farm Standard prohibits planting seeds produced by this CMS technique.

If you do not plant seeds of these types of crops, then the rest of this page is for your information and no action from you is required. **Otherwise, read on...**

Demeter USA has a list of known CMS-free seed varieties that is the result of a collaboration between Demeter Germany, Demeter Switzerland, and several organic certification agencies. The list has varieties that may not be available in the US, but there are many that US farmers will recognize as numerous seed companies sell seeds internationally.

Check to see that your hybrid Brassica and chicory seed varieties appear on the list. If they do or if the seeds are open pollinated varieties, there is no further action needed on your part other than confirming during your inspection that you only plant non-CMS varieties. Your inspector may want to spot check of your seed invoices or seed tags/packets.

If your hybrid varieties do not appear on the list, reach out to your seed suppliers and ask for confirmation that the hybrid Brassica and chicory seeds you plant are non-CMS. There is no requirement to label seeds produced by CMS, so the only way to know is confirmation by the seed grower. Provide the confirmation you receive to your inspector for including in ECERT. This will assist Demeter in adding to the list of known non-CMS varieties available in the US.

If you are transitioning your farm to Demeter certification and learn that seed planted was CMS produced, consideration will be made by Demeter for seed that is already planted or planted while you source other seed. Plantings destined for Demeter certification must not be from CMS seed. It is your obligation to ensure seeds are non-CMS prior to planting. Please provide documentation related to any varieties you learn are CMS produced for your inspector to record in ECERT. This will assist Demeter in compiling a list of known CMS varieties to help reduce the searching needed by everyone in the future.