

Chat during Winter Production Conference Millsap Farm video – 2/2021

Hi Curtis, how did the Chinese style greenhouse fare in the recent cold snap

CM: We had a few frosty nights in there. After four days of near zero nights, and no sunshine, we started to dip below freezing overnight. We put a propane torpedo heater in there, and that was enough to keep things from freezing.

What is the best way to clean the high tunnel between crops to reduce aphid populations?

CM: In our experience, the biggest factor in cleaning and reducing aphid presence in a high tunnel is removing all plants. That said, total aphid removal is not something we've ever achieved, and we comfort ourselves by saying that we are keeping our beneficials well fed by leaving some aphids behind.

Patrick Byers: Re: aphid management, remove as much plant material as possible from the tunnel after a rotation, especially any weed growth. If in the summer, close up the tunnel and allow the temperature to raise. If in the winter, open up the tunnel to allow the temperature to drop.

Are these organic?

Patrick Byers: Re: aphid pesticides, Dr Trinklein mentioned both organic and conventional pesticides. The label will indicate if a pesticide is "organic", and look for the OMRI designation.

Would diatomaceous earth work to crack the exoskeleton?

CM: We have not seen any Efficacy from Diatomaceous Earth. The Beneficial wasps are very effective, and have persisted from year to year in our tunnels. Ditto, we don't see much effect from Pyganic, which is the organic pyrethroid.

CM: <https://ag.umass.edu/sites/agcenter/files/pdf-doc-ppt/AphidBankerPlantSystem.pdf>. This is a really interesting article, and something we're going to try in our greenhouse this spring. Howard Prussak, in Vermont, who raises several greenhouses full of organic herb plants each spring, says they have been very effective for him.

Will you remind me the acreage you all are working on?

CM: We are on a 20 acre farm, but we grow veggies on approximately 2.5 acres. We have grown up to 7 acres, but it was a disaster, and we shrank down to 2 acres in 2012, which ended up being our most profitable year since we had started in 2007. Ever since then we have continued to grow our capacity within that same 2 acre footprint.

CM: To put solid numbers to that income per acre question, we sold about \$200,000 in vegetables in 2019, and my family ended up with about \$50,000 income.

If you got 50K net income where the 150k go?

CM: Our single biggest expense is labor, followed by seeds and plants, fuel, utilities, farm land loan, insurance, etc. Our labor is about 10 full time equivalent in the summer, from May to October, and about four FTE in the winter.

This isn't winter production related, but it looks like you have the Meganet sprinkler heads. How do you like them and what crops do you set up overhead irrigation for?

CM: I'm not a big fan of the mega nets. I prefer the senninger wobblers. The Meganets have to have a certain pressure to activate, which is not a problem for the senningers. That said, I know lots of folks who love meganets, and we continue to experiment with them.

What is an example of what is in a weekly CSA box

CM: We use value to decide what to put in a box. That means that we offer three different sizes, \$11, \$17, and \$33.

Is all your plastic the same for each of the structureshow many mil ?

CM: All tunnels use 6 mil greenhouse plastic. Our three bigger tunnels have double plastic with inflation fans, which gives us more insulation and rigidity.

Would ranunculus overwinter just as well in a low tunnel?

CM: We have ranunculus in low tunnels, high tunnels, and greenhouses. The ones in low tunnels sometimes have a fairly short bloom time, because by the time they start blooming it's getting too hot.

What zone is your farm in ?

CM: We're zone 6.

What variety are the peas for the shoots...did you mention ?

CM: Little Marvel. Although we have used several different varieties.

Garden (English) Pea then as opposed to Snow or Snap?

CM: I go with whatever variety I can get at my local hardware store in 50 lb bags. We have used snap and snow as well, but they tend to be more expensive. We are currently, as of the last few trays, using field peas!

Curtis, are you using no-till on any rows or plots?

CM: We practice minimal till across the farm. Most plots haven't been tilled deeper than an inch in more that four years. We are mostly using a deep compost mulch system, using compost we make on farm, and apply every other year.

CM: Although I should give the caveat that I do think there is a time for deep tillage, and we're not likely to give up our tiller completely anytime in the near future.

How does how does your cold storage work when it's colder outside than 34-35F?

CM: The heat coming up from the ground will keep it above freezing down to about 10 degrees, at which point we bring a small electric heater.

CM: The reason we have two coolbots in the short-term cooler is that we couldn't get the cooling effect that we wanted on hot summer harvest days; we really want that produce to chill quickly.

Where do you purchase your totes?

CM: We purchase our totes from buckhorn. They are local, and are the industry standard. They are fairly reasonably priced. If you're local, I know Finley Farms is going to place an order this spring, and they are probably willing to pool.

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CM – Curtis Millsap