



## Annual Oilseed Producer's Meeting

Heather welcome, commentary on the growth of the meeting, welcomes Hans Kandel from ND State, a broadleaf crops agronomist- soybeans, field pea, canola, sunflowers

Dorn Cox, GreenStart, working on no-

seed, settling tanks, BioPro 380 in it. Runs in the Midwest, 22 farms. Primary crop: sunflowers, winter canola, some camelina, some flax. Average acreage: 5-65 acres. Sometimes scheduling between the farms can be problematic. Charging \$1/gallon for processing (covers chemical costs). Designed to get people interested, not necessarily a service they plan on continuing to provide. Want to get the local food shed working. Working with the Mass Biofuel Coop. Have had issues with settling vs. filtering.

VSJF hired Chris to look at mobile unit. He looked at two different systems, his conclusions can be found on VSJF website.

Nick Meyer, Organic Valley dairy farm in Hardwick. Bought a BioPro 90 in 2005. Have been making Growing sunflowers for 3 years. Short growing season in Hardwick. Can grow, harvest, dry, store, press, now. Want to press oil, sell, get used back and turn into biodiesel. Getting money for the food grade makes it make sense. Wants to buy a load of the 35 gal (lbs?) cubes, but has to buy a whole truck load. Tried a filter press, still trying to figure it out. Has a Kern Kraft KK40.

UVM Extension, has applied for SARE grant to see what the processing steps are for food-grade oil. A lot of the steps are proprietary. Money will be used to help us figure out the processing (degumming, etc.) that needs to happen before you can sell it to a restaurant. Chris Callahan: variety selection plays a role in making it palatable for a restaurant, so do some of the processing specs (temp of pressing, etc.) Most of the solutions seem industrial (chemical, energy intense). John 30% of the oil goes out with the contaminants

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Nick: leave sunflowers in 2 years, rotate in peas and oats for baleage, and then seed down with grass mix (red clover, orchard, timothy grass). Get seed in late May, get harvest in by October. Use Teton, Defender Plus, 306 (slower maturity than Def. Plus, but just as much seed). Do about 10 acres. Wants to double that in the next few years. Had a lot of bird damage this year: 30-40%. Also hit by deer at the edges of the field. Bird machine was good enough for 3-5 acres. (Bird distress calls). Squawk box put in the middle of the field, near the tree line. <\$400. Roger said he got one for ~\$250. Nick, put the squawk box out in mid-August, maybe not early enough. Alan Baker: maybe put out before the seeds start to form. Heather: make sure you remember to change the battery. Jon Williamson: had neighbors complaining about bird cannons, squawk boxes. None of them work for him.

Blue River Organics came out with a new variety. ~75 RM. Variety: Sierra. Organic producers have a

Pressing moldy seed

e anything.

Consensus: Aerators cheap (\$140-250), does great. Can bring 14-16% down to acceptable levels in 3 days.

Paul Boivin, condensation = molding. Use an aerator to get moist down, but then monitor it. Watch big changes of weather. When it goes from cold to warm, will condensate, enough to make it mold. Has 20 ton Chinese press. Not set up yet. Growing KB36 (non-GMO, open-pollinated canola), selling for seed. Very hard (impossible?) to get non-GMO canola seed.

John Williamson, processing for 5 farms, lots of additional inquiries. Goal: 1000 acres, probably take another 5 years. Run B100 on their farm, in 5 machines. Capacity of biodiesel reactor: can do 1500L batches, 3 a day. Use solar energy to heat, so can do about one a day. Taby press can run at 3 gal/hr, 2.5 gal/hr. Methanol recovery some success using solar energy. Been dabbling with sugar crops so can produce own methanol. Mainly looking at sweet sorghum. He put in 24 acres of different oil crop. The neighboring farms added another 25-30 acres. Has better combine now? Crop rotation difficult to figure out. What follows what? His farm, organic, other farms that he works with are conventional. Never considered corn for methanol, want direct. Fertilizer: for organic cow manure. Grows cover crops, rye on everything. Plowed down. Off-farm, been using conventional fertilizer, herbicides. Soils samples taken over all the fields, and are going to be more meticulous in figuring out crop needs. Hans says that there is some Cranby(?) out of ND. Close to canola potential in terms of oil yields. Cranby has potential for industrial oil. Seed is about the same size as canola.

Larry Scott, Newbury, VT. Been growing oil crops for 5-6 years. Had 38 acres of sunflowers, were

December, still too wet. Going to try to harvest it once the snow melts a bit, before floods in the spring. -6,000 gallons a year in trucks, tractors, house. Has Taby, same as John. Wants to be able to provide all of his farm's fuel needs.

Hank Wagner, from Wagner Farms, grows sunflowers, canola (both winter and spring), ~200 total acres for oilseed. Been doing 4-5 years. Have own press, biodiesel reactor (homemade). Use 18 ton Chinese press, not too impressed with it. Sell seed meal to local farmers. Fuel for on farm use. Have beef, sawmill, land clearing business, use 100,000 gallons/year. First year, made 20,000 gallons. Been getting used oil from restaurants. Seed meal as feed: , it will produce an inconsistent meal, which makes it hard to mix into a feed ration. Definitely value in using seed meal as feedstock, supplementing seed meal for grain, using it for protein. Can be too much fat in seed meal, lines the cows stomach, not good for them. Some fat depression in milk production because ration was balanced. Seed meal could be 30-40% protein, ~\$200/ton of seed meal. Meal for chicken feed? Have to mix in some other stuff, chickens Meal can mold too. Using seed meal for organic fertilizer ~\$300/ton.

Alan Baker, works with John Williamson and Andrew Knafel. Doing soil samples, insect monitoring. Did some weed counts, etc. Different types of issues for weeds, soil types, buildup of insect problems.

hedgerow effects, affect banded sunflower moth prevalence, deer, birds, hedgehogs, have somewhere to go. The more upright the head as it matures, the more bird damage. Heads that bow down, fold in, less bird damage. (Head position affected by genetics.)



making sure the distance between the plants is right, is the way to get a good stand. Increased speed = decreased precision. Dig up some seeds at planting time as a self-check.

Strip till

Chris Callahan Vermont Oilseed Cost Calculator & 2010 Economic Review

Wanted to understand the costs of oilseed production crop costs, costs of processing (oil, meal, seed, fuel), greenhouse gas production

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Philip Halteman, Heather Darby UVM Extension

Lodging problems, due to over fertilization. Because sunflowers have such deep roots, we should be taking soil samples two feet down. Half again as much nitrogen can be in the second foot.

Research this year showed that 60 lbs was slightly advantageous over 0 lbs, but did not result in higher yields when compared to 90 lbs and 120 lbs. See research reports, available on UVM Extension website.

Results from seeding rate studies

