



Prepping crop spray nozzles

Review photo 4315 — Greg Nikkel

Aerial crop sprayer Jeff Farr shows the precision nozzles he uses to spray insecticides, called ASC rotary atomizers, which will be mounted on his spray planes in the spring. He calibrates the sprayers each spring to make sure they produce the right size and density of droplets for use in spraying for insects or for fungus on crops. The blades spin like a propeller, and the cylinder in front has small holes to atomize the spray; the propeller blades can be adjusted minutely as to their angles, which determines how the chemical gets sprayed over a farmer's field.



Farr family flying together to spray crops

Review photo 4316 — Greg Nikkel

The Farr family, Justin, Jeff and Jody, show off one of the new Thrush planes used by Farr Air to spray crops with insecticides or fungicides for southeast-area farmers, in the company's hangar at North Weyburn. Jeff is one of the four pilots who fly for Farr Air, and Justin is in Grade 12, and is working towards getting his commercial pilot's licence before taking an ag pilot course specifically to enable him to spray crops for the company. When spraying, the plane flies close to the ground as it applies the chemical; Farr determined he no longer will spray herbicides, only insecticides and fungicides.

Farr Air making a living 15 feet off the ground

A love of flying combined with ag knowledge

By Greg Nikkel

Jeff Farr has a unique view of many fields of crops in southeast Saskatchewan — from about 15 feet in the air at high speed.

This is the height he applies insecticides or fungicides from his crop-spray plane as one of four pilots with his family company, Farr Air.

Along with wife Jody and son Justin (a Grade 12 student who is in the process of getting his commercial pilot's license), they own four spray planes with four commercial spray pilots to fly them, including himself.

The Weyburn Airport at North Weyburn is the main base for the company, with air fields used extending from Coronach in the west up to Lewvan, Fillmore and White City in the north, and down to the U.S. border in the south.

Explaining how he got into aerial crop spraying, Jeff said, "I used to farm with my dad and brother at Lewvan, where we had a large grain farm and a farm supply company. At times it was hard to get access to an airplane for spraying, so we bought a plane and hired a pilot to fly it — and so I decided to do that too, in 2000."

He earned his commer-

cial operating certificate from Transport Canada, then later he bought a second plane and hired a pilot for it.

That first pilot he hired, Robin Coupal, is still his senior pilot (along with himself), having formerly worked as an agrologist with their farm supply business.

Today, two of the four planes are new Thrushes that he bought from Albany, Georgia, and they are capable of spraying fields in a faster and more efficient manner than his older crop-spray planes.

When a farmer calls him and wants a specific field sprayed, Jeff asks for a detailed picture of the field, including its location; they locate the land through Google maps which gives a satellite view of the field, and using GPS in the planes they are able to pinpoint exactly which field to spray.

For the pilot doing the spraying, their orientation to a given field is always north, and using GPS the field is located, and a fly-over is done at 500 feet to orient the pilot as to the layout of the field, and to look for any hazards like power lines, guy wires or trees.

If everything looks okay, and wind conditions are right,

they will then do passes over the field in a pattern similar to how a Zamboni ice machine cleans an ice rink, doing circular passes in a concentric pattern.

A recent development that is posing new hazards to low-flying crop sprayers are new, small meteorological towers some farmers just pop up in a field, and which are just under 200 feet so they don't have to have flashing red lights on them (as required by law).

"You're not only looking for power lines, but for these little towers," said Jeff, showing a photo of one that was very slim and painted a neutral colour that made it all but invisible for a pilot flying through at 15 feet above the ground. He noted a pilot in Manitoba hit one of these meteorological towers, but was able to fly his plane home.

A factor that producers might want to keep in mind is, for Farr Air at any rate, "we are very selective about the work that we do," said Jeff.

Part of this selectivity is, they will no longer spray herbicides from the air, limiting themselves to fungicides and insecticides. As Jeff explained, this is due to the value of a field of crops, and the risk of drift; if a herbicide

happens to drift into a field with an expensive crop in it, he would then be liable for the cost of that crop.

Organic producers are among those they are on the lookout for, because those fields cannot have any kind of chemical used on it; Jeff said their neighbours are usually very good at letting him know where organic fields are located.

In spite of these dangers, crop spraying is actually a very precise science, and Jeff works hard to ensure their planes are equipped with the spray nozzles and GPS that are very exacting in the crop spraying they do.

For example, every spring, their spray nozzles are calibrated to produce the most evenly-spread and efficient spray possible. An expert is brought in who lays out water-sensitive cards, and the planes fly over and spray it; the resulting patterns on the cards are scanned into a computer and the size and spacing of the droplets are calculated, with the nozzles adjusted accordingly. Jeff noted that last spring, they did 27 passes over these cards as they did minute calibration of their spray nozzles to get the optimum coverage with spray over the crops.

Crop sprayers are required to do this calibration every 18 months, so Jeff decided they would just do this every spring so they're in top working order for every new growing season.

"We spend a lot of time making sure everything's dialled in right," said Jeff.

For any new pilots he hires, they first need to do 10 hours of training to get to know the planes he operates (and they should have their commercial pilot's licence), and they then need to take the ag pilot course which is specifically designed for crop spraying.

"We have retraining every year, and we spend a day going over our planes and procedures, and write exams on the type of aircraft we have," said Jeff.

Most years, their season ramps up in the first part of June when they spray winter wheat, then there's spraying for insects or fungicide in July into August, and in August they start spraying pre-harvest Round-up, and sometimes the spraying takes them into October. One year, an extremely wet year when tractors couldn't get into the fields, they spent two weeks seeding canola by air.