

## PED Vaccine on the Horizon

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**CANADA - A Manitoba-based biotech company says it is about three months away from producing an effective vaccine to combat Porcine Epidemic Diarrhoea (PED).**

Zyme Fast Inc., which has a lab just outside Winnipeg in the RM of Springfield, told *Winnipeg Free Press* that the new vaccine will be a variation of a vaccine it developed about three years ago to successfully combat an Asian strain of the PED virus.

"Not only is it effective in protecting piglets from contracting PED, it also cures those already infected," said Zyme Fast president, Terence Sellen. "To the best of our knowledge, the Zyme Fast technology is the only one used in China."

Mr Sellen said the primary North American strain of the virus shares about 92 per cent of the characteristics of the Asian variety so Zyme Fast only needs to modify the Asian vaccine to make it nearly 100 per cent effective against the North American strain, rather than having to develop a whole new vaccine from scratch.

He continued: "We use a proven vaccine research and design protocol that we've developed and used to produce the Asian PED vaccine as well as other effective vaccines and animal-health products that are delivered as powdered animal-feed supplements. (So) barring any unexpected glitches, we're confident we can have an effective vaccine ready for approval in about three months."

He added that, while several pharmaceutical companies are also reported to be working on a vaccine, media reports say they are at least a year away from producing a product.

Zyme Fast is working closely with Agriculture and Agri-Food Canada, which approached it about a month ago to see if it was working on a vaccine for the North America strain of the virus. It is also working closely with the Canadian Food Inspection Agency (CFIA), which will have to approve the new vaccine before it can be used by Canadian hog producers, and with local hog industry's umbrella organisation - the Manitoba Pork Council (MPC).

Mr Sellen said Zyme Fast's local lab, which has a staff of six, has the capacity to produce the vaccine itself. It will likely need to hire only one additional worker.

But if the new vaccine is fast-tracked for use in Canada and the United States, it will likely generate millions of dollars in additional revenues for the firm, he added.

An MPC official said a made-in-Manitoba vaccine could provide a huge benefit for the local pork industry in its ongoing battle to prevent PED from ravaging herds here.

Mark Fynn, the MPC's animal care specialist, said the big benefit to using the Zyme Fast vaccine is that it is an egg-yolk antibody product that can be administered as a food supplement. The piglets ingest it and it takes effect almost immediately, rather than taking several days as would be the case with a traditional vaccine administered with a needle.

"So this type of product seems really promising. It will be a big deal for the industry in Manitoba, and an even bigger deal for the industries in Ontario and the US," Mr Fynn said. The virus has killed millions of piglets in the US since it was first discovered there last May, and there are more than 24 confirmed cases in Ontario since it was discovered there in late January. However, Manitoba has had only one confirmed case so far.

Although Mr Sellen says the vaccine can prevent pigs from getting the virus, Mr Fynn said the MPC will likely let producers decide whether they want to use it as preventative tool.

He told *Winnipeg Free Press* the council's position is maintaining proper bio-security measures on the farm is still the most effective defence against the spread of the virus.

MPC officials believe the reason the virus hasn't spread beyond the one farm is because the local industry and most of its producers already had stringent bio-security protocols in place before the virus arrived, likely on a truck from the US.

According to Zyme Fast, its PED vaccine is not a vaccine in the traditional sense. Rather, it is a natural vaccine protein product the company develops and injects into hens. Although it

does not harm them, the hens develop antibodies to kill the PED virus, and those antibodies are present in the yolks of the eggs they produce. Zyme Fast harvests and dries the egg yolks to produce a powdered food supplement which is added to the pig's food. The antibodies are transferred to the pig when it eats the food, providing a natural defence against the virus.

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