

## Intensive farming may save world: researcher

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Best way to feed growing population | Better communication with skeptical public is seen as important

CALGARY — Is precision farming a lynch pin in the goal of world peace? It may sound like a lofty idea until one considers global unrest created by food shortages.

Paul Fixen, director of research at the International Plant Nutrition Institute, said precision farming techniques can intensify food production, which will be needed as the world population grows.

However, he also told the Precision Ag 2.0 conference in Calgary that communicating the value of new intensive farming techniques to the public can be challenging.

“Most people get the idea that we have to produce more food,” he said in an interview.

“They get that part, but I’m not sure they understand the connection between that and the need to produce higher yields on the lands that we do farm.”

Precision farming can allow producers to produce more on the same land and with finite resources, Fixen said.

However, the public doesn’t necessarily embrace the idea of more intensive farming because its benefits haven’t been well communicated.

Fixen groups agricultural challenges into three main areas:

- human nutrition, including food quality, quantity and accessibility
- carbon, relating to climate change, energy use and bioenergy
- land, water use, soil quality and waste disposal

He sees precision agriculture as a tool for sustainable intensification because it promotes efficient use of inputs along with higher yields.

He quoted a study indicating that per capita income, and not population, was the primary predictor of crop demand. Using that premise, crop demand will increase by 110 percent when comparing 2050 to 2005.

That demand won’t be met without agricultural intensification, he said.

“It is our only hope for the future.”

Fixen is a proponent of a concept called 4R nutrient stewardship, which says crop nutrients must be applied to the right source at the right rate at the right time and in the right place.

He said it is vital agronomically, economically and environmentally because intensification is more than yield increases.

It also involves attention to nutrient resources, their efficient use and their effects on the environment.

“I think we have a challenge before us to do a better job of communicating that when we talk about intensification,” he said.

“It’s not just higher yields but it involves a system that has higher nutrient use efficiency, water use efficiency, plant use efficiency and all of that. It’s all part of the intensification package.”

As the public takes a greater interest in food production, farm managers will need to better measure their inputs so they can defend their use to a more curious public, Fixen said.

Precision agriculture allows that measurement.