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## **FARMERS POOL RESOURCES FOR NEW SPRAYER TECHNOLOGY**

Last week I had an opportunity to see a new sprayer being used for fall weed control east of Crete before it was winterized for the season. The sprayer was a John Deere 4720, the same sprayer that was on display last winter at the 2007 Commodity Classic show.

Several things struck out as cutting edge. First of all, one local family farmer does not own the machine. With the cost of this machine in the neighborhood of 180K, it is not economical for the small or mid sized farm operation. In this case, three neighbors went together in a joint ownership venture to pay for and utilize the new machine. If shared, ownership allows the machine to be used more often and on more acres, therefore, ownership costs go down. Pooling labor can have some big advantages of helping each other out. Spraying for others next year was also mentioned.

Successful farm machinery joint ownership ventures need to have farmers that have similar work ethic and personalities and a well thought out plan in writing on "what if" scenarios. All three local farmers dropped the traditional approach of pride of self ownership to have a machine that is more efficient and better than what they were doing before. The sprayer has all the bells and whistles with Global Positioning System (GPS) auto steer and automatic boom section control. All three farmers are continuous dryland no-tillers.

The sprayer has swath control that utilizes GPS to turn boom sections on and off automatically. There is a monitor in the cab that has a coverage map that shows where the operator and machine have previously applied product and it creates internal or external boundaries that show the operator what hasn't been sprayed. Watching the monitor color in the field as you go is so much easier and more accurate than following foam markers. Chemical applications for weed control are now more accurate than ever before.

Automatic boom control is the next cutting edge feature the machine had. This feature is emerging as one of the most popular features on high-tech sprayers. As controller manufacturers have added this option over the past year or two, farmers have quickly recognized the value in this technology's ability to avoid end-row shutoff headaches and to reduce overlaps and skips. As I rode in the cab, it is simply amazing to watch the computer detect when you are overlapping too far and then a boom section turns off. But to be within 4 inches accuracy with autosteer and see absolutely straight sprayer tracks up and down terraces on a steep piece of land is astonishing. The industry is saying typical chemical savings range from 2-10 percent and depend primarily on field shapes and boom width. With a standard five-boom-section sprayer, when auto section control is added, there is a 10 percent savings in chemicals.

Other features included a new suspension system on the sprayer that was designed like an aircraft landing on a carrier deck on a ship. In other words, operator bounce and boom bounce are reduced significantly which allows higher field speeds. The partners feel they can cover about 750 acres a day with the 90 foot boom swath during prime spraying conditions.



Manufacturers say if the scale of the operation is large enough, farmers are recovering the costs with higher productivity and reduced operator fatigue. More accurate applications and reductions in crop protection chemical usage are icing on the cake along with reducing crop damage when spraying post emergence with the narrow tires.

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