

February 10, 2017

## SPRAYER CLINIC WRAP-UP

I would like to express my thanks to the Southeast Nebraska Corn Growers and their sponsors for partnering with NE Extension and bringing Professor Greg Kruger to Crete. We had 135 applicators at the training from a wide area and it was quite a site at the 4-H Building at Tuxedo Park. I am proud of the fact how engaged everyone was with the training. It was all about on target applications, reducing drift, increasing efficacy of sprays and investing in areas where it can make a difference to the bottom line.

It's interesting how marks on spray tanks can be wrong. Weighing empty and full is one way to prove how many gallons a tank can hold with water weighing 8.34 pounds per gallon. Dry pesticide formulations should be measured by weight, liquids by volume. Some plastic measurement tubes for dry formulations can say accuracy is plus or minus 10% which is unacceptable. We need to be more accurate today than that. Scales sensitive enough to handle small quantities of solid materials are not widely available. A digital scale 500g x 0.01g for precision weighing are cheap to buy and immediately pay for themselves that first load. Throw away the measuring tubes when containers are used up. Formulations often change, you must use the tubes that come with the product.

Applicators were told to measure wind speed at the nozzle height on the boom when spraying a field and recording that in their pesticide records. You can do that with a kestrel wind meter for approximately \$75 or a new weather flow wind meter and smart phone app for half the cost. The attachment to your smart phone jack is called Weatherflow INC. WINDmeter Smartphone Wind Meter. This is very cool technology. If an applicator is being drug into a complaint and he knows it wasn't his fault, having accurate field records can become a big deal including wind speed and wind direction.

With today's 110 degree nozzles, strive to set boom height one for one with nozzle spacing. If nozzles are every 20 inches, boom height should be 20 inches over the target. If nozzles are every 30 inches, set the boom height 30 inches above the target. With wind speed number one, boom height is the second largest factor in effecting particle drift.

We would like one spray nozzle to work for all applications but it doesn't work that way. It is best to have several types and sizes of nozzles on the boom so that you can switch to the "best" nozzle choice for a given spraying job. There are various types of sprayer components and setups to configure your boom so the new set up allows you to easily switch from one nozzle to another. Kruger demonstrated a new nozzle angled forward and backward specifically manufactured for superior control of head scab in wheat that I had not seen before.

Two new products called Extendimax and Engenia are labeled for use for the first time in Nebraska but the label currently says use is limited to the TTi11004 nozzle which gives us ultra coarse droplet size. You cannot use AMS or mix with other products. AMS will increase the volatility of these active ingredients and would be a violation of pesticide application laws.



I discussed the direct link to the national weather service hourly forecast. There is a new app NE Extension has made for the iPhone called AgriTools. You can download this for free. The benefit is being able to predict in your grid up to 5 days in advance wind speed which is usually quite accurate by the hour from the National Weather Service. You can also go to this quick link on the Internet and click on your location for the hourly forecast at: <http://ow.ly/XNY2F>

I think we bring back the mobile training laboratory next year for those that missed and a more advanced sprayer clinic for those in attendance. I look forward to continued partnership with the Southeast Nebraska Corn Growers Association.

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