



agronomic special report

Nitro-B: 10% liquid boron source to be tank mixed with UAN for sidedress applications

As we continue to push the boundaries of corn yields, growers need to look towards a full-balanced nutrient profile. One key nutrient for corn is boron. Boron plays important roles in transferring sugars and nutrients in the plant, increases pollination, and helps with the transfer of carbohydrates to the grain.

Application timing of boron can be the biggest challenge. Boron is water soluble and extremely mobile in the soil and so is prone to leaching under wet conditions and because it moves into the plant through mass flow with water, becomes unavailable to the plant under dry conditions as evapotranspiration slows. Furthermore, boron mobility within the plant is extremely limited, so getting boron to the right place in the plant at the right time can be a challenge. Research (Heard, Manitoba Agriculture) conducted on the uptake of boron in corn has demonstrated more than 2/3 of uptake occurs starting at R1 which makes the 28% UAN application timing, ideal for the addition of boron.

Agro-100 has specifically designed **Nitro-B** as a 10% liquid boron source to be tank mixed with 28% UAN for sidedress applications. **Nitro-B** mixes completely with the UAN and allows for a consistent application of nitrogen and boron to the entire field, in one pass. By adding boron in the sidedress timing window, the uptake of boron can be maximized, while reducing the opportunity for nutrient loss in the field. Also, since boron and nitrogen both move into the plant with water via transpiration, adding the two together at sidedress timing, at the growth stage where uptake demand begins to peak, places the boron at the right place, right time and in a readily available form for the crop to absorb quickly.

Grower research trials from 2019 onward, have shown a consistent yield increase from the addition of **Nitro-B** to the sidedress application. Whether through injection or surface applied, adding **Nitro-B** to the UAN application has shown consistent results **averaging 9.9 bu/acre increase in corn yield and a 100% win** percentage in nine trials. For the cost of around 1 bu/acre of corn, Nitro B adds 9.9 bu/acre to the bottom line, a **10:1 ROI** by simply adding 1 L/acre of Nitro-B to the UAN sidedress application.

