



February 7, 2012

### Continuing Impacts from Dry Fall in Spring of 2012

# AGRONOMY TOPIC OF THE WEEK

With the harvest of 2011 behind us we begin thinking about the 2012 crop. Because of the extreme dryness last fall, some agronomic management decisions may have to vary from the norm.

Conserving moisture should be the primary concern. Generally every soil disturbance with a tillage pass can cause the loss of ¼ inch of soil moisture. A firm seedbed for obtaining good seed to soil contact, and establishment of roots that are located near the soil surface is imperative. A seedbed is too loose if your boots sink over 1 inch when walking through the field. Avoid any more tillage than is necessary to create this seedbed. Excessive pre plant tillage not only robs the soil of moisture, it creates an undesirable seedbed, sets the soil up for crusting with spring rains, and enhances the probability of wind erosion.

Spring NH<sub>3</sub> applications should also be monitored. There is generally a 4 inch ammonia “dispersal” zone around the point of NH<sub>3</sub> injection. This injection zone should be maintained at 7-9 inches deep to keep seed out of this dispersal zone. Dry soils tend to be cloddy, and ammonia can seep through large pores between clods after application. Proper depth of application and good soil coverage are a must for application in dry soils, monitor this closely. Planting should be delayed 3-5 days following anhydrous ammonia application. Running the applicator at an angle to the corn rows will keep a planter unit from running directly over a knife track the length of the field.

Establishing a full, even stand of corn can be a challenge with soil conditions that may be dry and cloddy. Trash whippers, or other equipment should be set to clear the seedbed area. Trash and clods can affect seed depth and emergence, causing uneven stands and a variance in growth stages. Yield losses due to uneven stand establishment can easily approach 7-15 bushels per acre.

Planting depth of 1.75-2 inches is optimal for most situations, but could be as deep as 2.5 inches under very dry conditions to ensure adequate moisture is present in the seed zone for germination.

Because fertilizers are salts, care should be taken with starter applications in furrow. Salts can pull moisture away from and out of the plant resulting in root injury, root tip death, and stand loss. Maximum recommended N and/or K<sub>2</sub>O rates are 8 pounds per acre (5 pounds in sandy soils) in furrow. 6.5 gallons of 10-34-0 results in 7.5 pounds of N, consider reducing starter rates under extremely dry conditions.

Finally, control moisture robbing weeds. Consider a pre emerge application of a broad spectrum herbicide. This will not only assist with moisture management, it also aids in preventing resistance to glyphosates.

For further discussion about how to plan for the Spring of 2012, contact your local Central Valley Agronomist.