

## AGVISE Guidelines

### Edible Beans

#### **Adjusting Nitrogen guidelines when 0-6" nitrate level is below 35 lb/a.**

Edible beans are a shallow rooted crop that fixes only a portion of their own nitrogen. In addition to inoculating the seed, a small amount of nitrogen in the 0-6" soil profile is suggested. If the 0-24" nitrate level is high yet the 0-6" tested low, a nitrogen guideline to bring the 0-6" profile total to 35 lb/a is suggested (see example below).

Example: If 0-24" nitrate level is 150 lb/a, yet the 0-6" nitrate level is 10 lb/a, then the "N" guideline is 25 lb/a ( $35 \text{ lb/a} - 10 \text{ lb/a} = 25 \text{ lb/a}$ )

### Wheat, Barley, Oats, Corn

#### **Adjusting Nitrogen guidelines when 0-6" nitrate level is below 50 lb/a.**

Crops which are planted into cold soil conditions require sufficient nitrogen early in the season. If most of the nitrogen in the 0-24" profile is below the topsoil, a small amount of nitrogen is suggested. If the 0-24" nitrate level is high, yet the 0-6" tested low, a nitrogen guideline to raise the 0-6" profile total of 30 to 50 lb/a is suggested ( see example below).

Example: If the 0-24" nitrate level is 200 lb/a, yet the 0-6" nitrate level is 20 lb/a, the suggested nitrogen guideline is 30 lb/a ( $50 \text{ lb/a} - 20 \text{ lb/a} = 30 \text{ lb/a}$ )

### Soybeans

#### **Adjusting Nitrogen guidelines when 0-24" nitrate level is below 60 lb/a.**

This N recommendation adjustment is for soil samples submitted to the Northwood, ND lab only.

Soybeans are a legume that generally fills all of their nitrogen needs with the help of nitrogen fixing bacteria. This is always the case when soybeans are planted on fields that have a long history of soybean production. Research has shown that nitrogen fertilizer may be beneficial when soybeans are grown for the first time. When the 0-24" soil nitrate level is less than 60 lb/a, the nitrogen guideline is calculated to bring that level up to 60 lb/a (see example below).

When soybeans are grown the first time, inoculants applied to both the seed and soil may replace a nitrogen application.

Example:

If the soil test nitrate (0-24") level is 20 lb/a, then the N recommendation is 40 lb/a ( $60 - 20 = 40 \text{ lb/a}$ )