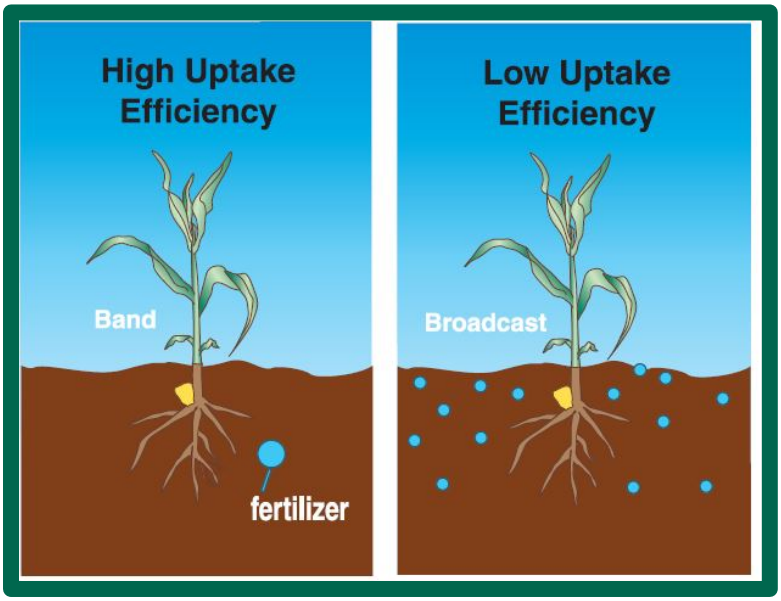
Best Management Practices

NUTRIENT PLACEMENT



DESCRIPTION

Correct nutrient placement is a critical part of efficient crop management. It often improves the efficiency by which plants utilize nutrients and therefore maximizes yield and reduces potential for losses. For phosphorus, subsurface banding reduces soil fixation and runoff losses. Nitrogen losses to ammonia volatilization and runoff can be prevented with subsurface placement. Placement of N and P fertilizer in non-irrigated furrows can reduce losses in furrow irrigation.

Subsurface banding of nitrogen and phosphorus fertilizers can contribute to water quality protection and often reduce fertilizer rate required for maximum yield. In situations where subsurface banding is not feasible, incorporation with tillage or sprinkler irrigation water soon after application is suggested.

A useful description of the advantages and disadvantages of various kinds of nutrient placement can be viewed at:

http://www.cals.uidaho.edu/edComm/pdf/CIS/CIS0757.pdf

Additional information on BMPs to optimize yield, maintain soil health and protect water quality can be found at:

coloradoagnutrients.org

BEST MANAGEMENT PRACTICES

- Nutrient placement one of the 4R's nutrient stewardship – *Right Place*
- Proper nutrient placement can increase yield potential and avoid nutrient and economic loss.
- Banding P fertilizer is especially effective in high pH, calcareous soils.
- Placement of N and P fertilizer in non-irrigated furrows can reduce losses in furrow irrigation.
- Placement options include broadcast, banding, foliar, and starter (pop-up).

Considerations for nutrient placement include:

- *Nutrient mobility in the soil*
- *Crop type*
- *Fertilizer type*
- *Soil characteristics (clay and organic matter content)*

IMPLEMENTATION REQUIREMENTS

Cost= MEDIUM
Operation and Maintenance= LOW
Training= LOW

EFFECTIVENESS

Nutrients: Banding P below the soil surface and near the growing root system can reduce P application rates by up to 50% compared to broadcast application.