



Spring 2006, No. 4

2005 CORN AND SOYBEAN NUTRIENT HARVEST IN THE NORTHCENTRAL REGION

Compared to the record-breaking yields in 2004, per-acre corn production was lower for many states in the Northcentral Region in 2005. In Illinois, drought led to more than a 20% decline in average yield and nutrient removal. The state average yield was 143 bushels per acre with associated phosphorus and potassium removal rates of 61 pounds of P₂O₅ per acre and 40 pounds of K₂O per acre. Other states with lower yields and nutrient removal rates in 2005 were Iowa (-4.4%), Indiana (-8.3%), and South Dakota (-8.5%). Not all states showed declines in corn yields in 2005. Wisconsin yields were up 8.8% and Minnesota's increase was even greater at 9.4%. **Across the Northcentral Region, corn yields in 2005 ranged from 119 to 174 bushels per acre. Phosphorus removal rates were 42 to 65 pounds P₂O₅ per acre, while potassium removal ranged from 33 to 52 pounds K₂O per acre.**

| State | 2005 ave. yield, bu/A | Removal rate, lb/bu | | 2005 ave. removal, lb/A | | Change in yield and removal from 2004, % |
|-------|-----------------------------|-------------------------------|------------------|-------------------------------|------------------|--|
| | | P ₂ O ₅ | K ₂ O | P ₂ O ₅ | K ₂ O | |
| IA | 173.0 | 0.375 | 0.30 | 64.9 | 52 | -4.4 |
| IL | 143.0 | 0.43 | 0.28 | 61 | 40 | -20.6 |
| IN | 154.0 | 0.37 | 0.27 | 57 | 42 | -8.3 |
| MN | 174.0 | 0.34 | 0.19 | 59 | 33 | 9.4 |
| SD | 119.0 | 0.35 | 0.30 | 42 | 36 | -8.5 |
| WI | 148.0 | 0.38 | 0.29 | 56 | 43 | 8.8 |
| U.S. | 147.9 | | | | | -7.8 |

Sources: USDA National Agricultural Statistics Service and state Extension publications.

In contrast to corn, soybean production in 2005 exceeded 2004 levels in many states. Wisconsin had the largest increase in yield and nutrient removal, up 27.5%, for an average yield of 44 bushels per acre, the fourth highest in the region. Increases were also seen in Iowa (8.2%) and South Dakota (5.9%). **Regionally, soybean yields ranged from 34 to 53 bushels per acre. The range in phosphorus removal was 27 to 42 pounds of P₂O₅ per acre, while potassium varied from 34 to 80 pounds of K₂O per acre.**

| State | 2005 ave. yield, bu/A | Removal rate, lb/bu | | 2005 ave. removal, lb/A | | Change in yield and removal from 2004, % |
|-------|-----------------------------|-------------------------------|------------------|-------------------------------|------------------|--|
| | | P ₂ O ₅ | K ₂ O | P ₂ O ₅ | K ₂ O | |
| IA | 53.0 | 0.80 | 1.5 | 42 | 80 | 8.2 |
| IL | 47.0 | 0.85 | 1.3 | 40 | 61 | -6.0 |
| IN | 49.0 | 0.80 | 1.4 | 39 | 69 | -4.9 |
| MN | 33.5 | 0.82 | 1.0 | 27 | 33.5 | 0.0 |
| SD | 36.0 | 0.77 | 1.4 | 28 | 50 | 5.9 |
| WI | 44.0 | 0.88 | 1.0 | 39 | 44 | 27.5 |
| U.S. | 43.3 | | | | | 2.6 |

Sources: USDA National Agricultural Statistics Service and state Extension publications

Nutrient management plans will need to be updated to account for the variable quantities of phosphorus and potassium removed. Nationally, nutrient removal by corn was down about 8% from last year, while that of soybean was up 3%. Phosphorus removal rates were higher for corn, but soybean topped corn in potassium removal.

—TSM—

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