

Nutrient Content & Removal of Canola Straw

(Interim Report)

Purpose:

To assess the yield and nutrient removal of canola straw.

Methods:

Canola straw samples were collected from 8 farms along with straw yield information. Samples were analyzed for nitrogen, phosphorus, potash, sulphur, boron, calcium, magnesium, zinc, manganese, copper and iron. The main elements of interest were phosphorus, potash and sulphur.

Results:

Fewer samples were collected than originally anticipated because of the low canola seed and straw yields experienced by many growers. Straw yields were highly variable as a result of the hot, dry conditions experienced in many areas. Straw yields ranged from a low of 900 kg/ha to 1.5 t/ha.

| | Straw Yield kg/ha (lb/ac) | Nutrient Content kg/ha (lb/ac) | | | |
|---|------------------------------|--------------------------------|-------------------------------|------------------------|------------------------|
| | | N | P ₂ O ₅ | K ₂ O | S |
| Sample Avg. | 1001.83 (894.5) | 7.69 (6.87) | 2.20 (1.94) | 11.50 (10.27) | 1.78 (1.59) |
| Nutrient Value \$/ha (\$/ac) | \$24.70 (\$10.85) | \$18.65 (\$7.55) | \$1.48 (\$0.60) | \$6.64 (\$2.69) | - |
| Nutrient Uptake (straw) ¹ | | 48 kg/ha (43 lb/ac) | 19 kg/ha (17 lb/ac) | 80 kg/ha (72 lb/ac) | 11 kg/ha (10 lb/ac) |

¹ Nutrient uptake as reported by Manitoba Agriculture based on 1940 kg/ha (1750 lb/ac) seed yield.

Summary:

Nutrient uptake was lower than expected and results should be viewed with discretion due to the low canola yields (560 - 2016 kg/ha, 500 – 1800 lb/ac) experienced in 2005. Straw yields were also highly variable. If the project is continued, a C:N ratio would also be useful, as limited data is available in this area.

Next Steps:

- Project to be continued for 2006

Acknowledgements:

Special thanks to the Growers who participated in the project, Georgian Regional Soil & Crop Improvement assoc member Soil & Crop assoc.

Project Contacts:

Brian Hall, OMAFRA, 519-271-0083, brian.hall@omafra.gov.on.ca

Ray Robertson, Georgian Regional SCIA, 519-986-3756, grey@ontariosoilcrop.org