



## **Pulse Agronomy Network~ *Partnership in Industry*** *September 27, 2004 - All Pulse Bulletin #16*

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- *Nutrient Value of Field Pea Straw*  
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### ***Nutrient Value of Field Pea Straw As A Soil Amendment***

- ▶ The benefits of removing straw from the field through baling rather than incorporating it back into the soil are of question and concern.
- ▶ Field pea straw contains nutrients that once broken down by the soil microflora, are available to following crops.
- ▶ The total cost of nutrients removed varies considerably depending on the total pounds per acre of straw removed (see table below).
- ▶ Added to the value of the nutrients, is the cost of baling straw (\$5 to \$12.00/bale) and hauling (\$3.50 to \$7.00/bale) which must be taken into consideration (source Alberta Machinery Guide 2004, AGDEX 825-1).
- ▶ Assuming 1000 lbs per bale, a farmer would require \$17.50 to \$28.00/bale to account for the cost of baling and hauling to the customer's yard (within a 25 mile radius) and the value of the nutrient contained within the straw.

## Cost of Field Pea Straw Removed per Acre As Nutrients 2004

Lbs/acre of pea straw removed	N*	N**=\$.42	P*	P**=\$.31	K*	K**=\$.17	S*	S**=\$.345	Total value per acre
1000	12	\$ 5.04	2	\$0.62	17	\$ 2.89	1.3	\$ .45	\$ 9.00
1500	18	\$ 7.56	3	\$0.93	25	\$ 4.25	2.0	\$ .69	\$ 13.43
2000	24	\$ 10.08	4	\$1.24	33	\$ 5.61	2.6	\$ .897	\$ 17.87
2500	30	\$ 12.60	5	\$1.55	42	\$ 7.14	3.3	\$ 1.14	\$ 22.43

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\* Nitrogen (N), Phosphorous (P), Potassium (K) and Sulphur (S) are actual in lbs/acre

\*\* Nutrients are \$/acre. Product used in pricing on per lb basis is; 46-0-0, 11-52-0, 0-0-60, and 21-0-0-0(24).

Note: Field pea straw nutrient levels are calculated using 1995-1997 average nutrient levels of

Crude Protein = 7.56%, P = 0.087%, K=1.38% and S =0.133%. To convert from crude protein to nitrogen % divide by 6.25.

- ▶ The decision by the farmer to work the straw back into the soil or bale and feed it is entirely up to each individual operation. In any case, farmers must recognize field pea straw's total value and not under estimate its' value.
- ▶ Farmers who are thinking of removing field pea straw should test it for protein, phosphorus, potassium, and sulfur to determine the nutrient content.