

# Harvest Weed Seed Control Financials

## Narrow windrow burning

Capital Cost: \$500

Costs	\$/ha	Area harvested with one harvester (ha)			
		1000	2000	3000	4000
Burning (labour / fire breaks)	2	2000	4000	6000	8000
Repairs and maintenance	0				
Fuel (extra 0.5 L/ha)					
Finance (\$500, 6%, 8 yr)		80	80	80	80
<b>Total</b>		<b>2080</b>	<b>4080</b>	<b>6080</b>	<b>8080</b>
<b>Cost per ha</b>		<b>2.08</b>	<b>2.04</b>	<b>2.03</b>	<b>2.02</b>
Residue removal (nutrient value \$/ha)		14.93	14.93	14.93	14.93

\*\*Growers with very high levels of soil Potassium may not wish to include the cost of nutrients in the calculation. The nutrient cost is roughly half K and half N.

### Assumptions

- Wheat 2 t/ha
- Nitrogen fertiliser \$1.15 / unit N
- Potassium fertiliser \$1.30 / unit K

### Nutrients in residue

Assuming 10 kg Potassium (K) per tonne of residue (normal range 5 to 15) and 6 kg Nitrogen (N) per tonne of residue (normal range 4 to 8).

#### Nutrient calculation:

2 t/ha wheat crop produces 3 t/ha residue (40% Harvest Index). Narrow windrow burn cart removes 50% of residue (range 40% to 55%) when harvesting wheat. Therefore, 1500 kg/ha of residue is removed and burnt. We assume a nutrient efficiency of 50% (i.e. if residue was retained, 50% of the nutrients would be used directly by following crops).

When narrow windrows are burnt, most of the nitrogen goes up in smoke and most of the potassium stays in the ash which then returns to the soil. However, most harvesters are now fitted with auto-steer and the windrow is deposited in the same place each year creating a nutrient rich (High K) strip. Therefore, we consider the Potassium to be lost from the system and this cost is included in the calculations. If the harvester moves slightly each year and Potassium is evenly re-distributed, then we may not need to consider the cost of Potassium loss.

