2008 Partial Budget Analysis for the Replacement of Metam Sodium by a Mustard Green Manure			
Positive Impacts		**Negative Impacts**	
Increased revenue[1]	per acre	**Decreased revenue[2]**	per acre
	$0		$0
Total increased revenue	$0	*Total decreased revenue*	$0
Decreased costs[3]	per acre	**Increased costs[4]**	per acre
Metam sodium application	$250	Plant mustard	$28
60 lb N/ac fertilizer, at $0.70/lb	$42	Fertilizer, 120 #N, S	$97
Irrigate after wheat harvest	$9	Water & Power	$30
		Spray weeds	$24
		Flail chop, disk	$13
Total decreased costs	$301	*Total increased costs*	$192
Total positive impacts	**$301**	**Total negative impacts**	$192
		Net Change in income	**+$109**

[1] *Increased Revenue*
Not included here is potential increased revenue related to increased tuber quality; specific gravity, reduced defects, etc.

[2] *Decreased Revenue*
Experience with mustard green manures have not shown any effects that would decrease revenue when compared to fallow.

[3] *Decreased costs*
40 gallons metam sodium/ac, at $6.25 per gallon.

A portion of the fertilizer applied to the mustard will be taken up by the following crop, thereby reducing its fertilizer needs. Here this was estimated at 50 lbs/ac (about 50% of the N in the incorporated mustard crop), but will vary according to conditions. Some farmers are finding that they can reduce their N applications by more than this amount.

When following wheat, disking of the stubble and irrigation in preparation for fumigation will not be needed when using a mustard green manure.

Not included here are potential decreased costs related to:

- Improved water infiltration; better distribution of water and associated fertilizers and pesticides, less soilborne disease pressure

- Improved soil tilth; decreased wind erosion, hills keep shape in sandy soils, less dirt harvested with potatoes, increased harvest speeds.
- Keeping nematodes in the surface soil for fall fumigation (vs. dry fallow which drives them deeper)

[4] *Increased costs*

These are the costs associated with managing a mustard green manure crop. The details used to come up with these costs are shown below:

- Plant mustard, Valmar applicator custom rate $10.25/ac, 10 lb seed per acre at $2.35 per lb of seed, 150 lb ammonium sulfate per acre applied with seed at $0.18 per lb.
- Fertigate, 90 lb N/ac at $0.78 per lb, $8 per acre for water, $22 per acre for power. Water charges will vary widely depending on your situation.
- Spray weeds, 6-8 oz. Arrow (Select) at $2 per oz, applied at custom rate of $10 per ac.
- Flail chop, 200 HP wheel tractor, 15' flail chopper

This analysis does not address the common use of a mustard green manure *with* a fumigant treatment.