

**Mustard Green Manures
 On-farm Research Results
 Measurement: Norkotah Potato
 Yields after Mustard, with and
 without Metam Sodium fumigant**

Results:

Potato Yields following a Mustard Green Manure Crop,
 with and without fumigant
 Gies On-Farm Trials, 1999 - 2001

1999-2000

1999: White mustard, *S. alba* Martigena planted 8/10/99 and incorporated on 10/25/99

Dry biomass yield: 5564 lb/ac
 Biomass N: 93 lb/ac
 Wheat residue: 6007 lb/ac
 Wheat residue N: 34 lb/ac

2000: Fumigated with metham sodium (Vapam) at end of March at a rate of 37.5 gallons per acre
 Russet Norkotah potatoes planted 4/15/00 and harvested on 9/7/00

	Yield	
	Fumigant	No Fumigant
	-----tons/ac ¹ -----	
Total (#1s + #2s + culls)	32.03	31.14
Total U.S. #1's (>4oz.)	26.5 (82.7%)	25.5 (81.8%)
<4 oz ²	3.05	2.58
4-8 oz	9.40	9.40
8-16 oz	14.28	13.94
>16 oz	2.81	2.17
culls and #2s	2.06	2.68

¹ Yields are averages of six paired replications, no significant differences were found

² tubers less than 2" in diameter were not harvested

2000-2001

2000: **White mustard**, *S. alba* Martigena planted 8/9/00 and incorporated on 10/24/00

Dry biomass yield: 4773 lb/ac

2001: Fumigated with metham sodium at end of March at a rate of 37.5 gallons per acre

Russet Norkotah (Colorado 8 selection) potatoes planted 4/20/01 and harvested on 9/17/01

Total N applied during growing season: 160 lbs per acre

	Yield	
	Fumigant	No Fumigant
	-----tons/ac ¹ -----	
Total (#1s + #2s + culls)	34.59	34.06
Total U.S. #1's (>4oz.)	31.00 (89.6%)	29.34 (86.1%)
<4 oz ²	3.04	2.85
4-8 oz	7.77	7.30
8-16 oz	18.48	16.89
>16 oz	4.75	5.15
culls and #2s	0.55	1.87

¹ Yields are averages of five paired replications, no significant differences were found

² tubers less than 2" in diameter were not harvested

2000: **Oriental mustard**, *B. juncea* Pacific Gold planted 8/9/00 and incorporated on 10/24/00

Dry biomass yield: 5023 lb/ac

2001: Fumigated with metham sodium at the end of March at a rate of 37.5 gallons per acre

Russet Norkotah (Colorado 8 selection) potatoes planted 4/20/01 and harvested on 9/17/01

Total N applied during growing season: 160 lbs per acre

	Yield	
	Fumigant	No Fumigant
	-----tons/ac ¹ -----	
Total (#1s + #2s + culls)	31.38	31.90
Total U.S. #1's (>4oz.)	27.59 (88%)	27.71 (87%)
<4 oz ²	2.25	1.72
4-8 oz	7.82	7.10
8-16 oz	16.15	14.70
>16 oz	3.62	5.91
culls and #2s	1.53	2.47

¹ Yields are averages of five paired replications, no significant differences were found

² tubers less than 2" in diameter were not harvested