

Mustard Green Manures
On-farm Research Results
Measurement: Glucosinolate
concentrations for mustard varieties

Glucosinolate Concentrations from Field- Grown Green Manure Crops							
2001 - Unreplicated							
<i>Sinapis alba</i> cultivars							
ITC Producing Glucosinolate	Martigena	Absolut	Achilles	Ida Gold	Tilney	Maxi	S. alba- Caliente
Shoots							
-----umol/g-----							
4-hydroxybenzyl	21.3	27.1	36.7	41.0	36.0	20.1	26.7
benzyl	3.2	2.9	3.2	2.5	3.2	6.0	3.8
Total (ITC producing)	24.6	30.0	39.9	43.5	39.2	26.1	30.4
Roots							
4-hydroxybenzyl	1.9	2.8	1.1	2.3	1.4	1.7	1.0
benzyl	1.4	0.9	0.2	0.5	0.5	1.0	0.3
phenylethyl	0.9	0.6	0.2	0.3	0.5	0.6	0.1
Total (ITC producing)	4.1	4.2	1.5	3.1	2.4	3.3	1.3
<i>Brassica juncea</i> cultivars							
ITC Producing Glucosinolate	Cutlass	Vulcan	Pacific Gold	ISCI20	F-E75	F-L71	B. juncea- Caliente
Shoots							
-----umol/g-----							
allyl	9.9	11.3	10.0	10.9	8.9	13.0	14.2
4-pentenyl					1.5		
phenylethyl	0.4	0.4		0.6	0.5	0.6	0.8
Total (ITC producing)	10.3	11.7	10.0	11.4	11.0	13.7	15.0
Roots							
allyl		1.2	1.4	0.6	1.7	2.1	1.9
4-pentenyl					0.4		
phenylethyl	0.5	0.8	6.0	0.8	2.7	2.1	3.6
Total (ITC producing)	0.5	2.0	7.4	1.4	4.8	4.2	5.5
ITC = Isothiocyanate							
All analysis performed on ~0.2 g subsamples with 0.2 ml internal standard, M. Morra, Soil Biochemistry Laboratory, Soil Science Division, University of Idaho							