

Table 1. 1996 snap bean yield response to 32 soil tillage and rotation treatments at Freeville site. Each value is the mean of 3 replications. Statistical analyses have not been completed. Abbreviations are: NDT=no deep tillage; DT=deep tilled; PR=perennial ryegrass; RV=rye/vetch; YM=yellow mustard. (Note: to convert kg to tons multiply by .001102).

Tmt no.	1995 Soil Tmt	1995 summer	1995/6 cover	1996 Summer Bean Pod Yield (kg/acre)		Soil Penetrom. (MPa)- 30 cm
				No Compost	With Compost	
1	NDT	Bean	none	3640	5718	2.16
2	DT			5217	3915	2.18
3	NDT		PR	3303	5364	2.08
4	DT			4826	5416	2.38
5	NDT		RV	1692	3229	1.70
6	DT			4165	3441	2.22
7	NDT		YM	3077	5988	2.01
8	DT			4005	4983	2.60
9	NDT	Corn	none	5418	6644	2.35
10	DT			5858	5764	1.86
11	NDT		PR	5409	6461	1.91
12	DT			4526	4513	2.35
13	NDT		RV	2574	6061	2.21
14	DT			4645	4562	2.07
15	NDT		YM	5020	5933	2.55
16	DT			6153	6136	2.14
17	NDT	Hubam	none	5712	6470	2.11
18	DT			5401	5619	2.49
19	NDT		PR	4804	6188	1.93
20	DT			5569	6136	2.09
21	NDT		RV	5417	6473	2.28
22	DT			4863	3822	2.18
23	NDT		YM	4976	6374	2.53
24	DT			5161	5523	2.55
25	NDT	Sudan	none	4760	4127	2.20
26	DT			5307	6580	2.26
27	NDT		PR	4636	8448	2.13
28	DT			5198	3833	2.25
29	NDT		RV	5236	6755	2.06
30	DT			5187	5497	2.01
31	NDT		YM	5083	7754	1.94
32	DT			5724	6528	1.93

<i>Averaging across 1995 summer crops:</i>						
	NDT		none	4883	6250	2.21
	DT			5446	5470	2.20
	NDT		PR	4538	6615	2.01
	DT			5029	4975	2.27
	NDT		RV	3980	5630	2.06
	DT			4715	4331	2.12
	NDT		YM	4539	6512	2.26
	DT			5235	5793	2.31

Table 1. 1996 snap bean yield response at Freeville site (continued)

Tmt no.	1995		1995/6 cover	1996 Summer Bean Pod Yield (kg/acre)		Soil Penetrom. (MPa)- 30 cm
	Soil Tmt	1995 summer		No Compost	With Compost	
<i>Averaging across 1995/6 cover crops:</i>						
	NDT	Bean		2928	5075	1.99
	DT			4553	4439	2.35
	NDT	Corn		4855	6275	2.26
	DT			5271	5244	2.11
	NDT	Hubam		5227	6376	2.21
	DT			5249	5275	2.33
	NDT	Sudan		4929	7821	2.08
	DT			5354	5610	2.11
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<i>Averaging across 1995 summer and 1995/6 cover crops:</i>						
	NDT			4485	6387	2.13
	DT			5107	5142	2.22

Table 2. 1996 sweet corn yield response to 32 soil tillage and rotation treatments at Freeville site. Each value is the mean of 3 replications. Statistical analyses have not been completed. Abbreviations are: NDT=no deep tillage; DT=deep tilled; PR=perennial ryegrass; RV=rye/vetch; YM=yellow mustard.

Tmt no.	1995		1995/6 cover	1996 Summer Sweet Corn Yield (no. ears/acre)		Soil Penetrom. (MPa)- 30 cm
	Soil Tmt	1995 summer		No Compost	With Compost	
1	NDT	Bean	none	16116	17908	2.63
2	DT			13465	20578	2.23
3	NDT		PR	15797	14647	2.55
4	DT			13456	22264	2.16
5	NDT		RV	14958	15510	2.17
6	DT			10767	16553	2.44
7	NDT		YM	14405	20764	3.20
8	DT			12439	22527	2.22
9	NDT	Corn	none	12476	12197	1.98
10	DT			10800	17631	2.07
11	NDT		PR	10546	22990	2.14
12	DT			12715	9438	1.96
13	NDT		RV	8763	16335	1.99
14	DT			6586	6776	1.95
15	NDT		YM	12969	19626	1.80
16	DT			12302	18454	2.55

Table 2. 1996 sweet corn yield response at Freeville site (continued)

Tmt no.	1995		1995/6 cover	1996 Summer Sweet Corn Yield (no. ears/acre)		Soil Penetrom. (MPa)- 30 cm
	Soil Tmt	1995 summer		No Compost	With Compost	
17	NDT	Hubam	none	17096	22277	2.70
18	DT			15363	19166	1.73
19	NDT		PR	16369	21384	3.03
20	DT			15615	21226	2.18
21	NDT		RV	17775	23232	2.70
22	DT			14661	18906	2.15
23	NDT		YM	16628	19664	2.93
24	DT			14816	20715	2.27
25	NDT	Sudan	none	15538	19747	2.19
26	DT			14505	22264	2.34
27	NDT		PR	15979	18854	2.55
28	DT			16718	17986	1.97
29	NDT		RV	15798	23100	2.04
30	DT			15076	21842	2.03
31	NDT		YM	18054	21067	1.97
32	DT			14578	17357	1.79

<i>Averaging across 1995 summer crops:</i>						
	NDT		none	15307	18032	2.38
	DT			13533	19910	2.09
	NDT		PR	14673	19469	2.57
	DT			14626	17729	2.07
	NDT		RV	14324	19544	2.21
	DT			11773	16019	2.14
	NDT		YM	15514	20280	2.48
	DT			13534	19763	2.21

<i>Averaging across 1995/6 cover crops:</i>						
	NDT	Bean		15319	17207	2.64
	DT			12532	20481	2.26
	NDT	Corn		11189	17787	1.97
	DT			10600	13075	2.13
	NDT	Hubam		16967	21639	2.84
	DT			15114	20003	2.08
	NDT	Sudan		16342	20692	2.19
	DT			15219	19862	2.03

<i>Averaging across 1995 summer and 1995/6 cover crops:</i>						
	NDT			14954	19331	2.41
	DT			13366	18355	2.13

Table 3. Geneva site emergence, total biomass and crop fresh wt. yield, root nematode (*Pratylenchus* sp.), and root disease severity rating (1=low; 9=high) for snap beans in 1996. NDT=no deep tillage; DT=deep tillage. Asterisk (*) indicates significantly different than check at 5% level. (Note: to convert kg to lbs. multiply by 2.204).

Treatment	No. plants/10 ft.		Yield, kg/10 ft		Nematode per g root	Root Disease Severity
	Emerg.	Stand	Total	Pod		
Tillage (F 94)						
NDT	74	64	5.0	3.0	18	6.4
DT	74	68	5.1	3.0	17	6.0
Compost (Sp 95,96)						
No Compost	75	68	5.1	2.9	19	6.2
Compost	73	64*	5.0	3.1	17	6.3
Cover Crop (F 95)						
None	77	68	5.4	3.2	15	6.4
Vetch	73*	66	5.0	3.0	14	6.1
Rye	72*	64	4.8	2.8	25	6.2

Table 4. Geneva site emergence, total biomass and crop fresh wt. yield, and disease severity for table beets in 1996. NDT=no deep tillage; DT=deep tillage. Asterisk (*) indicates significantly different than check at 5% level. (Note: to convert kg to lbs. multiply by 2.204).

Treatment	No. plants/10 ft.		Yield, kg/10 ft		Disease Severity	
	Emerg.	Stand	Total	Beet	% Infected	% Unmkt
Tillage (F 94)						
NDT	199	120	11.8	7.1	3.3	3.2
DT	201	119	10.6	6.2	3.0	2.7
Compost (Sp 95,96)						
No Compost	203	125	12.9	7.7	3.1	2.7
Compost	197	114	9.4*	5.7*	3.2	3.3
Cover Crop (F 95)						
None	211	124	11.2	6.7	3.6	3.1
Vetch	208	121	11.2	6.6	3.2	3.4
Rye	180*	113	11.2	6.7	2.7	2.4

Table 5. Geneva site emergence, total biomass and crop fresh wt. yield for sweet corn in 1996. NDT=no deep tillage; DT=deep tillage. Asterisk (*) indicates significantly different than check at 5% level. (Note: to convert kg to lbs. multiply by 2.204).

Treatment	No. plants/10 ft.		Yield, kg/10 ft		Ear no./10 ft.
	Emerg.	Stand	Total	Ear	
Tillage (F 94)					
NDT	14	14	8.1	3.3	15.1
DT	14	14	8.2	3.4	17.1
Compost (Sp 95,96)					
No Compost	14	14	8.0	3.4	15.3
Compost	14	14	8.4	3.3	16.9
Cover Crop (F 95)					
None	14	14	7.6	3.0	14.2
Vetch	14	14	8.0	3.4	18.3
Rye	14	14	8.9*	3.7*	15.7

Table 6. Snap bean yield response and soil penetrometer resistance at Western NY farm site. NDT=no deep tillage; DT=deep tillage; cmpst=compost; RV=rye vetch. (Note: to convert kg to tons multiply by .001102).

Tmt no.	1995 Soil Tmt	1995 summer	1995/6 cover	1996 Summer Pod Yield (kg/acre)
1	NDT	Bean	none	3964
2	DT			3602
3	NDT		cmpst	3275
4	DT			3139
5	NDT		RV	2994
6	DT			2803
7	NDT	Beet	none	3738
8	DT			3493
9	NDT		cmpst	3638
10	DT			3910
11	NDT		RV	4128
12	DT			3366
13	NDT	Corn	none	4354
14	DT			4218
15	NDT		cmpst	5035
16	DT			4173
17	NDT		RV	3683
18	DT			3003

Table 6. 1996 snap bean yield response at Western NY farm site (continued).

Tmt no.	1995		1995/6 cover	1996 Summer Pod Yield (kg/acre)	Soil Penetrometer (MPa)		
	Soil Tmt	1995 summer			15 cm	30 cm	45 cm
<i>Averaging across 1995 summer crops:</i>							
	NDT		none	4001	3.01	4.85	5.21
	DT			3765	3.12	4.84	5.25
	NDT		cmpst	3765	2.91	4.77	5.25
	DT			3738	3.44	5.08	5.25
	NDT		RV	3602	3.52	5.02	5.24
	DT			3057	3.55	5.13	5.26
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<i>Averaging across 1995/96 cover crops:</i>							
	NDT	Bean		3411	3.34	4.99	5.24
	DT			3175	3.45	5.02	5.26
	NDT	Beet		3828	3.20	4.95	5.21
	DT			3583	3.52	5.12	5.26
	NDT	Corn		4218	2.90	4.70	5.25
	DT			3792	3.15	4.91	5.24
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<i>Averaging across 1995 summer and 1995/96 cover crops:</i>							
	NDT			3792	3.49	4.96	5.24
	DT			3520	3.74	5.08	5.25

Table 7. Compost experiment results. 1996 table beet yield response to two years of composted chicken manure applications at rates indicated at Western NY farm site.

Yield Components	Compost Application Rate			LSD ₀₅
	0 tons/acre	2 tons/acre	4 tons/acre	
Mkt. Yield (tons/acre)	3.9	8.2	8.9	3.7
Total Yield (tons/acre)	7.3	12.0	12.2	3.3
% unmarketable	46	32	28	17
No. mkt/sq. ft.	1.6	3.4	3.5	1.8
Total no./sq. ft.	8.2	10.5	10.2	2.0

Table 8. 1996 summer/fall cover crop observational evaluation trial in Western NY, showing above-ground cover crop biomass production (dry wt.) during approximately first two months of growth.

<u>Cover Crop</u>	<u>Date Planted</u>	<u>Date Sampled</u>	<u>Biomass Dry Wt. (lbs./acre)</u>
Buckwheat	6/16	8/8	1759
Sudex	6/16	8/8	2338
Oilseed Radish	8/25	10/18	2242
Brassica hirta	8/25	10/18	2686
Brassica juncea	8/25	10/18	2355
Oats	9/10	11/3	1915
Vetch	9/10	11/8	1345
Ryegrass	9/10	11/8	456
Rye/vetch	9/10	11/8	1678
Rye	9/10	11/3	1284

Table 9. 1995/96 fall/winter cover crop observational evaluation trial in Central NY (Wayne county), showing above-ground cover crop and weed biomass production (fresh wt) per 1 m² plot harvested the following spring on 5/20/96. Each value is the mean of three replications.

<u>Cover Crop</u>	<u>Date Planted</u>	<u>Cover Crop Fresh Wt (g/plot)</u>	<u>Weed Fresh Wt. (g/plot)</u>
Austr. Winter Pea	9/2/95	107.3	75.3
Rye/Vetch	9/2/95	282.7	14.0
Yellow Mustard	9/2/95	winter killed	62.7
Vetch	9/2/95	179.7	8.7
Ryegrass	9/11/95	138.3	10.7
Ryegrain	9/11/95	331.0	4.3
Austr. Winter Pea	9/11/95	151.0	76.3
Rye/Vetch	9/11/95	396.7	7.0
Yellow Mustard	9/11/95	winter killed	62.7
Vetch	9/11/95	302.0	3.7
Ryegrass	10/8/95	39.7	0.0
Ryegrain	10/8/95	81.3	0.5