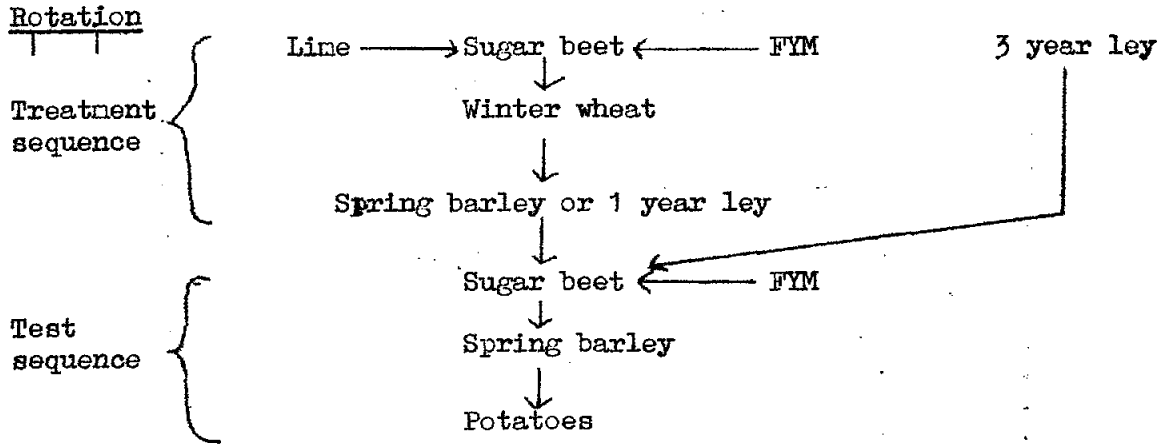


NORFOLK AGRICULTURAL STATION

NAS 200 ML Long Term Improvement of Soil Condition by Rotation,
Organic Manuring and Line

Provisional Results



Layout 3 phases each with 2 replicates

Crop Yields

Treatment sequence -

Sugar beet - sugar yield (t/ha)

	1972	1973	1974
Control	8.02	7.76	3.95
FYM	8.03	7.76	4.64
FW Line	7.98	7.86	5.10

Winter wheat - grain yield (t/ha)

	1973	1974	1975
Control	4.83	6.86	5.29
FYM	4.67	7.37	5.40
FW Line	3.99	7.09	7.01

Spring barley - grain yield (t/ha)

	1974	1975	1976
Control	5.55	4.47	3.55
FYM	5.61	4.84	3.63
FW Line	5.86	5.72	3.79

Test sequence -

Sugar beet - sugar yield (t/ha)

Treatment	Nitrogen (kg/ha)						Mean
	0	38	75	113	151	188	
<u>1975</u>							
Control	4.72	5.62	5.88	6.28	6.16	5.80	5.74
FYM	5.22	4.63	5.47	5.94	6.82	6.00	5.68
FW Line	5.52	6.44	6.86	6.57	5.90	6.86	6.35
1 yr ley	5.92	6.32	6.76	6.72	5.83	6.63	6.36
3 yr ley	4.81	4.82	5.73	5.75	4.60	5.79	5.25
<u>1976</u>							
Control	7.14	6.75	7.38	7.30	7.12	6.66	7.06
FYM	7.02	7.56	7.03	7.03	7.09	7.36	7.18
FW Line	6.90	6.45	6.87	6.91	6.14	5.77	6.51
1 yr ley	6.80	7.46	7.24	7.21	6.78	6.60	7.00
3 yr ley	7.66	7.11	7.19	7.12	6.80	6.60	7.08
<u>1977</u>							
Control	8.04	8.61	8.97	8.67	9.02	8.63	8.66
FYM	8.35	8.99	9.25	8.63	8.84	8.70	8.79
FW Line	8.05	8.19	8.63	8.81	8.60	8.44	8.45
1 yr ley	8.40	8.96	8.55	8.30	8.62	8.61	8.57
3 yr ley	7.97	8.84	8.51	8.28	8.71	8.28	8.43

Spring barley - grain yield (t/ha)

Treatment	Nitrogen (kg/ha)				Mean
	38	75	113	151	
<u>1976</u>					
Control	3.83	3.97	3.67	3.84	3.83
FYM	3.87	3.99	3.91	3.88	3.91
FW Line	3.90	4.04	3.89	3.82	3.91
1 yr ley	4.03	4.18	3.97	3.81	4.00
3 yr ley	4.12	4.12	4.05	3.87	4.04
<u>1977</u>					
Control	5.14	6.13	6.45	6.53	6.06
FYM	5.63	6.40	6.69	6.73	6.36
FW Line	5.56	6.31	6.65	6.80	6.33
1 yr ley	5.58	6.53	6.56	6.84	6.27
3 yr ley	5.82	6.31	6.57	6.61	6.33
<u>1978</u>					
Control	4.55	5.17	5.36	5.40	5.12
FYM	5.12	5.42	5.48	5.37	5.35
FW Line	4.81	4.93	5.62	5.63	5.25
1 yr ley	5.08	5.48	5.62	5.43	5.40
3 yr ley	5.53	5.46	5.73	5.55	5.57

Potatoes - ware yield 40-80 mm (t/ha)

Treatment	Nitrogen					Mean	
	80	120	160	200	240		280
<u>1977</u>							
Control	30.9	32.0	33.8	31.9	34.8	29.9	32.2
FYM	33.1	37.8	33.3	34.6	35.0	36.0	35.0
FW Line	27.5	27.5	28.3	26.3	25.9	27.9	27.2
1 yr ley	30.9	31.5	37.1	36.3	34.4	29.4	33.3
3 yr ley	30.5	30.1	30.1	30.3	32.9	30.9	30.8
<u>1978</u>							
Control	38.5	39.0	40.5	40.0	37.0	37.2	38.7
FYM	40.5	39.3	41.3	39.5	38.0	42.9	40.2
FW Line	35.8	38.0	36.7	36.0	36.2	35.7	36.4
1 yr ley	36.4	38.1	34.9	36.7	38.7	37.3	37.4
3 yr ley	41.7	41.3	39.9	40.7	37.5	44.6	40.9

Soil Structure - Peerlkamp St. Index

	Control	FYM	FW Line	1 yr ley	3 yr ley
<u>Sugar beet</u>					
1975	4.54	4.85	5.58	5.98	7.17
1976	7.25	6.95	7.50	7.35	8.45
1977	6.14	5.73	6.53	6.58	6.65
<u>Sp. barley</u>					
1976	5.35	6.10	6.70	5.90	6.85
1977	5.25	4.65	5.98	5.13	5.20
1978	5.20	4.71	5.94	4.49	5.94
<u>Potatoes</u>					
1977	5.84	5.43	6.40	5.45	6.15
1978	5.63	5.35	5.90	4.35	5.80
1979	5.33	5.47	6.08	5.05	5.56

- Soil Shear Strength (kN/m^2) 5-15 cm

<u>Sugar beet</u>					
1975	30.9	31.2	32.2	28.6	30.0
1976	27.9	28.2	27.5	26.5	24.1
1977	28.4	31.3	28.6	26.8	33.9