

TIME OF HARVESTING, 1980

NAS 512 ML
5th yearSUMMARY

Sample areas were hand harvested through the beet lifting campaign. Root yield increased steadily to a peak on the 20th November. Sugar yield followed a similar pattern and exceeded 11 tonnes/ha by the same date. Sugar content rose to a peak of 18% by early November and then declined slowly. Yield of tops gradually decreased throughout the season after a peak of 54 t/ha on the 11th September.

OBJECT

To monitor the development of the beet crop through the beet harvest campaign period.

TREATMENTS

Fortnightly samples of washed roots, fresh tops and sugar percentage beginning on 11 September and ending on 15 December.

METHOD

Four samples of 20 m² were hand harvested at fortnightly intervals from a uniform crop of Nomo over the period 11 September to 15 December. The crop had been drilled to a stand on 31 March at 15.9 cm spacing. Sub-samples were taken of fresh tops and brei for dry matter determinations and on three of these samples a full nutrition analysis was taken of the tops to correspond with early, mid-season and late lifts of beet.

RESULTS

A reasonably early start to the drilling season at the end of March was followed by a dry and sunny April and then an even drier and sunnier May, which was also cool. In spite of these dry, cool conditions good emergence was achieved and a mean population of 85 500/ha resulted. This ranged from 82 500 to 88 000. June brought average temperatures and reasonably sunny conditions but rainfall was well above normal due to a particularly wet last day (42.6 mm on 30th). July was cool, dull and wet for the first three weeks, but the rest of the month was warm and sunny. Dull weather prevailed in August, but temperatures were above normal and rainfall was well below. The warm dry weather persisted into September and beet growth was somewhat restricted during the early part of the month. However a very sunny October with ample rainfall but cool temperatures produced

good sugar beet growth early in the month, but growth slowed later on. Cold dull conditions during the first half of November gave way to mild wet weather which continued into December.

Root yield increased steadily throughout the season and reached a peak of 65.3 tonnes/ha on the 20th November. This is the highest yield achieved in this trial series.

Sugar content increased steadily to reach a peak of 18% in early November. A steady but gradual decline then followed, but a very satisfactory level of 16.8% was still maintained on the last lift on the 15th December.

Sugar yield increased steadily to reach a peak of 11.3 tonnes/ha on the 20th November and then declined slowly to 10.7 tonnes/ha at the final harvest.

The mean sugar yield increase was 100 kg/ha/day in mid-September and 107 kg/ha/day in late September/early October. Yields remained static in late October, probably as a result of the decrease in sugar content, but the mean sugar increase was 50 kg/ha/day in mid-November, when the peak yield was reached. The accumulated yield increase up to the time the maximum was achieved (11 Sept-20 November) was 56 kg/ha/day which compared favourably with 1979 (42 kg/ha/day) although in the previous year maximum sugar yield was recorded on the last harvest date (17th December).

Yield of tops began the season at the relatively high level of 54 tonnes/ha and declined slowly to 32 tonnes/ha in mid-December.

HARVEST DATE	1980			
	Root yield tonne/ha	Sugar content %	Sugar yield tonne/ha	Weight of tops tonne/ha
	(±1.62) 7 df	(±0.16) 7 df	(±0.30) 7 df	(±1.64) 7 df
11 September	45.2	16.3	7.4	53.9
25 September	53.5	16.5	8.8	45.8
9 October	58.1	17.7	10.3	46.8
23 October	59.1	16.9	10.0	41.9
6 November	59.1	18.0	10.6	34.8
20 November	65.3	17.4	11.3	32.5
4 December	62.4	17.3	10.8	35.3
15 December	63.7	16.8	10.7	31.8
Standard error %	3.9%	1.3%	4.2%	5.8%

MONTH	1980		Mean temp (°C)
	Rainfall (mm)	Sunshine (hrs)	
January	44.1 (57.3)	72.3 (45.2)	2.0 (3.3)
February	55.8 (47.4)	49.9 (65.1)	5.3 (3.3)
March	45.7 (42.8)	84.0 (104.7)	4.8 (5.0)
April	26.9 (39.3)	173.2 (149.4)	7.9 (7.2)
May	12.2 (44.7)	262.1 (202.4)	10.2 (11.1)
June	96.4 (45.5)	193.5 (212.1)	14.0 (13.9)
July	51.5 (48.7)	158.7 (192.0)	14.5 (15.8)
August	20.8 (50.2)	142.2 (181.8)	16.3 (16.1)
September	36.7 (42.5)	150.0 (154.1)	15.1 (13.8)
October	71.1 (43.4)	127.6 (107.5)	8.8 (10.5)
November	62.9 (71.4)	60.1 (71.8)	6.3 (6.2)
December	63.4 (54.8)	45.0 (47.8)	4.7 (4.5)
Total	537.5 (588.0)	1518.6 (1533.3)	

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