'Summertime' Crisphead Lettuce

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'Summertime' is a crisphead lettuce (*Lactuca sativa* L.) cultivar developed for the Pacific Northwest and other areas where lettuce is grown throughout the summer. Under high-temperature conditions, 'Summertime' is sure-heading, slow-bolting and resistant to the disorders rib discoloration and tipburn (Lipton et al., 1972). It was released as a possible summer replacement for such cultivars as 'Salinas', 'Morangold', and 'Montemar' which have excellent shipping quality and head size but are highly susceptible to bolting and rib discoloration at high temperatures. 'Summertime' derives its adaptation to summer production from 'Ithaca' which is resistant to bolting, rib discoloration, and tipburn, but has poor shipping quality.

Origin

'Summertime' resulted from a breeding program conducted at Corvallis, Ore., with selection and testing also done at Brooks, Ore., and Pickford, Mich. It was tested as OSU 143-1, an F₁ line developed by pedigree selection from 'Ithaca' × 'Salinas'. 'Salinas' was developed in the U.S. Dept. of Agriculture breeding program at Salinas, Calif. (Ryder, 1979). 'Ithaca' was developed by the New York Agricultural Experiment Station and released in 1970 (New York Foundation Seed Stocks Coop., 1970).

Description

'Summertime' plants are low-growing and

compact, with a characteristic appearance we have termed "flame leaf" because of the pointed cap leaf lobes. (Fig. 1). Heads average 145 mm wide and 120 mm deep, weigh ≈800 g as harvested and 590 g when trimmed for grocery store display. 'Summertime' has been sure-heading in the hottest weather encountered during its development in western Oregon. The heads are solid when mature and are slow to become bitter. We judge external and internal color as better, leaf texture more durable, and heads less ribby than those of 'Ithaca'. Seeds are black.

'Summertime' resembles 'Ithaca' in head size and field performance as shown by mid-summer trials conducted in 1987 and 1988 at Corvallis (Table 1). In these trials, 'Summertime' and 'Ithaca' show a typical lower incidence of tipburn and rib discoloration

compared with 'Salinas' and several other cultivars. 'Summertime' has usually shown a lower incidence of these defects than has 'Ithaca'. Primarily because there was no bolting of 'Summertime' and 'Ithaca' in these trials, they had substantially higher percentage of heads harvested than other cultivars tested. In 1987, because of larger heads, 'Salinas' still had a higher weight of harvested heads than 'Summertime' and 'Ithaca', but in 1988 a substantially lower weight of 'Salinas' was harvested due to bolting. When the initial yield of heads was adjusted by subtracting the percentage of heads showing tipburn, rib discoloration, or both, 'Summertime' had the highest yield of usable or nondefective heads in each trial.

Heads of 'Summertime' may be too small for some markets unless good culture is used. Head size can be improved by provision of adequate fertilizer and water and by use of raised beds to reduce soil compaction. When infected by a yellows-type virus, presumably beet western yellows, 'Summertime' has shown symptoms more severe than those of 'Salinas', 'Morangold', 'Montemar', and 'Dynasty', but approximately the same as symptoms shown by 'Ithaca'.

Fig. 1. Mature, untrimmed head of 'Summertime' crisphead lettuce.

Table 1. Production, percentage defective heads, and head size of crisphead lettuce cultivars, 1987 and 1988.^z

Cultivar	29 Apr. planting, 1987						23 June planting, 1988				
	Heads harvested (%)	Wt heads harvested (t·ha ⁻¹)	Tipburn (%)	Rib discolor. (%)	Usable ^y yield (t·ha ⁻¹)	Trimmed wt/head (g)	Heads harvested (%)	Wt heads harvested (t·ha ⁻¹)	Rib discolor. (%)	Wt usable ^y heads (t·ha ⁻¹)	Trimmed wt/head (g)
Summertime	94 c*	16.8 ab	6 ab	12 a	14.0 d	547 a	76 e	16.6 c	5 a	15.7 c	600 a
Salinas	86 bc	20.9 c	60 c	53 bc	5.8 bc	736 cd	27 a	7.5 a	57 b	3.3 a	765 b
Ithaca	83 abc	16.8 ab	19 b	41 b	8.3 c	623 b	79 c	17.4 c	29 ab	12.2 bc	603 a
Morangold	76 ab	19.5 bc	68 c	80 d	1.7 a	798 d	48 b	14.2 bc	43 b	7.9 ab	817 b
Montemar	76 ab	17.8 ab	19 b	66 cd	5.4 b	728 c	37 ab	11.4 abc	63 b	3.5 a	836 b
Dynasty	69 a	15.5 a	3 a	67 cd	4.9 b	671 bc	33 ab	9.0 ab	41 b	5.2 a	779 b

^zPlots in each year were arranged in randomized complete blocks with four replications. Rows were 100 cm apart, plants spaced 30 cm apart in the row. Plots were 7.6 m long. Yield and head size values are based on heads trimmed as for grocery store display. The harvest period was 6–14 July in 1987 and 31 Aug.–8 Sept. in 1988. Mean daily max. temp. for harvest period and prior 5 days was 26.5°C in 1987 and 31.2°C in 1988.

^yInitial yield reduced by the percentage of heads having tipburn and/or rib discoloration.

*Mean separation within columns by Duncan's multiple range test, $P = 0.05$. Percentage data were transformed to arcsin for analysis.

Availability

Trial packets of seed are available from J.R.B.

Literature Cited

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