



US00PP09310P

United States Patent [19]
Moore

[11] Patent Number: Plant 9,310
[45] Date of Patent: Oct. 3, 1995

[54] STRAWBERRY PLANT 'PUGET RELIANCE'
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[21] Appl. No.: 304,343
[22] Filed: Sep. 12, 1994
[51] Int. Cl.⁶ A01H 5/00
[52] U.S. Cl. Plt./48
[58] Field of Search Plt./48

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[57] ABSTRACT
'Puget Reliance' is large fruited, high yielding, medium red
strawberry suited to processing that is very virus tolerant and
moderately cold hardy, producing fruit at the same time as
'Totem'.

2 Drawing Sheets

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DESCRIPTION

This invention relates to a new and distinct short day, June bearing variety of strawberry plant named 'Puget Reliance' which is a result of a cross of non-patented selections BC 72-2-72 and WSU 1945. The variety is botanically identified as *F.×annanassa* Duch.

The seedlings resulting from the aforementioned cross were grown asexually by stolen runners in observation plots at WSU Puyallup, Wash. The genealogy of 'Puget Reliance' is shown below in FIG. 3.

The cross was made in an attempt to develop a virus tolerant and aphid resistant cultivar. 'Puget Reliance' was inoculated with a virus complex in the greenhouse prior to planting in the field and evaluated for aphid resistance in 1985 at the Washington State University (WSU) Vancouver Research and Extension Unit. The parent, 'WSU 1945', was known as an aphid resistant selection. In the first evaluation of 'Puget Reliance' the selection was considered aphid resistant. However, later evaluations disclosed that the selection was not aphid resistant but extremely virus tolerant, equal to or exceeding any Pacific Northwest cultivar.

As a sufficient number of plants for replication tests was not available earlier, 'Puget Reliance' was not planted until 1989. This planting was harvested in 1990 and 1991 and had the highest two-year yield, the largest fruit and the lowest preharvest fruit rot of comparable varieties as is shown in Tables 1 and 2 below.

TABLE 1

1990 harvest of 1989 planted strawberries at WSU Puyallup.			
	TOTAL YIELD (t/a)	HIGH PICK (t/a)	FRUIT ROT (%)
'PUGET RELIANCE'	16.6 a	7.0 a	11.9 qr
WSU 2187	14.2 ab	6.9 ab	28.0 d-n
ORUS 965-46	12.4 bc	5.5 a-f	33.6 a-i
BC 76-26-4	12.2 b-d	4.8 a-i	44.1 a
WSU 1980	11.6 b-e	5.5 a-f	21.6 i-r
WSU 2047	11.5 b-e	5.4 a-f	10.9 r
WSU 1998	11.5 b-e	5.9 a-e	37.9 a-e
WSU 1973	11.2 b-f	4.4 c-j	15.9 n-r
SUMAS	11.1 b-f	5.5 a-f	23.3 g-r
WSU 2174	10.9 b-g	4.9 a-h	17.8 k-r
REDCREST	10.7 b-h	5.5 a-f	28.1 d-n
RAINIER	10.3 b-i	4.8 a-i	32.3 a-j

TABLE 1-continued

1990 harvest of 1989 planted strawberries at WSU Puyallup.			
5	BC 76-26-14	10.3 b-i	5.0 a-g
	OLYMPUS	10.2 b-j	6.1 a-d
	WSU 2175	10.1 b-j	4.4 c-k
	WSU 1987	10.1 b-j	6.3 a-c
	TOTEM	10.0 b-j	4.0 c-k
	WSU 2012	9.9 b-j	5.1 a-g
10	BC 84-16-10	9.9 b-k	5.0 a-g
	BC 35-14-4	9.6 c-k	4.7 b-i
	ORUS 980R-185	9.3 c-k	4.8 a-i
	WSU 2035	8.9 c-k	3.3 f-n
	WSU 2172	8.9 c-k	3.6 e-m
	WSU 1971	8.9 c-k	4.6 c-i
	WSU 2032	3.2 c-l	3.6 e-m
15	BC 84-15-161	8.1 c-l	3.8 d-l
	HOOD	8.1 c-l	3.4 f-n
	WSU 1972	8.1 c-l	3.9 d-k
	WSU 2171	7.8 d-l	4.2 c-k
	SHUSWAP	7.7 e-l	3.6 e-m
20	SHUKSAN	7.6 e-m	3.6 e-m
	WSU 2033	7.6 e-m	2.9 g-n
	WSU 2004	7.5 e-m	3.7 e-m
	BENTON	7.3 e-m	3.4 f-m
	WSU 1978	6.8 f-n	4.4 c-k
	WSU 2041	6.6 g-n	3.4 f-n
	WSU 2176	6.3 h-n	2.5 i-n
25	BC 84-2-3	6.0 i-n	2.6 h-n
	WSU 2180	5.9 i-n	2.5 i-n
	WSU 2173	5.8 j-n	2.7 h-n
	WSU 2044	5.7 j-n	2.5 i-n
	WSU 2188	5.4 k-n	2.0 k-n
	WSU 2177	4.3 l-n	2.2 k-n
30	WSU 2183	4.2 l-n	1.6 l-n
	WSU 2185	3.3 mn	1.5 m-n
	WSU 2181	2.7 n	1.2 n
	MEAN	8.7	4.1
			26.0
35		FRUIT WEIGHT (g)	FRUIT FIRM- NESS (g)
	'PUGET RELIANCE'	15.6 a	223 l-n
	WSU 2187	14.4 ab	245 j-n
	ORUS 965-46	13.3 a-c	284 e-l
40	BC 76-26-4	14.2 ab	272 g-m
	WSU 1980	7.3 n-p	284 e-k
	WSU 2047	8.2 i-p	257 h-m
	WSU 1998	13.0 a-d	235 j-n
	WSU 1973	11.8 b-f	258 h-m
	SUMAS	10.3 c-j	252 i-n
45	WSU 2174	11.2 c-h	340 b-e
	REDCREST	10.3 d-l	362 c-d
	RAINIER	10.8 c-k	238 j-n
	BC 76-26-14	11.8 b-f	316 d-h

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.4 billion.

As the world's population grows, the demand for food and other resources will increase. This will put pressure on the environment and on the world's food supply.

One way to meet this demand is to increase the amount of food that is produced. This can be done by using more land for agriculture, or by increasing the amount of food that is produced on the same amount of land.

Another way to meet this demand is to reduce the amount of food that is wasted. This can be done by improving the way that food is stored and distributed, or by reducing the amount of food that is thrown away.

There are many other ways to meet this demand, and it is important that we find ways to do so. Otherwise, the world's food supply will be in jeopardy.

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of the new variety.

FIG. 2 depicts typical leaf and primary, secondary and tertiary fruit of plants in the first fruiting season (right) and second fruiting season (left) and longitudinal and cross-sections of typical fruit.

FIG. 3 sets forth the genealogy of 'Puget Reliances'.

The fruit of the new variety is medium red with good internal color and is not as dark as 'Totem' (see Table 15). 'Puget Reliance' was included in a second planting in 1991 and the harvest from that planting in 1992 and 1993 showed it had the highest yield and largest fruit of comparative varieties (see Tables 3 and 4).

TABLE 3

1992 yield of 1991 planted June-bearing strawberries, Puyallup, WA				
Clone	Yield (t/a)	Fruit Rot (%)	Fruit Weight (g)	Fruit Firmness (g)
'PUGET RELiance'	17.6 A	7% D-E	15.1 A	155 C-E
WSU 2213	15.1 A	21% A-C	11.6 B-C	182 B-D
WSU 2212	12.5 B	16% B-D	9.8 C-D	183 B-D
TOTEM	12.3 B	8% D-E	11.4 B-C	158 C-E
WSU 2122	12.0 B	32% A	11.1 B-C	129 E
ORUS 4688	10.5 B-C	13% C-E	9.7 C-D	178 B-D
REDCREST	10.5 B-C	13% C-E	9.8 C-D	219 B
SUMAS	10.5 B-C	21% B-C	8.9 D-	191 B-C
ORUS 1083-135	10.3 B-C	28% A-B	9.8 C-D	144 D-E
BC 86-27-1	8.7 C-D	23% A-C	9.5 C-D	176 B-D
MDUS 4740	8.6 *	35%	13.7	204
BC 84-16-10	8.3 *	8%	8.1	219
WSU 2080	8.0 C-D	4% E	9.5 C-D	175 B-D
BC 86-33-2	7.6 C-D	14% C-E	8.4 D	146 D-E
WSU 2210	7.1 D	16% B-D	11.2 B-C	175 B-D
DOUGLAS	6.4 *	15%	9.4	142
CAVENDISH	6.3 *	22%	13.5	193
ANNAPOLIS	5.4 *	7%	12.4	243
PARKER	5.2 *	22%	10.3	325
MDUS 4594	4.8 *	24%	6.5	202
MDUS 5120	4.0 *	22%	10.4	257
WSU 2218	3.7 E	21% A-C	12.6 B	297 A
EARLIGLOW	3.5 *	11%	7.4	241
HONEOYE	3.0 *	23%	12.0	175
WSU 2219	2.8 E	14% C-E	5.7 E	155 C-E
BC 86-23-6	2.6 E	23% A-C	6.4 E	180 B-D
MDUS 4587	2.5 *	2%	6.3	228
MDUS 5149	2.0 *	6%	6.0	185
MDUS 5122	1.6 *	5%	8.8	166
OSO GRANDE	0.6 *	14%	5.8	357
Average	7.1	16%	9.7	199

Clone	Harvest Season			Length of Season
	5%	50%	95%	
'PUGET RELiance'	5/27 B-C	6/5 A-B	6/15 A-B	20 A-D
WSU 2213	5/24 C-E	6/2 B-C	6/14 B	21 A-C
WSU 2212	5/23 D-E	5/31 C-D	6/13 B-C	21 A-C
TOTEM	5/27 B-C	6/5 A-B	6/14 B	18 C-E
WSU 2122	5/24 C-E	6/3 B-C	6/14 B	21 A-C
ORUS 4688	5/31 A	6/6 A	6/16 A-B	16 D-E
REDCREST	5/27 B-C	6/7 A	6/18 A	22 A-B
SUMAS	5/28 B	6/3 B-C	6/13 B-C	16 D-E
ORUS 1083-135	5/22 E	5/30 D	6/11 C-D	20 A-C
BC 86-27-1	5/24 C-E	6/3 B-C	6/13 B-C	20 A-D
MDUS 4740	6/2	6/10	6/23	21
BC 84-16-10	5/25	6/1	6/12	18
WSU 2080	5/27 B-C	6/5 A-B	6/15 B	19 B-E
BC 86-33-2	5/27 B-C	6/5 A-B	6/14 B	18 B-E
WSU 2210	5/22 E	5/30 D	6/10 D	15 E
DOUGLAS	5/21	5/30	6/12	22
CAVENDISH	5/23	5/31	6/13	21

TABLE 3-continued

1992 yield of 1991 planted June-bearing strawberries, Puyallup, WA				
ANNAPOLIS	5/20	5/27	6/5	16
PARKER	5/21	6/1	6/14	24
MDUS 4594	5/26	6/5	6/13	18
MDUS 5120	5/22	5/30	6/13	22
WSU 2218	5/26 B-D	6/2 B-C	6/14 B	19 A-D
EARLIGLOW	—	—	6/9	
HONEOYE	—	5/25	6/8	
WSU 2219	5/23 E	5/29 D	6/9 D	17 C-E
BC 86-23-6	5/26 B-D	6/2 B-C	6/18 A	23 A
MDUS 4587	—	5/26	6/8	
MDUS 5149	—	5/28	6/9	
MDUS 5122	—	5/24	6/8	
OSO GRANDE	—	5/27	6/13	
Average	5/25	6/1	6/12	20

Means followed by letters are averages of three 10 foot plots.

Means not followed by letters are based on a single 10 foot plot.

Means within columns followed by the same letter are not significantly different using Duncan's Multiple Range Test, P = 0.05.

TABLE 4

1992-93 harvests of 1991 planted strawberries at Puyallup, WA.					
	Yield (t/a)			Fruit	
	1993	1992	total	weight (g)	
'PUGET RELiance'	10.6	A 17.6	28.2	11.6	A
TOTEM	8.0	A-B 12.3	20.3	6.8	B-C
WSU 2213	4.5	B 15.1	19.7	8.4	B
BOUNTIFUL	8.0	A-B 10.5	18.5	7.1	B-C
ORUS 1083-135	8.1	A-B 10.3	18.4	9.0	B
SUMAS	7.6	A-B 10.5	18.1	8.7	B
WSU 2212	5.2	B 12.5	17.7	6.9	B-C
WSU 2122	5.5	B 12.0	17.4	8.5	B
REDCREST	3.8	B 10.5	14.3	5.4	C
BC 86-33-2	4.2	B 7.6	11.9	6.6	B-C
Average	6.5	11.9	18.5	7.9	
	Fruit		Fruit rot (%)	Midpoint of harvest	
	firmness (g)				
'PUGET RELiance'	201 A	55.4	A-C	6/13	B-C
TOTEM	220 A	30.9	D	6/16	A-B
WSU 2213	201 A	42.3	C-D	6/16	A-B
BOUNTIFUL	175 A	33.1	D	6/16	A
ORUS 1083-135	192 A	59.1	A-B	6/10	D-E
SUMAS	218 A	39.2	C-D	6/10	D-E
WSU 2212	183 A	52.3	A-C	6/15	A-C
WSU 2122	183 A	66.4	A	6/9	E
REDCREST	199 A	44.0	B-D	6/14	A-C
BC 86-33-2	174 A	33.6	D	6/13	C-D
Average	195	45.6		6/13	

Means followed by the same letter are not significantly different using Duncan's Multiple Range Test, P = 0.05.

In plantings established at Puyallup and Mt. Vernon, Wash. in 1992 the yields were less than in previous tests. However, they were not significantly different than the highest yielding clones (see Tables 5 and 6).

TABLE 5

1993 harvest of 1992 planted strawberries at Puyallup, WA.			
	Yield (t/a)	Fruit	
		weight (g)	firmness (g)
ORUS 4817	17.3	9.2	236

TABLE 5-continued

1993 harvest of 1992 planted strawberries at Puyallup, WA.				
REDGEM	15.5	9.8	220	
HONEOYE	13.6	12.3	231	
BC 86-27-1	12.8	A	12.1	C-F
BC 86-33-2	12.7	A-B	13.6	A-C
SUMAS	12.4	A-B	12.1	C-F
BC 86-30-56	12.3	A-B	13.5	A-D
'PUGET RELIANCE'	12.0		16.9	
'PUGET'	11.9	A-C	16.3	A
RELIANCE'-VF				
WSU 2006	11.7	A-D	11.0	C-G
WSU 2169	11.5		11.0	
BC 86-22-33	11.3	A-D	15.4	A-B
BC 84-15-161	11.1	A-D	10.1	E-H
CAVENDISH	10.8	A-D	15.2	A-B
BC 84-16-10	10.7	A-D	11.9	C-F
RAINIER	9.9	A-E	11.2	C-G
ORUS 1083-135	9.8	A-E	10.0	E-H
TOTEM	9.8	A-E	12.0	C-F
BOUNTIFUL	9.1	A-F	11.8	C-G
BC 85-13-14	8.6	A-G	7.2	H
WSU 2187	8.4	A-G	12.5	B-E
WSU 2077	8.2	A-G	12.1	C-F
BENTON	8.0	A-H	8.6	G-H
WSU 2244	7.8	A-H	8.9	F-H
REDCREST	7.7	B-H	10.4	D-G
VEESTAR	7.0		9.5	
BC 86-22-9	7.0	C-H	11.5	C-G
SHUKSAN	6.8	D-H	11.1	C-G
ORUS 4357	6.4		9.9	
R8607-2	6.0		9.5	
WSU 2133E	5.7	E-H	12.6	B-E
WSU 2229E	5.6		11.7	
SENECA	5.5	E-H	12.1	C-F
HOOD	5.1	E-H	8.7	G-H
WSU 2143E	5.1	E-H	9.1	F-H
TOKLAT	5.0		5.0	
R8614-2	4.9		7.4	
WSU 2139E	4.6	F-H	12.5	B-E
NY 1593	4.1	H-I	9.1	F-H
WSU 2106E	3.9		9.7	
MD 4589	3.9		8.5	
R8713-8	3.6		14.5	
WSU 2140E	3.2	H-I	9.2	F-H
BEAVER BELLE	2.6		9.7	
R8614-3	1.7		5.5	
BEAVER SWEET	0.7		—	
WSU 2086E	0.4		6.5	
WSU 2089E	0.1		3.6	
Average	7.8		10.7	
Fruit rot (%) Midpoint of harvest				
ORUS 4817	22		6/15	
REDGEM	46		6/15	
HONEOYE	48		6/5	
BC 86-27-1	34	G-J	6/13	D-G
BC 86-33-2	32	H-J	6/11	E-H
SUMAS	36	G-J	6/11	F-I
BC 86-30-56	62	A-E	6/15	B-D
'PUGET RELIANCE'	86		6/8	
'PUGET RELIANCE' -VF	53	C-G	6/10	G-I
WSU 2006	31	H-J	6/15	B-D
WSU 2169	61		6/12	
BC 86-22-33	49	D-I	6/13	D-G
BC 84-15-161	19	J	6/20	A
CAVENDISH	73	A-B	6/10	H-K
BC 84-16-10	47	D-I	6/14	B-E
RAINIER	72	A-C	—	
ORUS 1083-135	64	A-D	6/10	H-J
TOTEM	56	B-F	6/12	E-H
BOUNTIFUL	46	D-I	6/16	B
BC 85-13-14	44	E-I	6/16	
WSU 2187	47	D-I	6/15	B-D
WSU 2077	68	A-C	6/11	F-I
BENTON	29	I-J	6/16	B-C

TABLE 5-continued

1993 harvest of 1992 planted strawberries at Puyallup, WA.				
WSU 2244	47	D-I	6/7	K
REDCREST	57	A-F	6/13	C-F
VEESTAR	54		6/4	
BC 86-22-9	46	D-I	6/8	
SHUKSAN	42	F-I	6/14	B-E
ORUS 4357	51		6/13	
R8607-2	57		—	
WSU 2133E	64	A-D	6/10	
WSU 2229E	54		6/17	
SENECA	73	A-B	6/7	J-K
HOOD	49	D-H	6/8	I-K
WSU 2143E	62	A-E	6/10	H-K
TOKLAT	83		—	
R8614-2	71		6/6	
WSU 2139E	68	A-C	6/10	
NY 1593	76	A	—	
WSU 2106E	57		6/9	
MD 4589	71		—	
R8713-8	70		—	
WSU 2140E	64	A-D	6/7	
BEAVER BELLE	73		—	
R8614-3	62		—	
BEAVER SWEET	98		6/8	
WSU 2086E	33		—	
WSU 2089E	29	H-J	—	
Average	55		6/11	

Means followed by the same letter are not significantly different using Duncan's Multiple Range Test, $P = 0.05$.

Numbers in bold represent means of three 10 foot plots, light print represents means of one or two 10 foot plots and were not included in the statistical analysis.

TABLE 6

1993 harvests of 1992 planted strawberries at Mt. Vernon, WA.						
	Yield (t/a)		Fruit weight (g)		Fruit rot (%)	
BOUNTIFUL	14.4	A	13.4	B-E	20.3	D-H
SUMAS	13.4	A-B	13.3	B-E	28.7	B-H
'PUGET RELIANCE'	13.2	A-B	13.2	B-F	14.0	H
'PUGET'	12.5	A-B	15.0	A-C	16.0	F-H
RELIANCE'-VF						
ORUS 1083-135	11.1	A-C	12.0	C-G	36.0	B-C
REDCREST	11.0	A-D	12.6	B-F	16.0	F-H
BC 86-22-23	10.7	A-D	14.0	B-D	17.0	E-H
BC 84-16-10	10.1	A-D	12.7	B-F	18.0	E-H
HOOD	9.5	A-E	11.2	D-H	31.7	B-E
BC 86-30-56	9.1	B-F	17.1	A	18.7	E-H
HONEOYE	8.9	B-G	12.9	B-F	22.3	C-H
BC 86-33-2	8.6	B-G	13.9	B-D	18.0	B-H
BC 86-22-9	8.1	B-H	10.6	B-H	14.0	H
RAINIER	8.1	B-H	15.3	A-B	21.7	C-H
NY 1593	6.7	C-I	13.0	B-F	41.7	B
BENTON	6.2	C-J	8.7	H-I	14.0	H
CAVENDISH	5.9	C-J	15.0	A-C	15.3	G-H
SHUKSAN	5.8	C-J	12.0	C-G	20.0	D-H
BC 84-15-161	5.6	D-J	10.1	F-H	13.0	H
EC 85-13-14	4.3	E-J	9.3	G-H	22.3	C-H
BC 86-27-1	4.0	F-J	11.3	D-H	13.0	H
TOTEM	4.0	F-J	10.3	E-H	30.0	B-G
WSU 2187	3.6	G-J	10.3	E-H	26.7	C-H
WSU 2068	3.1	H-J	8.8	H-I	24.7	C-H
SENECA	1.6	I-J	8.3	H-I	31.3	B-F
GLOSCAP	1.5	I-J	6.2	I-J	34.7	B-D
TOKLAT	1.3	J	5.4	J	65.0	A
Average	7.5		11.7		23.9	
Midpoint of Harvest			Stand establishment (%)			

TABLE 6-continued

1993 harvests of 1992 planted strawberries at Mt. Vernon, WA.			
BOUNTIFUL	6/13 B-D	100	A
SUMAS	6/8 G-J	100	A
'PUGET RELIANCE'	6/11 C-F	100	A
'PUGET RELIANCE'-VF	6/10 E-H	100	A
ORUS 1083-135	6/9 F-J	100	A
REDCREST	6/13 B-D	100	A
BC 86-22-23	6/15 B	100	A
BC 84-16-10	6/13 B-D	100	A
HOOD	6/11 C-F	100	A
BC 86-30-56	6/14 B-C	100	A
HONEOYE	6/4	46	C-D
BC 86-33-2	6/11 D-G	96	A
BC 86-22-9	6/7 I-J	96	A
RAINIER	6/4	42	D
NY 1593	6/10	92	A
BENTON	6/14 B	92	A
CAVENDISH	6/8 H-J	71	A-C
SHUKSAN	6/10 E-I	71	A-C
BC 84-15-161	6/18 A	100	A
EC 85-13-14	6/12 B-E	75	A-B
BC 86-27-1	6/6 J	75	A-B
TOTEM	6/9 F-J	96	A
WSU 2187	6/10 E-H	92	A
WSU 2068	6/10 E-H	88	A
SENECA	6/3 K	59	B-D
GLOOSCAP	6/8 G-J	79	A-B
TOKLAT	6/2	92	A
Average	6/10	87	

Means are averages of three 10 foot plots.

Means within columns followed by the same letter are not significantly different using Duncan's Multiple Range Test, $P = 0.05$.

The plants in the last two plantings were in poor physiological condition and in an effort to produce as many plants as possible for testing in 1992, the plants were placed in a heated, lighted greenhouse to produce runners. Possibly because of lack of chilling these plants did not produce runners and at planting time the plants were large and woody and in poor condition. Nonetheless, they performed well and were not significantly lower yielding than the highest yielding clones. At both locations plants which were virus negative were planted. There were no differences between the virus infected plants and the virus negative plants. Accordingly, 'Puget Reliance' appears to be extremely virus tolerant.

Subsequently, the new variety was tested by Oregon State University at Aurora, Ore. and by Agriculture Canada at Abbotsford, British Columbia.

In 1992 a single unreplicated plot of 'Puget Reliance' was the highest yielding clone at Aurora. The variety was rated as one of the best for fruit quality at Abbotsford. However, it displayed susceptibility to post-harvest fruit rot. To date the variety has not been tested for resistance to specific races of red stele but it performed well at Mt. Vernon on non-fumigated land.

In test plantings established at Puyallup from 1989 to 1992 with virus infected plants, the new variety outperformed two of the most widely grown Pacific Northwest cultivars, 'Totem' and 'Sumas'.

'Puget Reliances' outyielded 'Totem' by 39% in its first harvest season and by 31% in its second season. It outyielded 'Sumas' by 31% in the first harvest season and by 30% in the second harvest season. In the same plantings 'Puget Reliance' had fruit which was 36% larger than 'Totem' in the first season and 57% larger in the second season. Its fruit was 47% larger than 'Sumas' in the first season and 30% larger in the second season.

Table 7 is a summary of the 1994 harvest season data. As seen from the table, 'Puget Reliance' clearly had superior yield and fruit size compared to other cultivars.

TABLE 7

1994 yield of 1993 planted strawberries, Puyallup, WA.						
	Market- able yield (t/a)	rot yield (t/a)	Total yield (t/a)	per- cent Fruit Rot	Fruit Weight (g)	Fruit Firmness (g)
'PUGET RELIANCE'	17.5	5.9	23.4	25%	17.0	213
BENTON	12.1	5.3	17.4	31%	12.7	181
ORUS917-123	12.7	4.5	17.2	26%	10.4	289
ORUS1077-47	12.1	4.0	16.2	25%	17.3	253
WSU 2211	8.1	7.8	15.9	49%	20.6	194
TOTEM	10.0	5.3	15.3	34%	12.4	234
RAINIER	8.9	6.4	15.3	42%	15.1	233
REDGEM	8.9	5.7	14.5	39%	11.9	195
SUMAS	7.1	7.4	14.5	52%	15.1	227
WSU 2225	8.9	5.5	14.4	38%	11.9	201
BC 86-27-1	9.0	5.3	14.2	37%	12.7	291
WSU 2253A	8.7	3.7	12.4	32%	15.3	311
WSU 2170	8.0	3.5	11.5	30%	8.9	233
REDCREST	7.2	4.1	11.4	37%	9.3	296
WSU 2265	7.6	3.4	11.0	33%	12.5	253
MELODY	6.9	3.7	10.6	35%	9.7	244
SHUKSAN	5.7	4.6	10.3	45%	12.5	239
WSU 2241	2.6	6.7	9.4	73%	17.0	285
WSU 2081	2.6	6.5	9.1	71%	13.4	164
BC 86-33-2	4.3	4.6	8.9	47%	10.9	266
WSU 2076	5.3	3.6	8.9	40%	13.7	246
WSU 2260	5.1	3.4	8.4	40%	12.7	329
WSU 1983	4.1	4.1	8.2	52%	15.2	274
WSU 2235	4.3	3.7	8.0	47%	13.4	228
HOOD	5.2	2.2	7.4	28%	11.3	237
WSU 2239	3.9	2.6	6.5	40%	14.8	192
EVITA	3.5	2.9	6.3	42%	15.3	247
BC 89-28-41	3.2	2.7	5.9	45%	8.6	325
WSU 2168	3.1	1.2	4.3	27%	5.4	207

Harvest Season

	5% harvest	50% harvest	95% harvest	Length of harvest
'PUGET RELIANCE'	6/4/94	6/15/94	6/27/94	23
BENTON	6/7/94	6/17/94	6/30/94	23
ORUS917-123	6/10/94	6/20/94	7/2/94	22
ORUS1077-47	6/10/94	6/21/94	7/5/94	24
WSU 2211	6/1/94	6/11/94	6/23/94	22
TOTEM	6/3/94	6/14/94	6/28/94	25
RAINIER	6/5/94	6/15/94	6/29/94	24
REDGEM	6/2/94	6/13/94	6/27/94	25
SUMAS	6/1/94	6/10/94	6/23/94	22
WSU 2225	6/3/94	6/14/94	6/28/94	25
BC 86-27-1	6/1/94	6/11/94	6/26/94	25
WSU 2253A	5/27/94	6/9/94	6/27/94	30
WSU 2170	6/5/94	6/18/94	7/1/94	25
REDCREST	6/3/94	6/15/94	6/30/94	27
WSU 2265	5/31/94	6/8/94	6/21/94	21
MELODY	5/31/94	6/9/94	6/25/94	25
SHUKSAN	6/5/94	6/13/94	6/25/94	20
WSU 2241	6/3/94	6/12/94	6/28/94	25
WSU 2081	6/1/94	6/12/94	6/27/94	26
BC 86-33-2	6/2/94	6/12/94	6/27/94	25
WSU 2076	6/4/94	6/15/94	7/1/94	27
WSU 2260	6/6/94	6/18/94	7/2/94	26
WSU 1983	5/28/94	6/7/94	6/18/94	20
WSU 2235	6/3/94	6/13/94	6/27/94	25
HOOD	5/30/94	6/9/94	6/23/94	23
WSU 2239	6/1/94	6/12/94	6/29/94	28
EVITA	5/25/94	6/6/94	6/22/94	28
BC 89-28-41	6/3/94	6/16/94	6/30/94	27
WSU 2168	5/30/94	6/10/94	6/27/94	28

Although the fruit is large and attractive, its softness and

susceptibility to post-harvest fruit rot make it unsuited for most fresh market uses.

The fruit from Puyallup and Aurora was sent to the Food Science and Technology Department of Oregon State University for evaluation in 1992. These evaluations were as (a) fresh fruit, (b) IQF fruit* and (c) frozen sliced fruit. The comparison varieties were 'Totem', three 'ORUS' selections, and one 'Agriculture Canada' selection. These evaluations were reported to the Oregon Strawberry Commission and are set forth in Tables 8 through 10 below.

*"IQF Fruit" means "individual quick frozen fruit" and refers to individual fruit that are frozen whole and packaged after freezing. IQF Fruit are discrete, whole frozen strawberries in contrast to frozen sliced fruit or bulk frozen fruit frozen together in a block.

TABLE 8

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)
Fresh Strawberries, 1992-93 Consumer Panel
Means, Standard Deviations (in parentheses),
Least Significant Difference (LSD) and
Significance Level for Flavor and Appearance
(Means with the same superscripts within each column are not significantly different: $p \leq .05$.)

Flavor					
Selection	Overall Flavor	Sweet-ness	Sour-ness	Straw- berry Flavor	Firm-ness
1076-124	4.99 ^b (1.93)	5.11 ^c (1.96)	4.83 ^b (1.96)	5.05 ^c (2.06)	5.82 (1.57)
1267-314	5.52 ^b (2.08)	5.86 ^b (1.66)	5.33 ^b (1.78)	5.29 ^{bc} (2.07)	5.26 (1.92)
1267-236	5.42 ^b (1.91)	5.42 ^{bc} (1.78)	5.14 ^b (1.86)	5.23 ^{bc} (2.04)	5.62 (1.57)
'PUGET RELiance'	3.80 ^c (1.81)	4.14 ^d (1.56)	4.17 ^c (1.64)	4.03 ^d (1.95)	5.24 (1.79)
BC 86-33-2	6.52 ^a (1.83)	6.62 ^a (1.62)	5.97 ^a (1.81)	6.33 ^a (1.93)	5.77 (1.81)
Totem	5.44 ^b (1.92)	5.77 ^b (1.66)	5.26 ^b (1.77)	5.79 ^{ab} (1.81)	5.46 (1.52)
LSD	.57	.53	.54	.58	—
Sig. Level	.0001	.0001	.0001	.0001	NS

Appearance

Selection	Overall Appearance	Color	Size	Shape	Seedi-ness
1076-124	6.47 ^b (1.73)	6.72 ^a (1.48)	6.68 ^b (1.60)	6.35 ^b (1.89)	5.88 ^b (1.55)
1267-314	7.17 ^a (1.40)	7.07 ^a (1.47)	7.46 ^a (1.28)	7.15 ^a (1.32)	6.53 ^a (1.38)
1267-236	5.76 ^c (1.63)	6.11 ^b (1.66)	5.89 ^{dc} (1.57)	5.62 ^c (1.80)	5.91 ^b (1.47)
'PUGET RELiance'	5.50 ^c (1.84)	5.27 ^c (2.12)	5.99 ^c (1.60)	6.56 ^b (1.48)	5.73 ^b (1.65)
BC 86-33-2	5.50 ^c (1.55)	5.96 ^b (1.86)	5.50 ^d (1.77)	5.29 ^c (1.78)	5.18 ^c (1.57)
Totem	6.77 ^{ab} (1.24)	6.70 ^a (1.47)	6.79 ^b (1.23)	6.74 ^{ab} (1.37)	6.39 ^a (1.46)
LSD	.44	.49	.41	.46	.40
Sig. Level	.0001	.0001	.0001	.0001	.0001

TABLE 9

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)
IQF Strawberries, 1992-93 Consumer Panel
Means, Standard Deviations (in parentheses),
Least Significant Difference (LSD) and
Significance Level for Flavor and Appearance
(Means with the same superscripts within each column are not significantly different: $p \leq .05$.)

Flavor					
Selection	Overall Flavor	Sweet-ness	Sour-ness	Straw- berry Flavor	Firm-ness
1076-124	4.95 (1.89)	4.68 (1.97)	4.53 (1.66)	4.95 (1.85)	5.03 ^a (2.10)
1077-47	4.58 (1.93)	4.70 (1.89)	4.57 (1.82)	4.85 (1.98)	4.43 ^{bc} (1.95)
1267-236	4.82 (1.75)	4.65 (1.71)	4.60 (1.69)	4.70 (1.72)	4.86 ^{ab} (1.95)
'PUGET RELiance'	4.58 (2.04)	4.35 (1.90)	4.42 (1.96)	4.44 (2.04)	4.61 ^{abc} (1.98)
BC 86-33-2	4.79 (1.91)	4.82 (1.81)	4.60 (1.84)	4.98 (1.96)	4.35 ^c (2.10)
Totem	4.77 (1.95)	4.79 (1.84)	4.72 (1.69)	4.81 (1.88)	4.85 ^{ab} (1.96)
LSD	—	—	—	—	.48
Sig. Level	NS	NS	NS	NS	.04

Appearance

Selection	Overall Appearance	Color	Size	Shape	Seedi-ness
1076-124	5.52 ^{abc} (1.72)	5.87 ^c (1.67)	5.63 ^c (1.65)	5.65 ^{bcd} (1.78)	5.75 ^{bc} (1.43)
1077-47	6.01 ^a (1.52)	6.32 ^a (1.51)	6.27 ^a (1.48)	5.98 ^{abc} (1.90)	6.20 ^a (1.41)
1267-236	5.49 ^{bc} (1.60)	5.63 ^{bc} (1.72)	5.66 ^{bc} (1.72)	5.52 ^{cd} (1.68)	5.2 ^d (1.53)
'PUGET RELiance'	5.94 ^{ab} (1.70)	5.92 ^{ab} (1.67)	6.11 ^{ab} (1.59)	6.23 ^a (1.67)	6.09 ^{ab} (1.55)
BC 86-33-2	5.05 ^c (1.97)	5.38 ^{abc} (2.05)	5.89 ^{abc} (1.63)	5.38 ^d (1.95)	5.61 ^{cd} (1.51)
Totem	5.70 ^{ab} (1.82)	5.72 ^a (1.66)	6.23 ^a (1.61)	6.10 ^{ab} (1.63)	6.29 ^a (1.47)
LSD	.50	.50	.47	.51	.41
Sig. Level	.002	.01	.02	.005	.0001

TABLE 10

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)
Sugared and Sliced Strawberries, 1992-93 Consumer Panel
Means, Standard Deviations (in parentheses),
Least Significant Difference (LSD) and
Significance Level for Flavor and Appearance
(Means with the same superscripts within each column are not significantly different: $p \leq .05$.)

Flavor					
Selection	Overall Flavor	Sweet-ness	Sour-ness	Straw- berry Flavor	Firm-ness
1076-124	6.39 (1.75)	6.40 (1.64)	5.88 ^a (1.54)	6.15 (1.77)	5.56 ^{ab} (2.04)
1077-47	6.16 (1.60)	6.21 (1.58)	5.51 ^b (1.48)	5.92 (1.76)	5.21 ^{bc} (1.59)
1267-236	6.35 (1.54)	6.55 (1.43)	5.98 ^a (1.47)	6.31 (1.42)	5.84 ^a (1.84)
'PUGET RELiance'	5.84 (1.77)	6.10 (1.68)	5.71 ^{ab} (1.40)	5.84 (1.78)	4.92 ^c (1.98)
BC 86-33-2	5.28	6.33	6.06 ^a	6.16	5.38 ^b

TABLE 10-continued

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)

Sugared and Sliced Strawberries, 1992-93 Consumer Panel Means, Standard Deviations (in parentheses), Least Significant Difference (LSD) and Significance Level for Flavor and Appearance (Means with the same superscripts within each column are not significantly different: $p \leq .05$.)

	(1.49)	(1.58)	(1.52)	(1.50)	(1.72)
Totem	6.26	6.35	5.88 ^a	6.21	5.20 ^{bc}
	(1.67)	(1.67)	(1.34)	(1.80)	(1.82)
LSD	—	—	.36	—	.44
Sig. Level	NS	NS	.04	NS	.001

Appearance					
Selection	Overall Appearance	Color	Size	Shape	Seediness
1076-124	4.87 ^{bc}	5.62 ^b	5.95 ^a	5.18 ^{ab}	5.40 ^b
	(1.86)	(1.88)	(1.30)	(1.83)	(1.40)
1077-47	5.22 ^{ab}	6.39 ^a	6.07 ^a	4.92 ^b	5.42 ^b
	(1.71)	(1.37)	(1.46)	(1.78)	(1.41)
1267-236	4.63 ^{cd}	5.89 ^b	4.54 ^c	4.44 ^c	5.24 ^b
	(2.00)	(1.73)	(1.90)	(1.95)	(1.53)
'PUGET RELIANCE'	4.45 ^d	5.60 ^b	5.57 ^b	4.45 ^c	5.20 ^b
	(1.73)	(1.72)	(1.57)	(1.78)	(1.50)
BC 86-33-2	5.29 ^a	5.70 ^b	6.02 ^a	5.54 ^a	5.78 ^a
	(1.79)	(1.99)	(1.62)	(1.95)	(1.44)
Totem	5.07 ^{ab}	6.34 ^a	6.10 ^a	4.88 ^{bc}	5.31 ^b
	(1.75)	(1.58)	(1.54)	(1.91)	(1.43)
LSD	.41	.41	.34	.44	.34
Sig. Level	.0002	.0001	.0001	.0001	.0125

'Puget Reliance' did not rate highly for flavor as a fresh strawberry but did for all appearance attributes of IQF fruit. Its flavor was not significantly different from 'Totem' as IQF or sugared and sliced strawberries. The physical and chemical attributes of the new variety are set forth in Table 11 below.

TABLE 11

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)

selection	date	*Brix	pH	TA	Asc. Acid mc/100 g
ORUS 1076-124	6/2	10.2	3.38	1.33	84.1
	6/11	12.5	3.28	1.26	84.2
	6/18	14.2	3.44	1.22	72.5
ORUS 1077-47	6/4	9.9	3.21	1.35	56.6
	6/11	12.1	3.31	1.27	60.7
	6/18	11.2	3.38	1.36	62.1
ORUS 1267-236	5/21	10.1	3.46	1.18	80.2
	5/26	10.1	3.36	1.29	85.1
	6/2	10.6	3.50	1.07	61.6
ORUS 1267-314	6/11	13.2	3.46	1.08	73.0
	5/26	10.4	3.54	0.93	70.0
	6/2	display sample only			
ORUS 1375-24	6/11	14.3	3.48	1.06	76.5
	5/19	10.1	3.45	1.00	54.4
	5/26	9.7	3.53	0.95	75.5
ORUS 1182-53	6/11	11.5	3.62	0.85	76.9
	5/19	9.0	3.56	0.96	53.6
	5/21	8.8	3.54	0.87	71.8
ORUS 1182-118	5/21	8.8	3.54	0.87	71.8
	5/19	8.7	3.36	1.10	23.6
	5/26	8.9	3.28	1.18	56.5
ORUS 1274-9	5/19	9.7	3.55	0.96	84.7
	5/21	9.6	3.34	1.31	100.1
	5/21	8.2	3.57	0.88	71.3
ORUS 1376-16	5/21	9.2	3.61	0.94	103.8
	5/26	9.1	3.38	1.08	99.9
	6/4	9.1	3.33	1.24	59.4

TABLE 11-continued

(From 1993 progress report to Oregon Strawberry Commission by Brian Yorgey)

5	W88127-73	5/21	9.3	3.62	0.85	72.0
	W88128-51	6/4	display sample only			
	BC 86-33-2	5/26	12.1	3.40	1.40	82.5
		6/2	12.5	3.53	1.14	62.8
	WSU 2009 (WA)	6/4	6.8	3.32	0.71	37.3
10	WSU 2068 (WA)	6/4	7.0	3.30	0.98	63.7
	'PUGET RELIANCE'	6/4	8.4	3.25	1.05	54.1
	'PUGET RELIANCE'	6/2	8.7	3.38	1.14	46.0
	(NWREC)	6/4	8.2	3.20	1.06	46.6
	Totem	5/19	9.9	3.48	1.00	78.4
		5/26	10.0	3.45	1.12	106.8
		6/2	10.8	3.58	0.96	73.7
15		6/4	9.7	3.50	0.92	72.9
	Redcrest	6/4	display sample only			
		6/11	display sample only			
	Hood	6/2	display sample only			
	Benton	6/4	display sample only			
20	selection	date	penetrometer	L	a	b
	ORUS 1076-124	6/2	529	29.48	23.15	8.03
		6/11	479	28.91	22.99	7.48
		6/18	417	27.85	20.59	6.46
	ORUS 1077-47	6/4	366	29.12	22.72	8.08
25		6/11	354	28.72	21.97	7.45
		6/18	395	28.22	21.33	7.48
	ORUS 1267-236	5/21	373	30.23	21.98	7.78
		5/26	388	29.70	22.31	8.06
		6/2	403	27.54	19.16	6.55
		6/11	307	29.93	20.70	7.05
30	ORUS 1267-314	5/26	389	30.24	20.64	7.37
		6/2				
		6/11	346	30.05	19.61	6.41
	ORUS 1375-24	5/19	474	29.90	21.05	7.26
		5/26	465	30.90	21.95	7.60
		6/11	377	30.20	19.04	5.93
35	ORUS 1182-53	5/19	413	27.97	19.59	6.50
	ORUS 1182-118	5/21	324	29.24	20.22	7.11
	ORUS 1284-79	5/19	334	31.61	21.08	8.14
		5/26	323	31.57	22.83	8.83
	ORUS 1274-9	5/19	382	28.28	19.82	6.72
	ORUS 1376-16	5/21	458	26.75	18.11	6.15
40	NW8808-79	5/21	364	29.14	19.58	6.70
	W84025-26	5/26	434	26.09	16.88	5.24
	W87010-7P	5/26	523	24.14	13.74	4.29
	W88017-49	6/4	336	29.70	21.91	7.70
	W88127-73	5/21	351	28.38	19.56	6.50
	W88128-51	6/4				
	BC 86-33-2	5/26	390	27.70	20.14	6.94
45		6/2	419	27.55	20.20	6.72
	WSU 2009 (WA)	6/4	458	27.65	18.04	6.40
	WSU 2068 (WA)	6/4	531	28.92	20.76	7.33
	'PUGET RELIANCE'	6/4	377	29.43	21.31	7.95
	'PUGET RELIANCE'	6/2	316	27.82	19.83	7.08
	(NWREC)	6/4	343	29.99	21.29	8.03
50	Totem	5/19	320	27.28	18.91	6.46
		5/26	343	27.89	20.42	7.12
		6/2	367	27.54	19.16	6.55
		6/4	295	27.17	18.66	6.17
	Redcrest	6/4				
		6/11				
55	Hood	6/2				
	Benton	6/4				

Analysis of frozen samples of the fruit of 'Puget Reliance' taken from the 1992 season at Puyallup appear in Table 12 below.

TABLE 12

Analysis of 1992 strawberry fruit grown at Puyallup, WA.

65	Number of sample	pH	Titrateable Acidity as % Citric Acid
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TABLE 12-continued

Analysis of 1992 strawberry fruit grown at Puyallup, WA.			
ANNAPOLIS	1	3.56	0.21
BC 86-33-2	3	3.47 A-B	0.63 B-C
CAVENDISH	1	3.72	0.51
MDUS 4740	1	3.41	0.57
REDCREST	3	3.24 C	0.87 A
SUMAS-1990	3	3.34 B-C	0.37 D
SUMAS-1991	3	3.47 A-B	0.58 B-D
TOTEM-1990	3	3.48 A-B	0.42 C-D
TOTEM-1991	3	3.57 A	0.42 C-D
'PUGET RELIANCE'	3	3.27 C	0.70 A-B
WSU 1990	2	3.43	0.38
WSU 2068	2	3.42	0.45
WSU 2122	1	3.42	0.62
WSU 2212	3	3.48 A-B	0.58 B-D
WSU 2213	3	3.53 A	0.56 B-D
Average		3.45	0.52

	Number of sample	S.S. %	Anthocyanins A @ 520 nm 10 g fr in 1000 ml
ANNAPOLIS	1	7.80	0.350
BC 86-33-2	3	9.60 A	0.372 A
CAVENDISH	1	10.20	0.380
MDUS 4740	1	7.60	0.197
REDCREST	3	8.63 A-C	0.410 A
SUMAS-1990	3	8.03 B-D	0.358 A
SUMAS-1991	3	9.27 A-B	0.296 A
TOTEM-1990	3	6.27 E	0.396 A
TOTEM-1991	3	8.73 A-C	0.358 A
'PUGET RELIANCE'	3	7.80 C-D	0.325 A
WSU 1990	2	6.70	0.432
WSU 2068	2	7.25	0.424
WSU 2122	1	9.40	0.309
WSU 2212	3	6.97 D-E	0.397 A
WSU 2213	3	7.03 D-E	0.375 A
Average		8.09	0.359

Means of samples of 10 grams for each clone.
Means followed by the same letter within a column are not significantly different using Duncan's Multiple Range Test, P = 0.05.

It was concluded that fruit of 'Puget Reliance' would be satisfactory as a processed strawberry and under the standard Washington State University Test Agreement (a copy of which is made of record), one hundred twenty-five virus infected plants were sent to each of four growers in Washington and Oregon. Despite the poor plant quality and low survival at several sites, the fruit produced was received favorably. Six hundred virus negative plants were then sent to one grower and four hundred plants to another in 1993 and these also tested favorably.

Throughout the testing of 'Puget Reliance' at research facilities in Oregon, Washington and British Columbia the variety displayed consistently high yields and large fruit.

The specific morphological characteristics which distinguish 'Puget Reliance' from other Pacific Northwest cultivars are set forth in Tables 13, 14 and 15. These concern the length, width and serration numbers of the central leaflet, the Petiolule and Petiole length and diameters and the length, width and color of the fruit as compared with closely related known varieties.

SPECIFIC DESCRIPTION

The color terminology is in accordance with the Munsell color system.
Plant: Large and vigorous, with an erect growth habit.
Produces abundant runners.

Leaves: Medium in size. Leaf characteristics of 'Puget Reliance' are compared to other Pacific Northwest varieties in Table 13. The central leaflet of 'Puget Reliance' is longer than 'Benton' or 'Totem' and the same as 'Sumas'. The width of 'Puget Reliance' is the same as 'Benton' and 'Totem' and narrower than 'Sumas'. The shape of the central leaflet is much longer and narrower for 'Puget Reliance' than for 'Benton', 'Sumas' or 'Totem' as indicated by greater length/width ratio. The number of serrations on the terminal leaflet for 'Puget Reliance' were less than for 'Sumas' but did not differ from 'Benton' or 'Totem'. 'Puget Reliance' had a long petiolule similar in length to 'Sumas'. The petiole length is similar for 'Puget Reliance', 'Benton' and 'Sumas' but longer than 'Totem'. The leaf color is the same for all four varieties, 5GY 4/4 on the upper surface and 5GY 5/4 for the lower surface. The petiole hairs are irregularly perpendicular to the axis of the petiole.

Inflorescence: Inflorescence characteristics of 'Puget Reliance' are compared to other Pacific Northwest varieties in Table 14. The common peduncle of 'Puget Reliance' is the same as 'Totem' and shorter than 'Benton' or 'Sumas'. The length of the pedicel is similar to 'Benton', but shorter than 'Sumas' and longer than 'Totem'. The diameter of the pedicel is similar to 'Benton' and thicker than 'Sumas' and 'Totem'. The pedicel hairs are irregularly perpendicular to the axis of the pedicel.

Fruit: Fruit characteristics of 'Puget Reliance' are compared to Pacific Northwest varieties in Table 15. The primary fruit of all four varieties is approximately 4 cm. The diameter of 'Puget Reliance' fruit is larger resulting in a shorter conic fruit. Fruit is usually smooth and symmetrically conic with inserted seeds. The exterior fruit color of 'Puget Reliance' (5R 3/6) and 'Totem' (5R 3/6) is slightly darker than 'Benton' and 'Sumas' (5R 3/9). As shown in Table 15, the fruit color at the apex of a longitudinal slice of both 'Puget Reliance' and 'Totem' is darker than for 'Benton' and 'Sumas'. The harvest season is the same as 'Totem', later than 'Hood' or 'Sumas' and earlier than 'Benton'.

Disease and pest reaction: 'Puget Reliance' is susceptible to strawberry aphid (*Chaetosiphon fragaefolii*) an aphid vector of viruses, but is highly tolerant to virus complexes common in Washington. It is susceptible to leaf scorch (Diplocarpon), anthracnose fruit rot (Collectotrichum), and is susceptible to both adult and larva root weevils in a field with both black vine weevil (*Otiorhynchus sulcatus*) and obscure room weevil (*Sciopithes obscurus*).

TABLE 13

Leaf characteristics of 'Puget Reliance', 'Benton', 'Sumas', and 'Totem'. Puyallup, WA (June 29, 1994)				
	Central Leaflet			
	Length cm	Width cm	Length/ width	Serration Number
'Puget Reliance'	8.46 a	6.68 b	1.27	20.0bc
'Benton'	6.89 b	6.34 b	1.09	18.6 c
'Sumas'	9.14 a	8.33 a	1.10	24.3 a
'Totem'	6.54 b	6.06 b	1.08	21.3 b
	Petiolule Length mm		Petiole Length cm	
'Puget Reliance'	15.5a		20.9 a	
'Benton'	6.1b		21.8 a	
'Sumas'	12.1a		21.4 a	

TABLE 13-continued

Leaf characteristics of 'Puget Reliance', 'Benton', 'Sumas', and 'Totem'. Puyallup, WA (June 29, 1994)		
'Totem'	7.8b	13.2 b

TABLE 14

Inflorescence characteristics of 'Puget Reliance', 'Benton', 'Sumas', and 'Totem'. Puyallup, WA (June 22, 1994)				
	Peduncle		Pedicel	
	length cm	diameter mm	length cm	diameter mm
'Puget Reliance'	15.1 b	2.52	4.24 b	1.77 a
'Benton'	20.4 a	2.35	4.44 b	1.56 a
'Sumas'	20.9 a	2.50	7.16 a	1.14 b
'Totem'	15.6 b	2.04	2.75 c	1.02 b

TABLE 15

Fruit characteristics of 'Puget Reliance', 'Benton', 'Sumas', and 'Totem'. Puyallup, WA (Color measured on June 11, 1992 other measurements June 22, 1994)						
	Fruit					Calyx
	Length cm	Width cm	Length/ width	Ex- ternal color	Internal color	diam- eter cm
'Puget Reliance'	4.08	3.50 a	1.15	5R 3/6	7.5R 4/9	3.00
'Benton'	3.64	2.98 b	1.22	5R 3/9	10R 5/10	2.89
'Sumas'	3.87	3.13 b	1.24	5R 3/9	10R 5/10	2.70
'Totem'	3.75	2.97 b	1.29	5R 3/6	7.5R 5/10	2.93

I claim:

1. The new and distinct variety of strawberry plant described and illustrated and identified by the characteristics enumerated above.

* * * * *

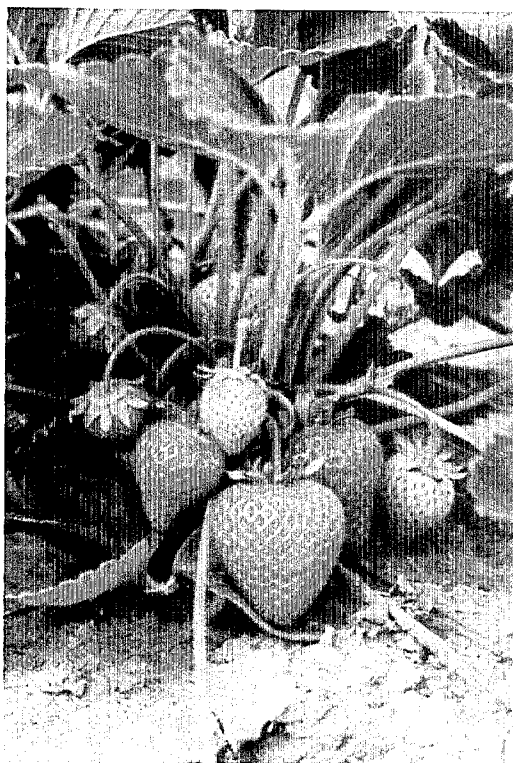


FIG. 1.

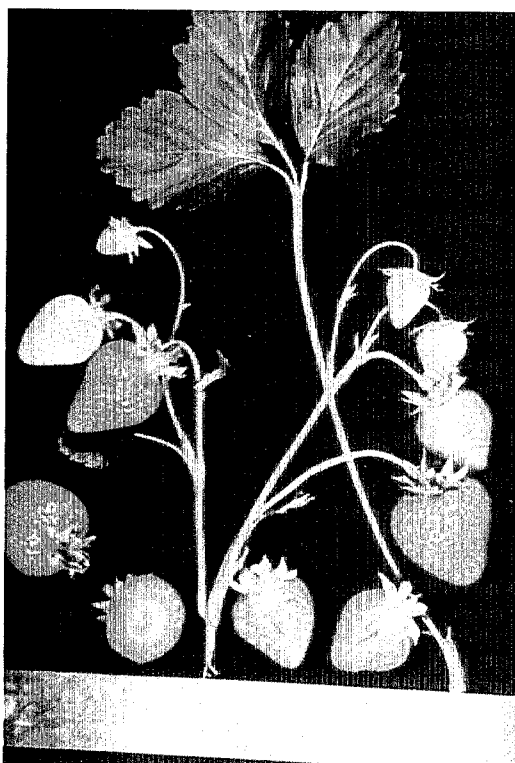


FIG. 2.

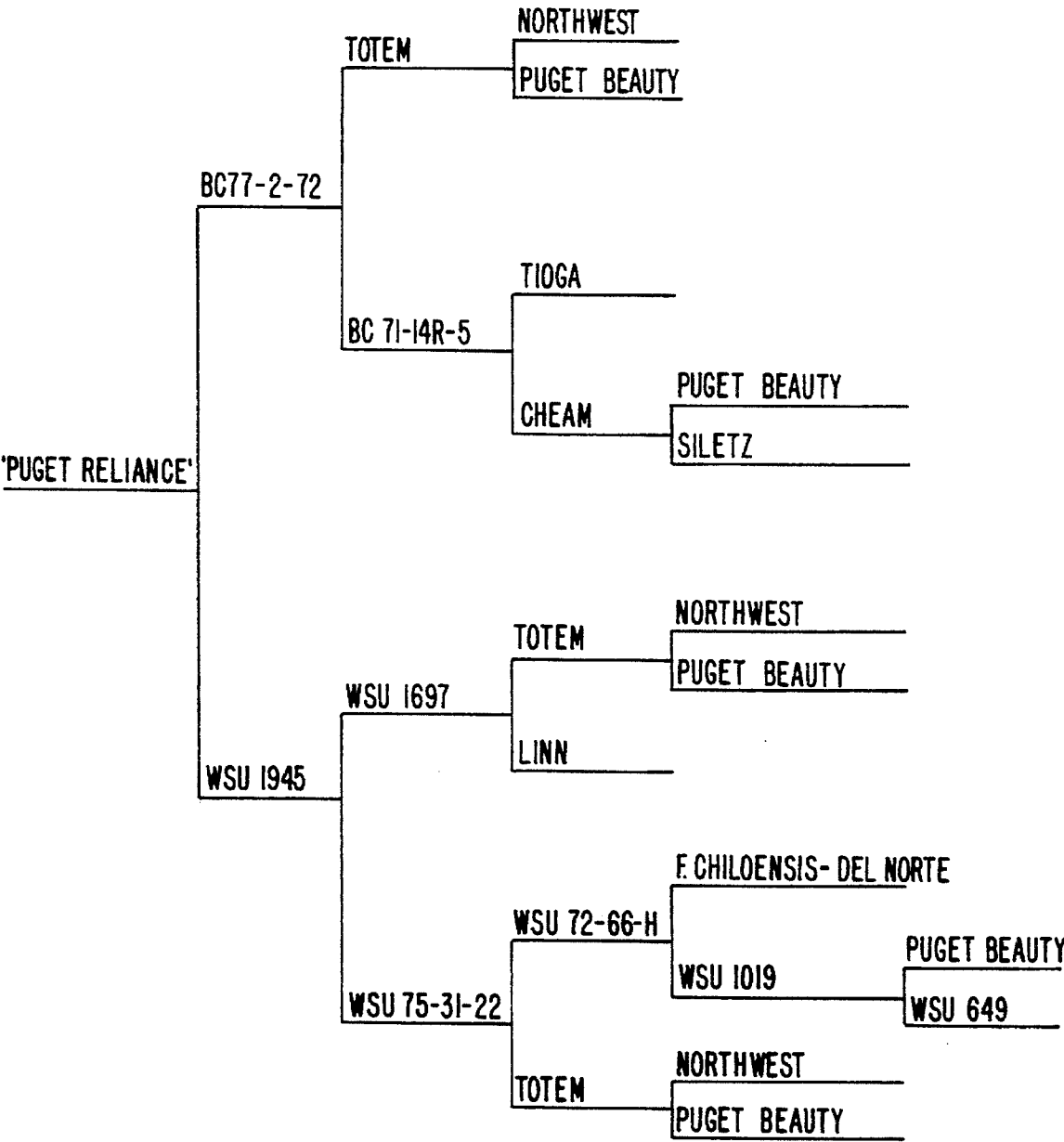


FIG. 3.