Table 2. Values "U.S. Standard Grades of Quality" of Lye-Peeled Processed Whole-Pack Tomatoes. Average Sample of 3 No. 303 x 406 cans. Raw Product from Fremont, Ohio; processing at O.S.U., Columbus, Ohio, 1980.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Drained wt</th>
<th>Wholeness</th>
<th>Color</th>
<th>Defects</th>
<th>Total score</th>
<th>U.S. grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio 7681</td>
<td>19.5</td>
<td>20.0</td>
<td>28.5</td>
<td>28.0</td>
<td>96.0</td>
<td>A</td>
</tr>
<tr>
<td>Campbell37</td>
<td>17.5</td>
<td>20.0</td>
<td>24.0</td>
<td>25.0</td>
<td>80.5</td>
<td>B</td>
</tr>
</tbody>
</table>

U.S. Department of Agriculture Standards for Grades of Canned Tomatoes.

Table 3. Values "U.S. Standard Grades of Quality" of Canned Tomato Juice and Attributes. Average Sample of 3 No. 303 x 406 cans. Raw Product From Fremont, Ohio; processing at O.S.U., Columbus, Ohio, 1980.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Color</th>
<th>Consistency</th>
<th>Defects</th>
<th>Flavor</th>
<th>Soluble solids (°Brix)</th>
<th>Titratable acidity (%)</th>
<th>Gross viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio 7681</td>
<td>27</td>
<td>13</td>
<td>15</td>
<td>38</td>
<td>93.0</td>
<td>0.29</td>
<td>44</td>
</tr>
<tr>
<td>Campbell37</td>
<td>27</td>
<td>13</td>
<td>15</td>
<td>34</td>
<td>89.0</td>
<td>0.31</td>
<td>46</td>
</tr>
</tbody>
</table>

U.S. Department of Agriculture Standards for Grades of Canned Tomatoes.

Description

Vines of ‘Ohio 7681’ are medium in size, determinate (sp) and adapted to high population direct seed or transplant culture (Fig. 2). Adequate foliage cover enables good quality fruit development, yet the vines become uniformly semi-prostrate at maturity resulting in good bed coverage, facilitating hand or machine harvest. Once-over yield has ranged from 62 to 89 MT of usable fruit per ha (28 to 40 tons/acre) in replicated trials from 1978 through 1980 (Table 1). Fruits average 117 g (4 oz) in size, blocky-deep-globe shaped and uniform ripening (ur) (Table 1 and Fig. 3). ‘Ohio 7681’ is resistant to race 1 of *Fusarium oxysporum* Schlecht. f. lycopersici (Sacc.) Wr. (c) and to Verticillium wilt, *Verticillium albo-atrum* Reinke & Berth. (Ve).

In experimental and commercial processing pilot trials Ohio 7681 raw processed quality is characterized by suitable solids, acid, color and Vitamin C (ascorbic acid), which favors its utilization in various tomato products (Tables 1–3). A desirable sugar/acid ratio makes the cultivar especially adaptable to quality juice production.

Availability

Commercial quantities of ‘Ohio 7681’ seed are available from ADI Distributors, Inc., Carmel, IN. 46032. Smaller seed samples are available from the Department of Horticulture, Ohio Agricultural Research and Development Center, Wooster, OH 44691.


‘Shani’ Grape¹

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Additional index words. *Vitis vinifera*, fruit breeding

A major objective of the grape-breeding program, started in 1968 at Bet Dagan, has been to breed early-ripening and late-ripening table grapes with loose clusters, and good berry size, appearance and quality. Only crosses between *Vitis vinifera* cultivars have been made. The progeny of a local ‘Dabouki’ x ‘Cardinal’ cross have proven of particular interest and one selection is being named ‘Shani’.

Origin

‘Shani’ tested as hybrid no. 5/70-5 (Fig. 1), was selected in 1974 from a population of 142 plants resulting from a cross between ‘Dabouki’ and ‘Cardinal’ made in 1968, propagated as selection no. 7 as ungrafted cuttings in Bet Dagan and planted in trial plots, grafted on ‘Ruggieri 140’ and ‘1103 Paulsen’ (V. berlandieri x V. rupestris).

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Seven crops of own rooted vines and three crops from the grafted plants have been observed.

Description

'Shani' vines are very vigorous, adapted to spur pruning, and prolific. The leaves are pentagonal, with an open shaped petiolar sinus. The bunches average 600g in weight, are long to very long, shouldered, and not compact. Berries are vivid red, large sized, averaging 7.0g in weight. Berry shape is ovoid. Very little cracking has been observed, compared with 'Cardinal'. Yields of 24-29 mt/ha have been obtained. Ripening date, at Bet Dagan, is from July 1 to 14, about the same as for 'Cardinal'. Color can be improved by spraying with 200 ppm (2-chloroethyl) phosphonic acid (ethephon) at 50% color change. Fruit stores well, but berries, especially on ungrafted vines, are somewhat prone to drop.

Availability

Patent pending. Budwood will be available from the authors, Volcani Center, Bet Dagan, Israel, by agreement. Tested virus free budwood will be available at the end of 1982.


'Sivan' Grape

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Additional index words. Vitis vinifera, fruit breeding

In a table grape-breeding program initiated in 1968 at Bet Dagan, the progeny of a cross between the local cultivar 'Dabouki' and 'Cardinal', has proven of special interest and several selections have been made. One selection is being named 'Sivan'.

Origin

'Sivan' (Fig. 1) was selected (hybrid no. 5/70-53) in 1976 from a population of 142 plants resulting from a cross between 'Dabouki' and 'Cardinal' made in 1968, propagated as selection no. 42 as ungrafted cuttings in Bet Dagan, and as plants grafted to 'Ruggieri 140' and '1103 Paulsen' (V. berlandieri x V. rupestris) rootstocks. Five crops from own rooted vines and three crops of the grafted plants have been observed.

Description

'Sivan' vines are very vigorous, well adapted to spur pruning and highly prolific (yields of 29-35 mt/ha have been observed). The mature leaves are wedge-shaped with an open-shaped petiolar sinus. Bunches are of medium size, average weight about 400g, not compact, and have a short conical shape. Berries are yellow at full maturity, ellipsoidal, of medium size, average weight of 5.0g, with one or two rather small seeds. The skin is fairly tough. There is some tendency for shot berries and sensitivity to sunburn of berries. A slight and delicate Muscat flavor is noted at full ripening. Ripening date at Bet Dagan, is from June 28 to July 10, similar to 'Queen of Vineyards'. Bunch thinning improves quality and size and hastens ripening. Best flavor and firmness are obtained close to full maturity, at 14° Brix.

Availability

Patent pending. Budwood will be available from the authors at the Volcani Center, Bet Dagan, Israel, by agreement. Tested virus free budwood will be available at the end of 1982.


'Allstar' Strawberry

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Additional index words. Fragaria x ananassa, red stele root rot resistance, Phytophthora fragariae, Verticillium albo-atrum, fruit breeding

'Allstar' is a vigorous and productive June-bearing strawberry (Fragaria x ananassa Duch.) that produces very large, firm fruit of good quality in late season. It is the most recent introduction in a series of red stele root rot-resistant cultivars developed in the cooperative strawberry improvement program of the U.S. Department of Agriculture and the University of Maryland. 'Allstar' combines multiple-locus resistance to red stele incited by Phytophthora fragariae Hickman with resistance to other root and leaf diseases, has unusually broad adaptation within the eastern United States, and performs well under a number of cultural regimes. Its name implies superior performance under diverse soil, climatic and cultural conditions.

Origin

'Allstar', tested as MDUS 4429, was selected from a cross of US 4419 x MDUS 3184 by D. H. Scott and A. D. Draper at Wye, Md., in 1971 (Fig. 1). The cross was made in 1969 and the seedlings were screened for red stele root rot resistance in the winter of 1969-70. The resistant seedlings were grown at Wye Institute on the Eastern Shore of Maryland in 1970 and 1971 for plant and fruit evaluations. 'Allstar' has been evaluated in Maryland during the period 1972-1981, and in a number of locations extending north from North Carolina to Massachusetts and westward to Ohio and Missouri during 1978-1981.