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SERIES I. EVALUATION OF FOREIGN FRUITS AND NUTS.

NO. 3. APPLES AND Pears

APPLE AND PEAR VARIETY INTRODUCTIONS NOW AVAILABLE FROM THE U. S. PLANT INTRODUCTION GARDEN GLENN DALE, MARYLAND

Prepared by

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This report is prepared as a cooperative service to state and federal experiment stations and presents evaluation data available on these varieties. Varietal names listed are those under which the material was introduced.

February 1956
APPLES

Variety

Abbondanza (Abundance, Belfor)

Source

Italy

Introduced (P.I. 105123) 1931 from Italy. Described in Bianchi catalogue (1932-3) as bearing fruit very large, of good form, skin colored entirely with handsome shining red; extensively grown in the Ferarese, a winter apple; in catalogue Arturo Ansaloni, Bologna, as bearing large, shining red fruit; tree vigorous and very productive, winter.

Described on 10/26/37 at Glenn Dale, Maryland. An attractive red, medium to large, white fleshed fruit, core very small but seed abundant. Flesh somewhat rubbery, flavor rather rich. Good. Probable season to January.

Picked at Glenn Dale, Maryland, 9/24/38 and described 10/21/38. Red color very high, firm flesh, good quality. Some mention in literature that it has been utilized in Italy as a rootstock. Has not colored well at Glenn Dale in some seasons. Might do better in high altitudes. Mentioned favorably by Dr. F. B. Tukey in American Fruit Grower; he saw it growing in northern Italy.

Introduced into Greece from Italy sometime between 1925-35, and renamed Belfor. Received from Prof. F. Alderman under P.I. 212369 from Salonica, Greece. It is now the most widely grown variety in Salonica region. Alderman comments on its fruiting in nursery row and being a heavy and consistent producer in the orchard. Fruits above medium size, round-oblate to round-conic, sometimes oblique. Not a good keeper and loses flavor quickly after maturity.

Apple Varieties Bred at Aomori Apple Experiment Station Japan
(See original color illustrations in your library).

199525 Amanshiki Ralls Janet x Indo
199531 Korei Ralls Janet x Golden Delicious — 10
205450 Kinrei Golden Delicious x Delicious — 10
199527 Korei Golden Delicious x Indo — 10
213557 Mutsu Golden Delicious x Indo — 10
195836 Shinko Ralls Janet x Jonathan — 10
199533 Shinsei Golden Delicious x Early McIntosh — 10
199532 Toyo Orient# Open pollinated seedling of Delicious — 10

* The origin of Indo variety is not clear. It may be a chance seedling of inter Pearmain.

# Aomori Station reports as good red color, long storage, not high quality.
Johansson, E. Grundstamstypen A2 (Apple rootstock A2)
Sverig. Pomol. Foren Arsskr. 1948, 49:71-76. A2 was
selected at Alnarp, Sweden, from imported rootstocks
and raised vegetatively. In numerous trials carried out
in different parts of Sweden, it was found to be as vigorous
as E.M.XVI, to be very hardy and to induce early bearing.
It is easily propagated in stool beds and by hardwood
cuttings. Cox's Orange trees planted in 1939 yielded from
1943 to 1948 a total of 88 and 46 kg. on A2 and E.M.XIII,
respectively. The corresponding figures for Laxton's Superb
are 111 and 78 kg. Belle de Boskoop trees planted in 1942
yielded 20.9 and 2.5 kg. from 1946 to 1948 on A2 and E.M. XVI,
respectively. Comparative data are tabulated for three other
varieties. It is anticipated that A2 will largely replace
seedling rootstocks, especially for the less vigorous varieties.

Apple stocks from East Malling and Alnarp (Sweden) have been
tested for hardiness since 1947. The Alnarp clone A2 proved
completely hardy, surviving the winter of 1943-49, with a
temperature generally about -20°C. without injury. This was
confirmed by another test at Kalin, where on a 10-scale A2 was awarded 10 and E.M. XI came next with 9 points.

Belle de Boskoop 3o30 Strain
Benitt's Roter Finkenwerder
Bowden Seedling
Charles Ross (Peasgood Nonesuch x Cox's Orange)
Cheddar Cross
Cox's Orange (Cox's Orange Pippin)
Cox's Orange continued.

fairly fine, smooth, handsome yellow, amply washed
with deep crimson dotted with brown and greyish white.
Flesh white, tender, fine or half fine. Juice abundant or sufficient, well sweetened, highly acidulated,
having a very savory flavor.

In Germany fruit valued highly along with Gravenstein
and eisse interkalvill as a very spicy fruit, edible
in early autumn and keeping until late spring with full
juiciness and freshness. Not as good appearance at
harvest time as many other fruits. Tree cannot be called
strong growing but it forms vigorous, bushy crowns with
long, thin side branches.

This variety has been used as a parent by apple breeders
in the United States and Canada, as well as by European
breeders.

In Denmark, Cox's Orange is unexcelled in flavor when on
not too heavy soils, but develops only fair red color.
Seedlings of Cox's Orange have not supplied an improved
variety. The Danish Ingrid Marie (Roter' Cox's Orange)
is in no way an improvement. The color is more pronounced
but its keeping quality is poorer and the form is less
satisfactory. The English production, Crimson Cox, which
has been highly recommended, lacks flavor. A tree of
Cox's Orange with particularly fine colored fruits was ob-
served in one Danish grower's orchard. A 200 tree orchard
of this (redsport?) planted on another site produced
fruits of the same vivid red, having a flavor and keeping
quality as good as Cox's Orange, if not better. In this
variety, flavor is influenced by soil and stock.

Gravensteiner (Gravenstein)  Germany  12 Scions

Gravenstein Red  Australia

An Australian strain of Gravenstein

Hereford Red Streak  England  20

Ingrid Marie Schneider's Red Strain  Denmark  30

Apples of New York, Vol.2:85
### Apple Varieties from Ireland

<table>
<thead>
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<th>Variety</th>
<th>Source</th>
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<td>206021</td>
<td>Ballyfatten</td>
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<tr>
<td>206022</td>
<td>Clear Heart</td>
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<td>206024</td>
<td>Greasy Pippin</td>
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<td>206026</td>
<td>Honey Ball</td>
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<tr>
<td>203814</td>
<td>Keegan's Crab</td>
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<td>206036</td>
<td>Kemp</td>
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<td>206031</td>
<td>Reid's Seedling</td>
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<tr>
<td>203818</td>
<td>White Crofton</td>
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</tr>
<tr>
<td>206027</td>
<td>Irish Crofton</td>
<td></td>
</tr>
<tr>
<td>194106</td>
<td>Johannes Bottner</td>
<td>Germany</td>
</tr>
</tbody>
</table>

This apple variety, which has been continually improved by the breeder, is already widely grown in the Thineland, where it is appreciated for its high yields and freedom from woolly aphis and canker, and for its keeping qualities.

**K 32-100-3**

Bred at Experiment Station, Kentville, Nova Scotia. Three seedlings were tetraploid. K-32-100-3, a Stark by Cox's Orange Pippin seedling, was one of these. It has more of the Stark characteristics than the Cox. The young trees have grown very rapidly, but scions frameworked into a young, thrifty tree along with some other seedling scions, with it in the best location in the tree, have grown rather slowly. So far it has been shy in bearing.

**K 33-112-3**

Bred at Experiment Station, Kentville, Nova Scotia, Dr. P. P. Longley of that Station comments on this apple selection as follows: "The K 33-112-3 shows considerable promise. We are not in particular need of another variety in the McIntosh, Cortland season. If it is enough earlier it may have a place, but would then be in competition with Gravenstein and possibly Melba."

**Lamb Abbey Pearmain**

An old English apple variety.

**Lord Lambourne**

Interest in this variety is in its value as an index of rubbery wood in other varieties. Buds of this number have been propagated on commercial apple seedlings. Under P.I. 205048 and 205049 we have rubbery wood free Lord Lambourne.
on Malling XVI on Tree 1442 and Malling VIII on Tree 170, both stock and scion indexed at the East Malling Station. We prefer to send scions or budwood from these earlier introductions as propagating wood becomes available.

Using the sensitive variety Lord Lambourne, the presence of rubbery wood virus has been demonstrated in the stoolbeds of the clonal apple rootstocks I.I and I.IX at East Malling. Six out of 12 tested stools of I.I were infected, and 10 out of 12 of I.IX. Tests on I.II, I.III, I.IV, I.VII, I.VII, I.VI.V and Crab C from the Research Beds were negative, but stocks of I.III and I.VIII brought in from a commercial nursery were entirely infected. The current investigations on the virus status of rootstocks and scion varieties are discussed by Posnett, A.J. and Cropley, R. in Fruit. Abs. 2306, vol. II, Sept. 1952.

205559

**Malus prunifolia. Sikora Type I.**

K. J. Hauer, in pursuance of earlier experiments carried out at Sinelaka, compared the nursery behaviour of Atonorowka with that of 12 other varieties, submitting numerous data from a small-scale trial. Variation in height and diameter was considerable with all varieties tested and Atonorowka proved to be more uniform than some others. By far the highest degree of uniformity was shown by Malus prunifolia Sikora Type I. Reisenheim Research Station.

209939

**Malus sylvestris**

205480

Merton Beauty

England 45

205481

Merton Delight

England 15

205482

Merton Pippin

England 7

207636

Red Cinnamon

Finland 3

199095

Red Transparent

Denmark 8

199693

Rome Beauty (Primley Beauty Strain)

Denmark

199694

Rome Beauty (Skegness Red Strain)

Denmark

199695

Rome Beauty (Red Australian Strain)

Canada 40

137577

Robusta 5.

The well-known hardy Canadian apple interstock.

205339

Ross Honepareil

Ireland 8

203816

Scarlet Bramley (Crimson Bramley).

England 25

A uniform, large, attractive, smooth skinned, sub-acid to acid, English cooking apple, of interest because of crimson color on sunny side. It can be picked over a period of a month to six weeks; is firm and crisp even when left to ripen on tree; bears well and the tree is a well formed, spreading type. The picking season of this variety at Glenn Eola, Harland, extended from 9/10/55 to 9/20/55. It is an excellent cooking and storage apple.
P.I. | Variety | Source
--- | --- | ---
188523 | Schellinkhout | Holland


125768 | Schoner aus Miltenberg | Germany

Strong growing, healthy tree. Fruit medium size to rather large, greenish yellow, of beautiful appearance; good manufacturing apple, also suitable as a table apple. Blossoms medium early.

187062 | Souvenir de Fernand Cognet | France

Catalog of Leon Pin, Saint Genis-Laval (Rhone). A novelty. New variety of very great value; remarkable for its vigor and its resistance to diseases. The fruit, of medium size, is green, washed and dotted red in the sun. It can be consumed starting the end of November and keeps perfectly in cellar or fruit room until April. Flesh white, solid, very fine and juicy; delicately perfumed. Quality very good. Has an incomparable resistance to diseases, including woolly aphis.

191420 | Spasserud | Sweden

A local apple grown in Vermland, Sweden, for which the following characters are claimed:--exceptional frost resistance, great scab resistance, long storage life, classified dessert grade II.

191414 | 12 Scions | Dominion Expt. Sta, Summerland, P
191445 | 9 Scions | " " " "

188521 | Sterappel | Holland

On list of varieties locally recommended. Origin described first in 1830. Supposed to have been a native of the Netherlands or Belgium, a round, broad outstanding tree. Bears very late but then regularly and very well. Fruit moderately large, good hand apple until January, in cool house until February. Poor in Vitamin C. Tree is very healthy on high ground. Rating: Vitality 4; early fruiting 1; regular bearing 3; yield 1; resistance against scab and canker 3; fruit size 3; exterior of fruit 5; flavor 3; dessert.
Native of Livland, ripens in September, good pollenizer. Wagner F., (1891) enumerating the few North Russian apples worthy of being grown in Europe, includes Suislepper, the handsomest summer apple. Beach: Apples of New York II:218-219, a synonym of Switzer; when well grown, a very handsome fruit of medium size or below, nearly white with beautiful blush. Very good in flavor and quality either for dessert or culinary use. As fruited at Geneva, tree comes into bearing rather early and is a fairly reliable biennial cropper. Season late August to October. As compared to standard varieties of its season, it does not appear to merit the attention of New York fruit growers.

As grown at Glenn Dale, Maryland, a 2½" apple, ground color white, faintly striped and splashed with red but overcolor meager, pleasant, mildly subacid flavor, rather nice dessert apple, but white skin unfavorable to commercial utilization, however hardiness combined with good quality makes its breeding potentialities interesting. Ripens about with Williams between Duches and Wealthy.

205706 0-381
205707 T-391
212583 Tallinnan Paarynacmensa
125272 Upton Pine
21478

Described in 1936-7 catalog, George Pyne; a valuable late keeping apple raised at the Denver Nurseries (Pyne's). The fruit is large, conical, skin a bright yellow, 'he flavor of Golden Noble, but lightly striped with pale pink on the exposed side; handsome and suitable for exhibition. It is a sure and regular bearer, producing heavy crops of fruit in the worst seasons. During the years the trees have been on trial, from two years of age, they have never failed to produce good crops of fruit. It is quite distinct from any other variety; tree vigorous and of upright growth. The quality of the fruit is excellent; flesh white, firm and juicy; it is equally useful for either dessert or culinary purposes; at its best from Christmas to March. This variety has the largest and most beautiful blossom of any apple in cultivation.

At Glenn Dale, Maryland, picked 9/16/39 and on dwarf stock in nursery 9/3/55. Large (4½), roundish, oblate apple, yellowish green covered about 25 to 40 percent with light red blush and stripes; flesh creamy white, firm, crisp, pleasantly acid flesh of good quality. Good dessert or cooking apple.
Variety

A chance seedling discovered by A. E. Vaile in the northern peninsula of the North Island of New Zealand, on what is known here as "The Gumfields," an area once more or less covered by forests of kauri or Agathea australis. Gravenstein is the best of the earlier apples. Irish Peach is much earlier but this has no quality and is a tip bearer. Vailearly is at least 5 weeks earlier than Gravenstein and a week or 2 earlier than Irish Peach. Vailearly crops heavily, regularly, ripens early, grows well, has good flavor and fine appearance.

Worcester Pearmain

Originated near Worcester, England. Introduced into trade 1874. Like James Grieve it is a good annual bearer, fruit produced at ends of short one-year shoots rather than on spurs. Tree tends to bush type of growth; fruits of medium size, smooth, richly colored, fairly good in quality. Not as good quality as James Grieve or Charles Ross. Blossoms late at Long Ashton and when hit by frost while in full bloom in 1938, it suffered relatively little damage. Hoblyn, in trials of this variety at East Malling, found that too much nitrogen quickly ruins color and quality. Worcester Pearmain is extensively grown in Rhine region of Germany. In France it ripens in late August. At Glenn Dale, Maryland, fruit is picked about third week of August; skin is covered with dark red stripes; flesh is white, crisp and firm; flavor pleasant sub-acid, almost sweet; quality good. Skin develops a rough appearance and apples tend to run small unless thinned.

**PEAR ROOTSTOCKS**

<table>
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<th>Source</th>
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<tr>
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<td>Pyrus betulaefolia</td>
<td>New Zealand</td>
</tr>
<tr>
<td>214088</td>
<td>P6-40</td>
<td>50 scions</td>
</tr>
<tr>
<td>214089</td>
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<td>214090</td>
<td>P6-443</td>
<td>2</td>
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<td>214091</td>
<td>P6-245</td>
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Earlier work has shown that seedlings of *Pyrus betulaefolia* are particularly suitable for vegetative propagation as pear rootstocks and 38 clones are being studied at the Horticultural Research Station at Pillnitz near Dresden. A method,
reported here, has now been worked out for the commercial propagation of the rootstock. The suckers in the stoolbed are earthed up in "the usual way" (presumably in spring and summer) and cut in the late autumn. They are then kept in a cellar during the winter and planted out in beds in the spring, about 5 cm. deep. Here root formation is profuse, being induced by etiolation. Tests with worked clones have so far shown (1) no instance of incompatibility (2) good anchorage (3) vigorous growth combined with early bearing. The rooting of the clones is illustrated by photographs and tabulated data.

"We do not find that our material is susceptible to blight, and the fruits of the varieties grafted on it are quite normal." (Extract from H. Muller letter).

### PEAR VARIETIES

<table>
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<tr>
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<tr>
<td>215320</td>
<td>Antoine Defosse</td>
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<tr>
<td>215321</td>
<td>Baronne Leroy</td>
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<td>215322</td>
<td>Belle Angevine</td>
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<td>215323</td>
<td>Belle Guerandaise</td>
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<td>215324</td>
<td>Beurre Chasset</td>
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<td>184814</td>
<td>Beurre Giffard</td>
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</tr>
<tr>
<td>104045</td>
<td>Butirra d'Amanlis</td>
<td>Italy</td>
</tr>
</tbody>
</table>

Raised at Amanlis, near Rennes, France, before 1800, introduced 1826. Tree growth vigorous and straggling, good cropper. It is very hardy and grows well in Scotland; on the Continent it is reported to flourish at altitudes of 1000 feet. Fruits—medium (3 3/4 x 3 in) round, pyriform, fairly even. Skin bright yellow-green tinged with reddish-brown cheek on sunny side, patches and dots of russet. Skin slightly rough. Eye open with stout segments set in a slight basin. Stem long, slender, woody, inserted in a small cavity. Flesh yellowish-white, fine grained, tender, juicy, melting, rich, sweet, agreeably perfumed. Season—mid-September. (Pick end of August). Triploid Bul. 133, of Agric.
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<thead>
<tr>
<th>P.I.</th>
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<tr>
<td>215328</td>
<td>Mme. Dupuis</td>
<td>France</td>
</tr>
<tr>
<td>186636</td>
<td>Nijiseiki (Twentieth Century)</td>
<td>Japan</td>
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Shaped like an apple, light lemon yellow, waxy; skin with minute humps like sand grains; flesh crisp, very juicy, containing some grit cells. Flavor extremely delicate with very pleasant; fruit tender. Trees grown 24 feet apart on trellises produce 48,000 pounds of fruit per acre in Japan. Varieties of Japanese pears now in use, according to Kajiura, may be divided roughly into two groups: Twentieth Century variety and other varieties. The Twentieth Century pear is considered the Japanese pear of best quality.

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<td>215330</td>
<td>Soeur Gragire</td>
<td>France</td>
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<tr>
<td>213908</td>
<td>William's Bon Chretien (Bartlett)</td>
<td>England</td>
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