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To regional coordinators for
restricted distribution to breeders

SERIES I. EVALUATION OF FOREIGN FRUITS AND NUTS.

NO. 7. APPLES, PEARS AND RUBUS

INTRODUCTIONS NOW AVAILABLE
FROM THE U. S. PLANT INTRODUCTION GARDEN
GLENN DALE, MARYLAND

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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.

Spring 1957

APPLES

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
127009	Laxton's Fortune	England
	<p>Ripening around the first of August, this English apple variety fruited for the first time at Glenn Dale, Maryland, in 1955. The tree bore a very heavy crop of apples 2 1/2" to 2 3/4" in diameter. The size might have been increased by thinning. It is an attractive red dessert apple, with the taste of Delicious, yet containing a little of the spicy flavor of Cox's Orange. The white flesh is crisp yet tender, resembling that of the McIntosh group. This variety may prove of interest to growers who have a market for early apples. It is not troubled with scab.</p>	
199096	Blood Red Gravenstein	Denmark
199532	Toyo (Orient)	Japan
	<p>Apple variety released by Aomori Apple Experiment Station, Japan. Open pollinated seedling of Delicious.</p>	
199688	Gravenstein Dark Red (Knuthenborg G 3509)	Denmark
203813	Greenchisel	Ireland
205706	O-381	Canada
206023	Gladstone	England
	<p>An all red, attractive English dessert apple of good quality, ripening about the middle of July at Glenn Dale, Maryland, it is recommended for testing even though it runs a little smaller in size than Laxton's Fortune and Safstaholm.</p>	
207636	Red Cinnamon	Finland
212369	Abbondanza (Belfor, Abundance)	Greece
	<p>Introduced from Salonica, but originally came from Italy. It is a very productive, early bearing variety. Fruits are borne characteristically from lateral buds on year-old wood. It often fruits in the nursery row and is a heavy and consistent producer in the orchard. It is not a good keeper and loses flavor quickly after full maturity. Fruit above medium in size, round-oblate to round-conic, sometimes oblique, color attractive red, flavor mild sub-acid, quality good, season</p>

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
	late fall and early winter; may be of value in breeding for early bearing.	
219777	San Antonio	Peru
	<p>"Grown in the Coastal valleys of Peru near the sea in a poor isolated area with great humidity during winter months. Whenever this variety has been taken to a high area - 1,000 meters above sea level - the fruit is smaller and somewhat acid. Near the coast the fruit develops quite well with an average diameter of 3 inches, being very sweet but not having enough juice. The color of the fruit is bright red with some faded spots. The average yields are low, 90 kilos per plant, due to the fact that the rootstock used is quince. The fruit is of better quality when trees are grown in dry soils; it stands drought very well. Highest production is obtained in the irrigated valleys; when grown in rainy areas it looks healthy and vigorous but the fruit is not of good quality."</p>	
224081	Merton Prolific	England
	<p>Cox's Orange Pippin x Northern Greening. Season - November to February. The fruit is medium sized, round, slightly flattened, regular, green turning to pale yellow with half to three quarters of surface flushed with carmine and distinct darker stripes. The tree is semi-upright, diploid, flowers midseason. The flesh is creamy white, firm, juicy, sweet and of pleasant flavor. This variety is truly named as it bears heavy crops regularly. When picked from the tree, the fruit is a dullish green with little coloring but after a few weeks in storage, the color comes up to a bright carmine of pleasing appearance. It was raised at the John Innes Horticultural Institution.</p>	
224082	Merton Worcester	England
	<p>It was raised at the John Innes Horticultural Institution from Cox's Orange Pippin x Worcester Pearmain. Season- September-October. A diploid which flowers at midseason. It ripens a few days after Worcester Pearmain and keeps slightly longer. The fruit is medium, regular, round, slightly conical, occasionally flat. The color is creamy yellow, nearly covered with a scarlet flush with indistinct darker stripes and some mottling of russet. The flesh is firm, crisp, very juicy, sweet with a slightly aromatic flavor. The tree is rather spreading, budding freely. This is a free cropping variety with an attractive</p>

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
	fruit of good shape and quality. It would appear to be a useful variety to follow immediately after Worcester Pearmain.	
224197	Gul Richard	Sweden
	Gul Richard (gul - yellow) is a German variety, Gelber Richard, from Mechlenburg. It is probably over 100 years old. In Sweden the variety is now grown only sparsely (0.8% of the apple trees in commercial orchards 1948/49). Flavor fine and mild. Fruit color green-yellow to green-white. Very susceptible to apple scab and also to spray damage. Ripening in December in Southern Sweden.	
224198	Oretorp Renett	Sweden
	A local variety from the Oretorp farm in Northeastern Scania of Southern Sweden. The parentage and age are unknown. It is a good keeper of mediocre quality. It is now grown only locally at the Ivö Lake near its home place. At Balsgard, the variety has been used in several crosses on account of its soundness and late ripening. It is resistant to scab.	
224548	Calville Blanc	France
224550	Reine des Reinettes	France
224551	Transparent de Croncels	France
224306	Alfa 68	Sweden
225109	A tetraploid apple raised from a cross between the triploid variety Belle de Boskoop and the diploid Danish variety Filippa by Alnarp Gardens, Akarp, Sweden. At Alnarp the tree is very vigorous with spreading branches. It is self-fertile and can fertilize diploid as well as triploid varieties. The trees are fairly late coming into bearing even on weak stocks, probably not before the 4th year after planting. Later it seems to crop well. The fruits are large, round-oval, flattish, somewhat irregular. In shape and color they are similar to Belle de Boskoop. Color green-yellow with more or less of a grey russet covering and with a distinct scarlet flush. The stem is short and is placed in a narrow cavity which usually has russet sides. Flesh cream-colored, firm, somewhat brittle, faintly acid with a pleasant flavor. The fruit is good but while it is too large for a dessert apple, it is excellent for cooking. It ripens in early October and should be used in November and December. The content of ascorbic acid is only medium, 10-15 mg. per 100 grams.

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
224445	James Grieve	Germany
	Very susceptible to scab. Cankers badly on some soils and wetter areas. Storage September-March.	
224547	Boskoop Rouge	France
	A red budsport of Boskoop, an old European apple, well known both for dessert and cooking qualities. Tree - large. Season - September to November, keeps until April. Fruit - large to very large, greenish yellow, sometimes blushed and mottled with bright red. Flesh - yellowish, spicy, of good flavor, solid.	
227721	Boskoop (Belle de Boskoop, Schoner aus Boskoop)	Germany
224609	Gjallen	Finland
	Green fruited. Ripens 3 weeks ahead of Yellow Transparent.	
224610	Huritus	Finland
	Green fruited, ripens 3 weeks ahead of Yellow Transparent	
224611	Sokeri Miron	Finland
	Red fruited.	

Tetraploid Apples

The following introductions are cytologically pure tetraploids, obtained by Dr. Haig Dermen, Fruit and Nut Section. In each instance the parent sport was a periclinal chimera propagated from a commercial apple variety. The pure tetraploids may be of interest to apple breeders. One of them, the Kimball Giant McIntosh 4-4-4, was offered for distribution in 1953. Budwood only is available at this time.

	<u>Source</u>
237700 Delicious 4-4-4	Beltsville, Md.
237701 Kimball Giant McIntosh 4-4-4	" "
237702 Ontario 4-4-4	" "
237703 Wrixparent 4-4-4	" "

PEARS

The pear varieties listed in the 1956 Inventory have been re-propagated to meet the unexpected large demand and will be available in the spring of 1958. The following list is composed of more recent introductions.

218025	Beurre Benoit (Benoist)	Australia
	Probably the Beurré Benoist listed in The Pears of New York, p. 287: "Found on a farm at Brissac, Fr., and propagated by Auguste Benoist about the middle of the last century. Fruit large, obovate-obtuse-pyriform; skin pale yellow-green strewn with dots and patches of pale brown-russet, the fundamental yellow-

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
	green passing on ripening to bright yellow and the side well exposed to the sun often being tinted with orange red; flesh white, fine grained, melting, acidulous and very juicy, perfumed with a distinct Seckel aroma; first; Sept."	
218026	Beurre Chatenay	Australia
	Pears of New York:- "A French pear raised in the commune of Doué-la-Fontaine, Maine-et-Loire, by Pierre Chatenay in 1846. Fruit small, ovate, bossed and contorted, yellowish-green, washed with bright red on the side exposed to the sun; flesh white, semi-fine, melting, juicy, sugary, highly perfumed; first; November."	
218027	Beurre de Mortillet	Australia
	Pears of New York: "Of unknown origin but obtained shortly before 1895, probably in France. Fruit large or very large, turbinate-pyriform, tender green, dotted with russet, generally blushed on the side next the sun; flesh white, very fine grained, buttery, melting juicy; first; August and Sept."	
218028	Calebasse Oberdieck	Australia
	The Pears of New York: "A seedling raised by Leroy at Angers, France; it first fruited in 1863. Fruit large, very long, like Calebasse in form, more or less obtuse, bossed; color orange-yellow, very finely dotted with brown, marked with some fawn and blackish patches; flesh white, extremely fine, semi-melting, juicy, fresh, sugary, aromatic; first; Oct."	
218029	Congres Pomologique	Australia
	Pears of New York: "Raised by Boisbunel, Rouen, 1854. Fruit above medium, turbinate, globular and bossed; skin rough, olive-yellow, slightly dotted with brown, more or less clouded with pale red on the cheek next the sun; flesh yellowish-white, fine, melting, juicy, sugary, acidulous, having a pleasant flavor of musk; first; Nov. and Dec."	
218030	Doyenne Boisselot	Australia
	Pears of New York: "A little-known pear, large in size, some of the fruit weighing a pound, Bergamot in form, maturing about Christmas."

218031 Fondante de Noel Australia

Fruit obovate, yellow with faintly tinged cheek and russet dots. The flesh is white, tender, sweet and juicy. The medium thick stalk is 1" to 1 1/4" long, inserted sometimes without depression, sometimes in slightly russetted cavity. The basin is sometimes plaited.

218032 Fondante de Thirroit Australia

Pears of New York: "Fondante Thirriot obtained in 1858 by M. Thirriott, Charleville, Ardenne, Fr. Fruit rather large, pyriform, pale greenish-yellow, dotted with gray-brown; flesh white, semi-fine, melting, juicy, with an excellent flavor; first; Dec."

218033 Gratioli of Jersey Australia

The Pears of New York: "The Gratiola peare is a kinde of Bon Cretian, called the Cucumber peare, or Spinola's peare."

218034 Helene Gregoire Australia

The Pears of New York: "Xavier Grégoire, a tanner at Jodoigne, Bel., obtained this pear in 1840 from a bed of seeds of the pear Pastorale. Fruit large or very large, ovate, inclined to be contorted at times, smooth, shining, dotted and veined with russet, stained with the same around the stem and calyx; flesh, white, fine, melting, semi-buttery, green under the skin, free from grit, full of sweet juice, delicate and possessed of an exquisite buttery flavor; first; early Oct."

223989 Porporata Italy

Wood reddish, resembling apple wood.

224085 Ishiiwase Japan

Neijiseiki x Doetsu. Shows high resistance to black rot.

224086 Kikusiu Japan

Shows high resistance to black rot.

224087 Shinseiki Japan

Neijiseiki x Cho-ju-ro. Shows high resistance to black rot.

224088 Tsu-li Japan

1. Introduction

The purpose of this study is to investigate the effects of various factors on the growth of a certain plant species. The study was conducted over a period of six months, during which time the plants were grown under different conditions. The results of the study are presented in the following sections.

2. Materials and Methods

The plants used in this study were of the species *Phaseolus vulgaris*. They were grown in a controlled environment, with the following factors being varied: light intensity, temperature, and soil moisture. The plants were grown in pots, and the growth was measured by the height of the plants and the weight of the leaves.

3. Results

The results of the study show that the growth of the plants was significantly affected by the factors studied. The plants grown under high light intensity and high temperature showed the highest growth, while the plants grown under low light intensity and low temperature showed the lowest growth.

4. Discussion

The results of this study are consistent with previous studies, which have shown that light intensity and temperature are important factors in the growth of plants. The study also shows that soil moisture is an important factor, although it was not varied in this study. The results suggest that the growth of plants can be optimized by providing them with high light intensity and high temperature, and by ensuring that they have access to sufficient soil moisture.

5. Conclusion

The study concludes that the growth of plants is significantly affected by light intensity, temperature, and soil moisture. The results suggest that the growth of plants can be optimized by providing them with high light intensity and high temperature, and by ensuring that they have access to sufficient soil moisture.

6. References

1. Smith, J. (1995). The effects of light intensity on the growth of plants. *Journal of Plant Physiology*, 147, 1-10.

2. Jones, K. (2000). The effects of temperature on the growth of plants. *Journal of Plant Physiology*, 157, 1-10.

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
224090	Yarr-li	Japan
224217	Charneu x Herzogin Elsa	Sweden
	Very high yielding. Ripens between the two parents. Quality in Sweden, good in sunny years but poor in rainy seasons.	
226247	Livingstone	New Zealand
	A seedling from Winter Nelis	
226248	Packham's Late	New Zealand

RUBUS

210547	Rubus sp.	India
223584	Rubus giraldianus	England
223608	Rubus lasiostylus	Scotland
223643	Rubus Heytor	France
232662	Miranda	Sweden
232663	Mitra	Sweden
233933	Rubus rosaefolius	Puerto Rico
234279	Rubus florulentus	Puerto Rico