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TESTS OF VEGETABLE VARIETIES FOR THE WINTER GARDEN REGION, 1937-1941

by

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This Bulletin supplements Texas Station Bulletins 508 and 546 by reporting on the adaptability of certain vegetable varieties introduced since the second of those bulletins was published in 1937. It gives information on varieties previously untested. The combined alphabetical lists in these three bulletins give the complete list of varieties on which the Winter Garden Station has publishable information up until the time of this bulletin. With the exception of only a few, any variety mentioned is reported in full in only one of these three bulletins.

This report covers around 200 varietal names representing the following vegetables: snap and lima beans, beet, carrot, sweet corn, edible cowpea, cucumber, eggplant, lettuce, muskmelon, okra, onion, English pea, hot pepper, sweet pepper, paprika pepper, tomato, and watermelon. Over 600 samples were included in the trials. Not only have the varieties been studied for adaptability, but the characteristics which help to identify them have also been noted. In several instances new varieties excel the older ones, and with some vegetables commercial preferences for varieties have changed since the time of the last report.

CONTENTS

Page

Introduction 5

Method of Procedure 5

Recommendations and Description of Varieties 6

- Bean 6
- Beet 8
- Carrot 9
- Corn, Sweet 11
- Cowpea, Edible 13
- Cucumber 13
- Eggplant 16
- Lettuce 18
- Muskmelon 20
- Okra 24
- Onion 26
- Pea, English 28
- Pepper, Hot 31
- Pepper, Sweet 31
- Pepper, Paprika 35
- Tomato 38
- Watermelon 44

Summary of Promising Varieties 48

Acknowledgments 50

Literature Cited 50

TESTS OF VEGETABLE VARIETIES FOR THE WINTER GARDEN REGION, 1937-41

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New, or previously untried vegetable varieties, are continually being tested at the Winter Garden Experiment Station. Since it is impossible with present facilities to test all the varieties and strains listed by all the seedsmen, emphasis is placed on testing the newer varieties of vegetables commonly grown in the Winter Garden region, as offered by the seedsmen operating in that territory. This procedure is an outcome of the rather wide study of vegetable varieties made by this station from 1930 to 1936, inclusive. Reports of that work were published in Texas Experiment Station Bulletnis 508 and 546 and covered nearly fifty different vegetables, and over 750 different varietal names. The present report is intended to draw attention to some of the promising or unusual varieties seen in the trials since 1936, and not included in the earlier reports.

The information for most of the varieties of eggplants and peppers is based on studies conducted in cooperation with the Bureau of Plant Industry of the United States Department of Agriculture. These studies primarily involved the collection of detailed descriptions and measurements, rather than observations on adaptability. However, they are more comprehensive and more detailed than a regular adaptability trial and are an excellent source of information for such a report as this, and hence full use has been made of the data collected.

Method of Procedure

The procedure of conducting these trials has been much the same as that followed in the previously reported trials (4, 5).[1] An effort was Usually one of these was planted at fairly frequent intervals throughout the field. With these varieties for comparison, the behavior of the previously untried varieties could be fairly accurately gauged. All the seasons reported were practically normal for the crops concerned. Recent trials of dwarf snap beans have been omitted pending further observations on the varieties.

All the trials except some of those with watermelons were conducted on a Webb fine sandy loam, or closely related soils. Observations on a number of the watermelon varieties are based on trials conducted on Duval fine sand and sandy loams in Frio county. On the Webb soils, the vegetables usually received 150 pounds per acre of 11-48-0 fertilizer, made to obtain the samples from original sources whenever possible. In all the trials, well adapted standard varieties were grown as checks.

[1]Numbers in parentheses refer to literature cited.

while on the Duval soils, the watermelons received 100 pounds per acre of 13.5-34-0 fertilizer placed in the row.

RECOMMENDATIONS AND DESCRIPTION OF VARIETIES

This report covers 17 vegetable crops and around 200 varietal names and is based on a study and comparison of more than 600 samples grown in recent years. The crops and varieties are discussed alphabetically. With the exception of beans, sweet corn, lettuce and onions, of which only a few kinds are mentioned, the varieties have been arranged in tabular form so that a comparison of their more common characteristics can easily be made. Only those vegetables tested since the publication of Texas Bulletin 546 are included here. If one takes Bulletins 508 and 546 with this one, he can easily tell what varieties have been tested at Substation 19 by checking the alphabetical lists (as given in the tables) in all three publications. If a variety cannot be found in any of these three places it means that the Station either had not tested it, or did not have sufficient information on it up to the time of this publication. In some instances, a variety reported upon previously is again mentioned. This is usually because it has grown in importance, or because there is more information on it.

In so far as possible the tables duplicate in form and arrangement the tables published previously so that comparison can also be made with varieties reported in those publications. The varieties selected for discussion in the text include the well adapted varieties as well as some which, although not adapted, growers are likely to hear about for one reason or another. Perhaps the variety is proving successful in other sections of the country, or has received unusual publicity, and in some cases the variety is discussed in the text because of unusual characteristics, not necessarily desirable, but about which a grower should know.

For a discussion of the adaptability of the different vegetable crops the reader is referred to Bulletin 508. As pointed out in that bulletin, some vegetables seem naturally adapted, while others are limited in their adaptability in the extreme South because of one or more factors, such as summer temperatures, winter temperatures, length of day, atmospheric humidity, insects, diseases, and so on.

Beans, *Phaseolus limensis* and *P. vulgaris*

Few trials with beans have been conducted at the Station in recent years, and these have been limited chiefly to varieties previously tried, but being tested again in connection with canning crops investigations. Varieties not reported upon before are: Blue Lake, Kentucky Wonder, Morse's Pole 191 and White Creaseback—all pole beans; Idaho Refugee, a dwarf snap variety; and Baby Fordhook, a dwarf lima.

Baby Fordhook bush lima resembles Henderson in type of vine, but the pods are thicker although usually shorter. This thickness is due to the seeds being plumper than those of Henderson, the characteristic com-

ing from Fordhook, one of the parents of Baby Fordhook. The beans, or seeds have a fine green color and hold it for a long time, thus adding to the appearance and quality of the crop. The variety tends to mature a little later than Henderson, but produces well.

Blue Lake pole bean has been outstanding among both pole and dwarf varieties. Pole beans, in general, yield more in the Winter Garden region when grown in the fall, and Blue Lake is no exception. In 1938, when an unsually early killing freeze brought the fall season to an end on November 8, Blue Lake had already produced marketable beans at the rate of over 3½ tons per acre. The pods of Blue Lake are straight, slender, round and fleshy, stringless at the marketable stage and of very high quality. It is a popular variety with Pacific Coast canners desiring fine quality packs. All strains of this variety are not, however, equally adapted. Where a seedsman distinguishes between an early strain and a late one, the early one should usually be obtained for Winter Garden plantings. Based on the several trials by this Station in the past few years in different seasons and on widely different soils, most strains of Blue Lake pole bean can be highly recommended for the home garden and for canning. The variety is white seeded.

Idaho Refugee, a dwarf snap variety, produces fairly well. However, in performance it does not compare with such varieties as Giant Stringless Green Pod and Bountiful and related varieties or strains. These are still the most satisfactory for the average grower in this section. It has been observed that the Refugee varieties generally yield better on the heavier more fertile soils, and also better in the more northerly sections of the Winter Garden region, rather than the southerly ones. Idaho Refugee is listed as being highly resistant to common bean mosaic (3).

Kentucky Wonder, a popular pole variety in many sections, also did well in the one season it was tried—spring 1938. The appearance and the quality of the pods did not equal that of Blue Lake, however. The pods are long, curved, and usually irregular, lacking the smoothness common in Blue Lake. The variety is prolific and in the home garden would undoubtedly be satisfactory in many cases.

Morse's Pole 191 is a white seeded variety, later and less productive than Kentucky Wonder. It is questionable whether it has a place in the Winter Garden region.

White Creaseback pole bean is listed by some seedsmen as synonymous with Blue Lake. However, as grown in variety trials at and near Winter Haven, White Creaseback has appeared to differ from some of the better and especially the earlier strains of that variety in several respects. Although the seeds are white, like those of Blue Lake, the vine is usually larger and more vigorous. The variety also matures later and is less productive. It usually does not equal Blue Lake in appearance and quality of pod.

Beet, *Beta vulgaris*

No unusual varieties have appeared in the trial of this vegetable. Table 1a and 1b list the beet varieties previously unreported. Garden beets, in general, are well adapted in this section, and so the choice of a variety depends more on appearance and usefulness than on adaptability. Since the publication of the first report on vegetable varieties, a cooperative report on the principal beet varieties based partly on work done at Winter Haven and Weslaco has been published (15).

Table 1a. Varietal characteristics of beets

Variety	Chief use	Season	Plant size	Time of reddening in foliage	Remarks
Asgrow Canner	canning	midseason	large	early	Excellent
Asgrow Wonder	home, market	early	medium	midseason	Fine variety
Blood Red Ball	home, market	midseason	medium	midseason	Fine for color
Bunching	home, market	early	very small	late	Fine for color
Burpee's Extra Early	market	early	small	midseason	Others better
Early Model	market	early	medium	midseason	Others better
Long Season	home, storage	very late	large	always green	Same as Winter Keeper
Strawberry Crosby	market	early	medium	midseason	For special markets
Vermillion Globe	market	midseason	small—med.	midseason	Good, but others better

Table 1b. Varietal characteristics of beets

Variety	Root						
					Interior		
	Shape	Depth	Diameter	Skin color	Definition of zoning	Color of darker zones	Quality of interior color
Asgrow Canner	deep oblate	1¾—2¼	2½—3	dark	indistinct	very dark red	excellent
Asgrow Wonder	deep oblate	2—2½	2¼—2¾	medium dark	distinct	dark reddish purple	good
Blood Red Ball	globular	2¼—3	2¼—3	very dark	indistinct	dark red	excellent
Bunching	globular	1¾—2½	2¼—2¾	dark	indistinct	medium dark red	excellent
Burpee's Extra Early	globular	1¾—2¼	2—2½	dark	distinct	dark red	medium
Early Model	globular	2¼—2¾	2¼—2¾	dark	distinct	reddish purple	medium
Long Season	top-shaped	3—4½	2½—3	dark	distinct	dark reddish purple	medium
Strawberry Crosby	globular	2¼—2¾	2¼—2¾	light	distinct	light red	medium
Vermillion Globe	globular	2¼—2¾	2—2½	medium dark	sl. indistinct	dark red	good

*The interior color as a whole depends on the definition of zoning, as well as on widths and colors of zones or rings. This column is a record of the general impression created by the combination of these characters.

Asgrow Canner has been better appearing than many varieties tried. Its deep oblate shaped root has an excellent interior color.

Asgrow Wonder is a good uniform strain of Early Wonder previously described (4).

Bunching looks like a good strain of Detroit Dark Red. The interior color of the globular root is excellent.

Carrot, *Daucus carota*

The situation with carrots remain much like it was in 1935 so far as adaptability and varieties are concerned (4). No variety unknown to this section at that time has become important in commercial plantings

Figure 1. Taking notes on a number of carrot varieties and strains.

although many samples have been tried (Figure 1). The statement made in Texas Experiment Station Bulletin 508 to the effect that no crop is better adapted than carrots has been well justified by the tremendous increase of commercial carrot acreage in the Winter Garden Region in recent years. Imperator (Figure 2), because of its greater length, has become the leading commercial variety, replacing Danvers Half Long (Figure 2). Both of these varieties have been previously described. The growing national importance of Imperator is indicated by the inclusion in a recent United States Department of Agriculture "typebook" (16). Tables 2a and 2b list and describe the eight previously untested varieties tried at the Station since the last report on carrots.

Danvers Half Long, Red Cored. This strain resembles the old Danvers Half Long in external appearance, but excels it in having good core color.

Supreme Half Long is an excellent variety of the Danvers Half Long type. The core color is very good. In the sample examined 88 per cent of the roots had red cores, and 12 per cent pale red, none were yellow. Strains such as this and the one above could do much to restoring the popularity of the Danvers Half Long type.

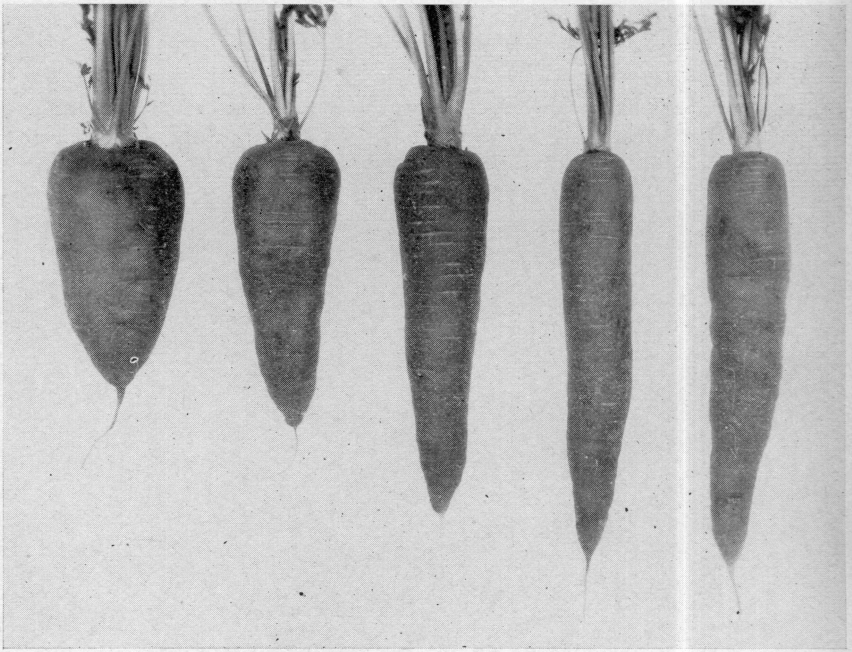

Figure 2. Five varieties of carrots. Left to right: Oxheart, Goldenhart, (a strain of Chantenay), Danvers Half Long, Morse's Bunching, and Imperator. Last named is about 8 inches long.

Table 2a. Varietal characteristics of carrots

Variety	Chief use	Season	Foliage size	Remarks
Danvers Half Long, Red-cored	market, ship.	midseason	large	Good strain
Goldinhart	home, mkt., can.	midseason	large	Strain of Chantenay
Luc Half Long	home, mkt., ship.	midseason	medium	Average variety
Special Nantes	home, mkt., can.	early	small	Fair for Nantes
Streamliner	market, ship.	late	small	Excellent, except for lateness
Supreme Half Long	market, ship.	late	small	Excellent
Table Gem	home, market	midseason	very small	Similar to Amsterdam Forcing
Touchon	home, market	early	small	Similar to Nantes

Key: can.—canning; mkt.—market; ship.—shipping.

Table 2b. Varietal characteristics of carrots

Variety	Root					
	Shape	Length, in.	Skin color,* above ground	Core		Quality
				Size	Color tendency	
Danvers Half Long, red-cored	long conical	6—7	green	medium	like flesh	good
Goldinhart	medium conical	4¾—5½	green	medium	like flesh	good
Lue Half Long	medium conical	5½—7	red	medium	some yellow	fair
Special Nantes	cylindrical	6—8	red	medium	some yellow	fair
Streamliner	long conical	6—8	green	tends small	like flesh	excellent
Supreme Half Long	long conical	6—7	green	medium	like flesh	excellent
Table Gem	cylindrical	5—6	some red	small	like flesh	good
Touchon	cylindrical	6—7	reddish purple	medium	like flesh	good

*Skin color below ground orange in all these varieties.

Corn (Sweet), *Zea mays*

Since 1937, trials of sweet corn varieties have not revealed any new sorts, but our optimism concerning some of the new varieties at that time has been well justified. Honey June is still the leading white

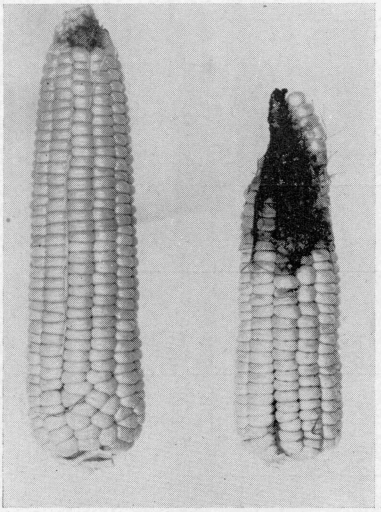

Figure 3. Corn earworm damage in two varieties of yellow sweet corn. Left: Ioglen; right Bancross.

sweet corn. In the earlier report Iogold P.39.I.45 and Iogold P.51.I.45 were both mentioned as highly promising new varieties of yellow sweet corn with considerable resistance to the ravages of the corn earworm.

Table 3. Varietal characteristics of cowpeas (edible)

Variety	Season	Productivity	Pods					Dried Seed color	Remarks
			Length, ins.	Longitudinal shape	Peas				
					Color, green	Number	Size		
Blue Goose	late	poor	7—8	straight—slightly curved	light	11—14	medium	speckled purple gray	Looks identical with Gray Crowder
California Blackeye	late	poor	7—8	curved	light—medium	8—10	large	white, blackeye	Unsatisfactory
Early Wilt Resistant Ramshorn	early	good	5½—7	slightly curved	light—medium	10—12	medium	white, blackeye	Well adapted; promising
Giant Wilt Resistant Ramshorn	early	good	6—7	straight—slightly curved	light—medium	10—12	medium	white, blackeye	Well adapted; promising
Improved Rice	late		6—8	slightly curved—curved	light	11—15	small	white	Has similarities to Lady
Large Black	midseason	very good	7—9¼	straight—slightly curved	light	12—16	medium	black	Well adapted; promising
ver Crowder	midseason	good	4¾—5½	straight	whitish	13—17	small	light rose brown	Distinct; promising

These varieties have been tested several times since then, both in the Winter Garden Region and in the Lower Rio Grande Valley, by the Station, as well as by others. They have shown so much promise that both varieties are now available commerially. However, Iogold P.39.I.45 is now known as *Ioana*, and Iogold P.51.I.45 goes by the name *Ioglen* (2).

Other varieties tested in recent years are Bancross, Bloomcross, Spancross and Whipcross. None of these are adapted to South Texas conditions, all of them being particularly subject to corn ear worm damage. (Figure 3.)

Cowpea (Edible), *Vigna sinensis*

Seven varieties of edible cowpeas previously untried have been grown in recent trials at the Station. All of these are described in Table 3. Cream Crowder is still a popular and satisfactory variety with many growers, although the Blackeye varieties, of course, are also still widely grown.

Early Wilt Resistant Ramshorn is of the blackeye type of cowpea. The regular strain of Ramshorn was described in the first report on varieties from this Substation some years ago (4). This early wilt resistant strain of Ramshorn has shown excellent adaptability in trials at Winter Haven. It is early and very productive.

Giant Wilt Resistant Ramshorn under Winter Haven conditions is practically identical with the early strain just mentioned. It is supposed to be larger and somewhat later, and possibly in other sections such differences would be apparent. Like the early strain it is very productive, and should be tried by more growers.

Cucumber, *Cucumis sativus*

Among the thirteen varieties of cucumbers grown since the last report on this crop (5), several are worthy of trial by home gardeners as well as commercial growers. All thirteen varieties are described in Tables 4a and 4b and several have been singled out for discussion below. No new pickling variety has appeared to dispose the popular National Pickle and the Chicago Pickling, although the new variety, Mincu, with its white spines is rather unique and should probably be tried by growers interested in pickles. Among the slicing varieties, those having longer and darker green fruits are still increasing in popularity, so that whereas five years ago varieties such as Colorado, A and C, and similar sorts were in the trial stage of production in South Texas, they are now much more firmly established. There are now so many varieties and strains of this general type being offered in numerous seed catalogs, that a grower would do well to try such varieties on a small scale at first before depending entirely on them.

Table 4a. Varietal characteristics of cucumbers

Variety	Chief use	Season	Fruit (mature slicing size) exterior			Spine color	Size of seed cavity
			General color	Stripes			
				color	Length*		
Burrell's Pickling	home, pickling	early	yellowish green	yellow	½	B	medium
Grow Quick	pickling	very early	medium green	yellow	½—⅔	B	medium
Mandarin	home	late	medium green	pale green	¼—⅓	W	sm., med
Mincu	pickling	very early	medium green	pale green	½	W	very large
Mission	home, shipping	late	med. dk. green	pale green	⅛—¼	W	small
Pride of Delaware	home, shipping	early	dk., v. dk. green	pale green	⅓—½	W	medium
Puerto Rico 39	home	very early	dark green	pale green	------	W	--------
Ryan Pickle	home, pickling	early	yellowish green	yellow	½—⅔	B	large
Simon's Perfection	home, shipping	early	dark green	pale green	⅓—½	W	medium
Special Dark Green	home, shipping	midseason	dk., v. dk. green	pale green	⅓—½	W	medium
Sunnybrook	home, shipping	midseason	v. dk. green	pale green	¼	W	medium
Supreme Green	home, shipping	early	t. med. green	pale green	⅓—½	W	medium
Taxpayer	home, shipping	midseason	dark green	pale green	½	W	medium
White Wonder	novelty	late mid-season	white	------	0	W	medium

*Length of stripe in proportion to fruit length; e.g. ½ means that the stripe extends one-half of the length of the fruit from the tip.
Key: B—black; dk.—dark; lt.—light; med.—medium; sm.—small; v.—very; W—white.

Table 4b. Varietal characteristics of cucumbers

Variety	Fruit (mature slicing size)				Remarks
	Length x greatest diameter, inches	Longitudinal shape	Base shape	Tip shape	
Burrell's Pickling	5½—6½ x 2¼—2½	v. sl. convex	blunt	semi-blunt	Disappointing
Grow Quick	4¾—5½ x 2¼—2½	sl. convex	blunt	semi-blunt	Disappointing
Mandarin	6½—8 x 2	sides parallel	semi-blunt	semi-blunt	Chinese type; good quality
Mincu	3½—4½ x 1—1½	convex	semi-blunt	semi-blunt	Productive
Mission	9—10 x 2	sides parallel	semi-blunt	semi-blunt	Slender, attractive
PrideofDelaware	6½—7½ x 2¼—2½	sl. convex	semi-blunt	semi-blunt	Color attractive
Puerto Rico 39	6½—7½	v. sl. convex	semi-blunt	semi-blunt	Attractive
Ryan Pickle	5—6 x 1½—1¾	v. sl. convex	blunt	blunt	Disappointing
Simon's Perfection	7—9 x 2¼—2½	sides parallel	semi-blunt	semi-blunt	Attractive
Special Dark Green	6½—9½ x 2¼	sides parallel	semi-blunt	semi-blunt	Attractive
Sunnybrook	7½—8½ x 2—2¼	sides parallel	semi-blunt	semi-blunt	Attractive
Supreme Green	7—8 x 2¼	v. sl. convex	semi-blunt	semi-blunt	Appearance disappointing
Taxpayer	7—8 x 2¼—2½	sl. convex	semi-blunt	semi-blunt	Yield disappointing
White Wonder	4¾—6 x 2½	sl. convex	blunt	semi-blunt	Novelty. Yields well

Key: sl.—slight; v.—very.

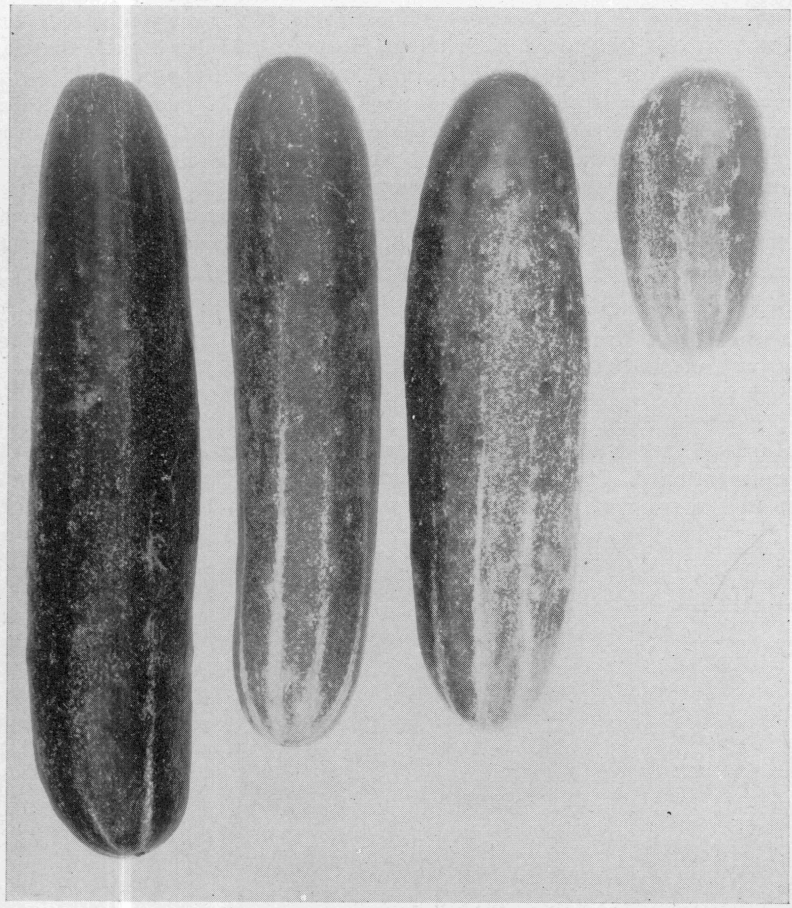

Figure 4. Four varieties of Cucumbers. Left to right: Mission, Straight 8, Clark's Special, and Mincu. Straight 8 and Clark's Special were described in previous reports, but are included here for comparison. Mission ranges 9 to 10 inches in length.

Mincu is an unusual little cucumber introduced by the Minnesota Experiment Station in 1937 (7). It is suitable for pickling but unlike most pickling varieties has white spines. It has high productivity. Mincu is certainly worthy of trial.

Mission (Figure 4.) This is another of the long dark green varieties. In trials at Winter Haven it tended to be even longer than Colorado and more slender. Although it does not have the darkest of green colors, the relative shortness of its stripes tend to create the impression of a solid green color.

Puerto Rico 39. This cucumber was developed for resistance to downy mildew at the University Experiment Station at Puerto Rico. In trials at Winter Haven, as well as at several other substations in Texas, it has shown considerable promise as a very early prolific cucumber. It has also exhibited the claimed resistance to downy mildew. The fruit ranges from 6½ to 7½ inches long, is well shaped, and has an attractive dark green color. The color is not, however, as dark as in some of the new varieties mentioned above. Although the variety has not been grown in Texas, outside of the Experiment Station, it is given this much space here because of its possible potential value. Should it become generally available, it should certainly be given wider trial.

Special Dark Green is another new variety indicating the trend to long and well colored fruits. Like Mission it is worthy of trial.

Eggplant, *Solanum melongena*

In 1935, when this crop was last reported upon, only two varieties were mentioned. The crop then suffered every year from a serious handicap in the form of eggplant yellows. The Station has since discovered

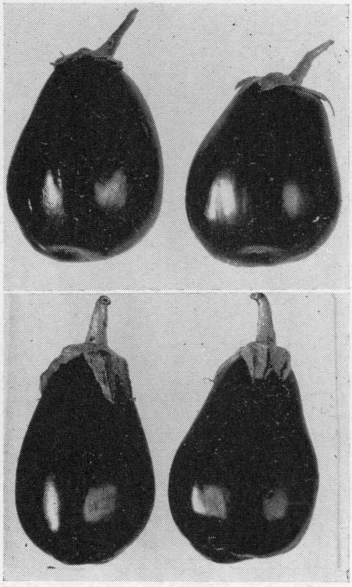

Figure 5. Fruits of two varieties of Eggplant. Approximately X 1/6. Upper: Black Beauty; lower: Ft. Myers.

and developed a simple, cheap method for controlling the yellows thus removing the only serious drawback to eggplant culture in this section

Table 5. Varietal characteristics of eggplants

Variety	Chief use	Season of maturity	Plant		Fruit					Remarks
			Habit	Size	Shape	Length (ins.)	Width (ins.)	Weight (lbs.)	Skin color	
Black Beauty	mkt., ship.	midseason	spread.	medium	egg shaped	5½—7½	3—5	½—2	blackish purple	Good all around egg-plant
Black King	home	early	spread.	small—med.	egg shaped	3—5	2—3	¼—½	practically black	No commercial use
Florida High Bush	mkt., ship.	late	sl. spread	large	long egg	5—7½	3—5	½—1½	dk. reddish purple	Fort Myers is better
Fort Myers	mkt., ship.	late	sl. spread.	large	long egg	5½—8	3½—5½	¾—2	blackish purple	Excels Fla. High Bush
Kilgore Special	mkt., ship.	late	sl. spread.	large	long egg	5—7½	3—5	½—1½	dk. reddish purple	Fla. High Bush type
Killes Special	mkt., ship.	midseason	spread.	medium	egg shaped	5½—7½	3—5	½—2¼	dark purple	Not as good as Black Beauty
Long Purple	home	early	erect	small—med.	long club	5—8	2—3	¼—¾	blackish purple	Distinct, early, useful
Manatee Special	mkt., ship.	late	sl. spread.	large	long egg	5—7½	3—5	½—1½	dk. reddish purple	Does not excel others of type
New Hampshire Hybrid	home	v. early	v. spread.	small	egg shaped	3—5½	2½—4½	¼—¾	dark purple	Distinct, early, useful
New York Improved	mkt., ship.	midseason	spread.	medium	egg shaped	5½—7½	3—5	½—2¼	dk. reddish purple	Similar to Black Beauty
Supreme High Bush	mkt., ship.	late	spread.	large	long egg	5—7½	3—5	½—1½	dk. reddish purple	Does not excel Fort Myers

Key: dk.—dark; mkt.,—market; ship.—shipping; sl.—slight; spread.—spreading; v.—very.

(11, 12, 13). General observations would indicate that most, if not all, varieties of eggplants are well adapted to the Winter Garden Region, and the choice of a variety depends chiefly on the growers' purpose in raising the crop. Table 5 includes all the varieties thus far tested at the Station. This Table as well as the written descriptions below are based on observations made in the cooperative trials of the Bureau of Plant Industry of the United States Department of Agriculture.

Black Beauty (Figure 5) is probably still the most useful and desirable variety chiefly because of the appearance of its fruit. Good stocks of this are early, prolific, and their fruits with their dark purple color (almost black) are uniformly attractive.

Black King is an unusual variety, having very small, dark purple fruits. Except as a curiosity, however, it hardly has a place in the Winter Garden Region.

Fort Myers (Figure 5) can be recommended as an improvement over Florida High Bush. It has the same type of upright plant, although often more vigorous, and the fruits tend to be more uniform in shape, darker and more evenly colored.

New Hampshire Hybrid, developed by the New Hampshire Experiment Station, is outstanding as an early variety producing an abundance of moderately small fruits of the general shape of Black Beauty. They have a fairly dark purple color too. In spite of its productivity, and distinctness its small size is against it for commercial production, but home gardeners might well try it out.

Lettuce, *Lactuca sativa*

Since 1935, commercial interest in lettuce has increased in the Winter Garden region. Early in the 1930's several crops of Cos or Romaine lettuce had been grown successfully, but in recent years larger acreages of one or more of the Imperial strains of the New York type of lettuce have been planted by a number of growers in several fairly widely separated localities of the area. All of these Imperial strains have been developed by the United States Department of Agriculture for resistance to brown blight (10). The Station conducted several trials of a limited number of these strains, as well as observed trials and commercial plantings conducted in other localities by various growers. No detailed descriptions of the strains were made, because as indicated above, they were all essentially strains of the New York variety as described previously (4). The following observations and comments are intended to give a brief characterization of each strain indicating its good and poor points.

Imperial 44 is one of the most dependable strains of New York lettuce so far tested in the Winter Garden region. Its chief assets are: uniformity of size and maturity, firmness of head, and tardiness in bolting

even in early fall and spring plantings. Its drawbacks are a tendency towards small size, and possibly a somewhat coarse or "ribby" appearance. The small size can be serious but it need not be an insurmountable handicap in commercial plantings since it can be overcome to a great extent by planting the crop on the heavier, more fertile soils, by fertilizing, and especially by proper spacing. Plants should not be closer than 14 inches in the row, and a space of 16 inches is not too much. In home gardens, size is not normally so important a consideration. The consistently good performance of Imperial 44, especially in its tardiness to bolt, is in line with the findings of the Cornell Agricultural Experiment Station (14), as well as those of the Florida Station (1). The tests at the latter Station were conducted in comparable seasons and under climatic conditions similar to those at Winter Haven, and their results also emphasize the value of proper spacing. Considering all points, Imperial 44 is probably the best of the New York type strains for commercial production in the Winter Garden region.

Imperial 152. Next to Imperial 44, No. 152 is probably the most dependable. It has the distinct advantage of usually being larger than No. 44, in addition to being nearly as uniform in size, time of maturity and firmness of head. Compared to some strains it seems to grow especially well in spring maturing crops, although it will still bolt earlier than Imperial 44. Imperial 152 has also shown promise in Florida (1). It should be tried more widely.

Imperial 615 would be among the best, on the basis of size, if it were only more dependable in performance. It is exceptionally vigorous and forms very large heads. These, however, may not always be firm, and if subjected to rainy weather near harvest time may open up and become entirely unmarketable. At its best, Imperial 615 could hardly be excelled by any of the strains discussed here, but the uncertainty of not knowing ahead of time whether the season is going to be favorable or not, makes the production of this strain more hazardous than any of the others. There has, however, been at least one successful commercial planting of No. 615 in the Winter Garden region, and this strain should probably be tested further and by more growers before it is completely discarded. Plantings in late October and through the first three weeks of November are on the average likely to be more successful than plantings earlier or later than that period.

Imperial 847 is a fairly dependable strain, usually consistently larger than No. 152 (and thus No. 44, too), and this is a distinct advantage. It seems especially adapted to fall plantings. Imperial 847 does not have the uniformity of maturity exhibited by Imperial 44 or even Imperial 152, but in fall plantings this is not as serious as it might be because the weather around harvest time does not particularly favor bolting. It may mean that more cuttings are necessary.

Imperial 850 has not been tried at the station but in well conducted trials by the American Refrigerator Transit Company, during the 1941-42 season, it appeared to be very similar in appearance and performance to No. 847. Along with Imperial strains No. 152, No. 847 and No. 615, it is listed as among those which in Florida are "in some respects preferable to Imperial No. 44 under suitable weather conditions" (1).

New York No. 12 is the least desirable of the strains tested. Its chief drawback, and a serious one, is its susceptibility to freezing injury. In November 1940, a temperature of 29° F. caused some leaf injury in New York No. 12 at the Station, without the slightest sign of injury in other strains. New York No. 12 was likewise injured by similar low temperatures in other localities within the Winter Garden region. In view of the hazard of low temperature during the winter months, the fact that there are strains which give an all around better performance than No. 12 irrespective of low temperatures, it would seem as though this strain might be omitted from the list of better adapted strains.

Muskmelon, *Cucumis melo*

The muskmelon is a popular vegetable and hence new varieties and new names are fairly common. Since 1937 Seed Breeders because of its earliness has become the variety most commonly planted in spring, while

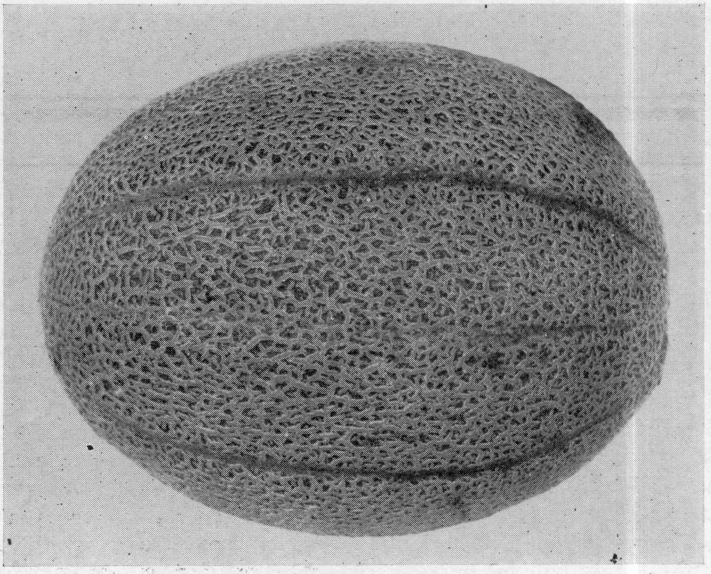

Figure 6. A fruit of Mildew Resistant 45 variety of muskmelon. Fruit normally range 5½ to 6 inches long.

Mildew Resistant No. 45 because of its disease resistance, and Arizona Nugget because of its small size are the varieties most likely to be planted by commercial growers for summer or fall crops. Seed Breeders was described earlier as New Seed Breeders (5), and has justified the Station's opinion of it at that time. Mildew Resistant No. 45 (Figure 6) was described at the same time under the names Powdery Mildew Resistant No. 45 and Imperial 45. Although the first of these two names was the one under which it was originally introduced (9,20), at the present time it is frequently referred to briefly as No. 45 by cantaloupe growers. More recently some seedsmen have practically eliminated the ribs in the strains handled by them, thus removing the chief defect listed in the earlier report. Commercial growers now complain that No. 45 tends to run too large in this section. This has tended to increase the popularity of Seed Breeders which has smaller fruit. In all Station trials in which this latter variety has been included it has been consistently productive during the first several pickings. Seed Breeders, however, has no resistance to either powdery mildew or downy mildew. In fact, of the varieties listed only Mildew Resistant Nos. 1 an 45 show resistance to the disease.

Tables 6a and 6b list and describe the varieties reported upon for the first time from this Station.

The edible qualities of muskmelons and cantaloupes are easily affected by weather conditions. The crop is "temperamental." People's tastes

Table 6a. Varietal characteristics of muskmelons

Variety	Chief use	Season	Flesh		Remarks
			Thickness	Color	
Arizona Nugget	shipping	midseason	thick	salmon	Small, but good
Cooper's Sweetheart	home, market	early	thick	salmon	Productive, worth trying
Cuban Castillian	home	late midseason	medium	white	Resistant to downy mildew
Early May	home, market	early	thick	salmon	Productive, quality fair
Globe of Gold	home, market	early midseason	thick	deep salmon	Attractive; productive
Green Fleshed Rocky Dew	home	early midseason	thick	pale green	Resistant to downy mildew
Ideal	home, shipping	early	thick	deep salmon	Attractive; Hale's Best type
Kilgore's Hummer	market	early	thick	salmon	Only fair
LaFayette	----------	midseason	thick	deep salmon	Cracks very badly
Mildew Resistant No. 1	market	early midseason	very thick	deep salmon	Others better
Old Ironsides	home, shipping	early midseason	thick	salmon	Quality improves with storage, good
Orange Fleshed Rocky Dew	home	early midseason	thick	salmon	Resistant to downy mildew
Queen of Colorado	home, market	early midseason	thick	salmon	Unproductive
Six Three	home, shipping	early midseason	very thick	salmon	Hale's Best type
Wayside Market	home, market	midseason	thick	salmon	Attractive, but unproductive

Table 6b. Varietal charactestics of muskmelons

Variety	Fruit (exterior)						
	Length x diameter (inches)	Weight, pounds	Shape	Color	Netting	Ribs	Rind
Arizona Nugget	4¾—5¼ x 4¼—4¾	1½—2½	oval	golden fawn	medium	slight	tough
Cooper's Sweetheart	4—4¾ x 4—4¾	1¼—2½	globular	golden fawn	medium	very slight	med. tough
Cuban Castillian	5—6¼ x 5—5½	2—4	globular to oval	yellow	very slight	very slight	tough
Early May	5¼—6 x 4¼—4½	2—3	oval	golden fawn	medium	pract. ab.	med. tough
Globe of Gold	5—8 x 5—5½	2½—3½	globular	very pale green cream	medium	none	tough
Green Fleshed Rocky Ford	6¾—8½ x 5½—6	3¾—5	elliptical	yellow	very slight	prominent	soft—med.
Ideal	5½—6 x 5	------	short oval to oval	golden fawn	heavy	pract. ab.	tough
Kilgore's Hummer	4½—5¾ x 4½—5	2—3	globular	golden fawn	medium	pract. ab.	med.—tough
LaFayette	4¾—5¾ x 4¾—5¼	2¼—3¼	globular	grey—cream	none	prominent	med. tough
Mildew Resistant No. 1	5½—6 x 4¾—5¼	2½—3½	oval	golden fawn	medium	slight	tough
Old Ironsides	6—7¾ x 4¾—6	3¼—4¼	long oval	grey—cream	heavy	slight	very tough
Orange Fleshed Rocky Dew	7¾—8 x 5½—5¾	4—5¼	elliptical	yellow	very slight	prominent	soft—med.
Queen of Colorado	6—6½ x 4¾—5½	3¾—5	oval	grey, creamy yellow	heavy	slight	tough
Six Three	5—6 x 4¼—5½	2¼—3¼	short oval to	golden fawn	medium	pract. ab.	med. tough
Wayside Market	7¾—8½ x 6¾—7¾	5½—7	oval	grey	medium	pract. ab.	tough

Key: ab.—absent; med.—medium; pract.—practically.

vary too, and so it is not always easy to give ratings on quality with which all will agree. However, since quality is so important, reference to it has been included in the following discussion, and it is hoped this will be helpful.

Arizona Nugget is the only one of the 15 varieties listed in Tables 6a and 6b that has been grown, so far as is known, on a commercial scale in the Winter Garden area. Because of its small size, productivity and attractive appearance, it pleases growers who dislike the large size Mildew Resistant No. 45. It is also smaller than Seed Breeders, and this explains its popularity in summer and fall when earliness is less important. Like Seed Breeders, however, Arizona Nugget is also susceptible to both powdery and downy mildew. The variety came originally as the name suggests from Arizona. It has a small cavity, thick flesh, and high quality.

Coopers Sweetheart might well be tried in a small way by growers who want to keep up with the latest developments. This variety introduced in Florida in recent years has produced well in Station tests, and had a high percentage of marketable fruit. The fruit is globular to oval in shape, with a fine medium heavy netting, and it practically lacks ribs. There is a resemblance to Hale's Best. It is likely to have a high but pleasing flavor.

Globe of Gold while unlike any commercial type handled at present in the Winter Garden region is well worthy of trial, at least in the home garden. The fruit is globular with a very pale green cream exterior color. The netting is fairly heavy, and the fruit lacks ribs entirely. The interior is characterized by a thick, deep salmon colored flesh the quality of which is well above normal.

Green-Fleshed Rocky Dew (Figure 7) attracts attention because of its resistance to downy mildew, but the elliptical shaped fruit with its prominent ribs is not suitable for commercial production in the Winter Garden section. It also tends to crack. In the home garden this variety might well serve a good purpose. Its quality is fair to good, although some may feel its flavor is too musky.

La Fayette was very disappointing in station trials, because it cracked so badly.

Mildew Resistant No. 1 is very similar to Mildew Resistant 45. Under some conditions it may be a little later, and it is reported that it tends to exceed No. 45 in size of fruit. In the Station trials, however, this was not true.

Old Ironsides is one of so-called "white skinned" melons, in that the skin is very pale colored. The fruits are oval in shape and the pale gray cream skin is covered with a heavy, tough and rather coarse netting.

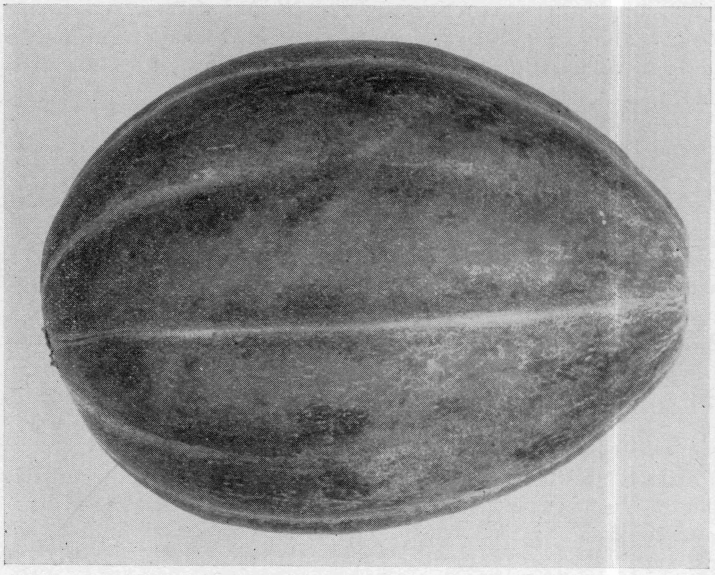

Figure 7. A fruit of the Green Fleshed Rocky Dew variety of muskmelon. Fruit normally ranges 6½ to 8 inches long.

These characteristics together with the thick-fleshed interior and the tendency for the fruits to ripen to full flavor very slowly give the fruit a solidity which make the name "Old Ironsides" quite appropriate. Even after the fruit is picked on the full slip, it should be stored for several days before being cut, as it is rarely, if ever, ready for eating at that time. This is an unusual characteristic in a cantaloupe, and should recommend the variety for trial as a shipping melon. Although, being slightly ribbed, it lacks the smoothness of outline possessed by some varieties, Old Ironsides is nevertheless well worth trying in both home and commercial trials.

Orange-Fleshed Rocky Dew is an orange-fleshed edition of Green-Fleshed Rocky Dew. The flesh color is, of course, more attractive to most growers.

Queen of Colorado, although an attractive cantaloupe, is too late, under Winter Garden conditions, and the fruit is too large, except possibly for the home garden.

Okra, *Hibiscus esculentus*

In 1937 a fairly extensive collection of the available varieties of okra was grown, in order to supplement the rather meager information on this vegetable given previously (4). This has been supplemented with

Table 7. Varietal characteristics of Okra

Variety	Plant		Pods				Remarks
	Heighth	Red coloration in stems and petioles	Length, inches	Cross section shape	Pubesence	Color (green)	
Clemson Spineless	medium	sl.—med.	7—8	7 to 9-sided	soft	medium	Very uniform; productive
Cuban	medium	rare	3—4	8-sided	harsh	dark	Pods plump
Dwarf Long Podded Green	dwarf	sl.—med.	5—6	8-sided	harsh	dark	
French Market	medium	none	3—4	circular	soft	medium	Pods very slightly ridged
Karger's	dwarf	sl.—med.	6—8	6 to 7-sided	harsh	dark	
Lady Finger Velvet	medium	rare	6—8	circular	soft	very pale whitish	Similar to White Velvet
Landreth's Dwarf Stalked	medium	sl.—med.	4—5	6 to 9-sided	medium	medium	
Low Bearing Long Green	medium	sl.—med.	6—8	6 to 7-sided	harsh	dark	Similar to Perkins
New Orleans Market	medium	sl.—med.	3—4	8-sided	soft	dark	
Perkins Mammoth Long Pod	medium	medium	7—9	6 to 7-sided	harsh	dark	Dependable
Perkins Mammoth Pod Long Green	medium	medium	6—8	6 to 7-sided	harsh	dark	Dependable
White Velvet	tall	rare	6—8	circular	soft	very pale whitish	Productive; attractive

Key: med.—medium; sl.—slight.

observations on smaller plantings since then. Table 7 lists all the okra varieties ever tried at Substation 19.

Clemson Spineless. This variety was developed by the South Carolina Experiment Station, and is one of the most uniform varieties being grown today. Although in appearance, the pods resemble Perkins Mammoth Long Pod, the pubescence is sparse and soft, that is, the variety is spineless. As grown at Winter Haven it has shown considerable productivity. Clemson Spineless seems to be a distinct improvement over some of the older varieties, and should be tried more widely.

White Velvet is an old standard variety, but is one of the most satisfactory to grow. The pods are 6 to 8 inches long, circular in cross section, and spineless, although the soft pubescence is heavier than in Clemson Spineless. The productivity of White Velvet is good.

Onion, *Allium cepa*

The biggest development in Texas onion production has been the rather spectacular increase in commercial acreage planted to the Early Grano or Babosa variety in the last two or three years. This variety has become outstanding in South Texas, because of its high productivity, its freedom from splits, doubles, and seeders, and its ability to stand up to thrips. Early Grano was described in Texas Bulletin 508 in 1935 (4), when it was almost unknown in Texas outside of the Station. It took several years to get into commercial production. Because of its growing importance it was included in the varieties described in the United States Department of Agriculture "onion type book" and Babosa was listed as a synonym of it (17).

In shape and color, **Early Grano** or **Babosa** is a top shaped, yellow globe (Figure 8), but unlike any other globe-shaped onion so far tried, it bulbs at approximately the same time in South Texas as the Bermuda varieties. Chemical analysis of bulbs grown at Winter Haven, Texas, has shown Early Grano to be milder than either Yellow Bermuda or Crystal Wax (19). Continued testing of this new onion variety at the Station has confirmed the earlier conclusion that it has very definite promise under south Texas conditions. However, one note of warning should be made. It has definitely been established that Early Grano or Babosa is more susceptible to the pink root disease than are the Bermuda varieties (8). This means that growers will have to be especially careful to avoid planting this variety in pink-root infested soil.

Crystal Grano is a white type of Early Grano developed in California (20). The present strain is not very well adapted to Winter Garden conditions, because it is not yet fixed in its length-of-day requirements. While in general these are evidently longer than those for Early Grano, making the variety later, they vary sufficiently, so far as individual bulbs are concerned, to make the variety uneven in time of maturity.

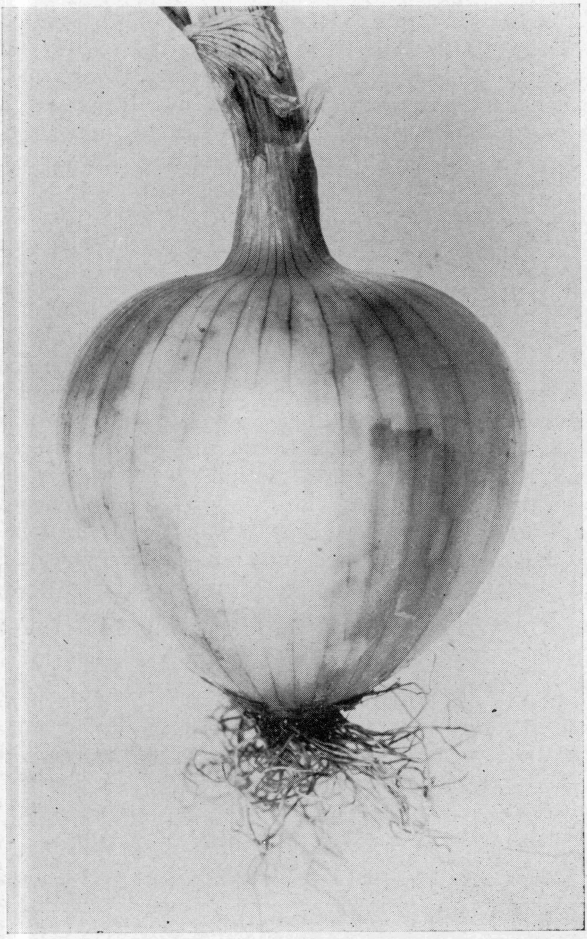

Figure 8. An Early Grano bulb. At its best such a bulb is over 3 inches in diameter.

The bulbs which mature properly however, are very attractive. Selection towards an earlier, more uniform maturing strain for Texas is under way at the Station, and there are good reasons to believe that within several years such an improvement can be attained. The foliage of Crystal Grano lacks entirely any bluish cast, having a glossy green foliage often associated with resistance to thrips.

Early White Globe is not as early as perhaps the name would imply, although it is decidedly earlier than Sweet Spanish which does not mature before late June or early July and then not always satisfactorily (4), and, of course, much earlier than all the northern varieties which do

not bulb at all in the far South. Whereas Early Grano usually matures in late April, Early White Globe is rarely ready before May 15 or later and even then tends to mature somewhat unevenly. From observations on Station trials as well as on commercial plantings it appears as though the variety is perhaps better adapted to the heavier soils. The foliage has a distinct bluish cast which distinguishes the variety from Crystal Grano. Early White Globe is perhaps worthy of further trial by commercial growers, as small commercial crops of it have been fairly successfully grown, but those growers primarily interested in early crops should go cautiously.

White Grano is another white type of Early Grano developed like Early Grano itself at the New Mexico Agricultural Experiment Station. White Grano differs from Crystal Grano in having a darker green foliage, even less glossy green than Early Grano. It does not however have the bluish cast present in Early White Globe and thus differs distinctly from that variety. Some bulbs of White Grano are likely to have a faint fawnish color, rarely, if ever, seen in Crystal Grano. In season and in uneveness of the time of maturity White Grano resembles Crystal Grano, and hence is not perfectly adapted to the Winter Garden region.

With several seedsmen, and various research workers, in both the U. S. Department of Agriculture and the State experiment Stations working on types of all these earlier maturing White Globe varieties, better and earlier strains will undoubtedly become available.

Pea (English), *Pisum sativum*

This crop is still a very minor one in the Winter Garden region; consequently, little time has been spent in trying the extremely larger number of varieties available. In the season of 1937-38, a limited number of varieties known to be suitable in the canning and quick freezing industries were grown in a time of planting test (Table 8).

Table 8. English pea varieties—days from planting to maturity

Variety	Planting date					
	Sept. 18	Oct. 1	Oct. 19	Jan. 18	Feb. 3	Feb. 15
Ace	46	45	73	58	48	46
Canner King	77	117	114	71	66	65
Chief	66	95	114	68	62	63
Climax	80	95	114	69	65	64
Early Harvest	44	45	73	55	45	45
Early Perfectah	80	119	114	74	66	65
Glacier				60	50	49
Mardelah	44	45	73	55	45	45
Pride	66	95	105	66	59	62
Teton				65	45	49
Thomas Laxton	48	48	73	59	45	49
Wisconsin Early Sweet	41	45	73	55	45	45

Among the data collected from this test, perhaps the most interesting were those showing the number of days required by each of the varie-

Table 9a. Varietal characteristics of English peas

Variety	Chief use	Season[1]	Height,[2] inches	Foliage color, green	Color of dried peas,[3] (seeds)	Remarks
Ace	canning	early	14	lt.—med.	green	Fair
Canner King	canning	midseason	16	lt.—med.	green	Attractive; unproductive
Chief	canning	midseason	22	medium	green	Attractive; unproductive
Climax	canning	midseason	22	medium	green	Unproductive
Early Harvest	canning	early	13	medium	green	Useful
Early Perfectah	canning	late midseason	17	dark	green	Good pods; fairly productive
Glacier	home, mkt., freezing	early	17	medium	cream—green	Very like Thomas Laxton
Mardelah	canning	early	16	medium	green	Promising
Pride	home, mkt., canning	midseason	14	dark	green	Productive; good pods
Teton	mkt., can., freezing	midseason	16	medium	cream—green	Pods noticeably large
Thomas Laxton	all purposes[4]	early	16	medium	cream—green	Dependable
Wisconsin Early Sweet	canning	early	16	medium	green	Promising

[1]Relative terms given here; the actual number of days to first picking vary greatly with time of planting; see text and Table 8.
[2]This varies somewhat with time of planting. The heights given here are those for the planting of February 3, 1938.
[3]All varieties listed in this table had wrinkled seeds, indicating high sugar content.
[4]Home, market, shipping, canning and freezing.

Key: can.—canning; lt.—light; med.—medium: mkt.—market.

ties to reach edible maturity when planted on different dates (Table 8). Not all varieties responded alike. For example, Thomas Laxton planted September 18 was ready to harvest in 48 days; planted October 1 (13 days later), it was again ready to harvest in 48 days, but Chief planted on those same dates took 66 days in the first planting and 95 days (practically a month more) in the second. Both varieties in the third planting matured considerably slower than they did in the second. Of course, it is actually such factors as air and soil temperatures, length of day, relative humidity and possibly other factors, associated with one period of growth which cause these changes in the rate of growth. Whatever the factor or factors are, however, it remains a fact that the number of days required for edible maturity as given in most seed catalogs means little unless the time of planting and location are known. As most of such figures are based on spring planted trials in the north, they are often misleading to South Texas growers. Descriptions of the varieties are given in Table 9a and 9b.

Table 9b. Varietal characteristics of English peas

Variety	Pods					
	Length x Breadth, inches	Shape	End shape	Color	No. of peas	Size of pea
Ace	2—2½ x ½	straight	blunt	light	4—6	small
Canner King	2¾—3¼ x ⅝	sl. curved	semi-blunt	medium	4—7	large
Chief	2½—3½ x ⅝	str.—sl. curved	semi-blunt	light	5—8	medium
Climax	2—3 x ½	sl. curved	blunt	light	5—8	medium
Early Harvest	1⅞—2¼ x ½	straight	blunt	light	4—6	small
Early Perfectah	2½—3 x ½	sl. curved	semi-blunt	medium	----	medium
Glacier	2½—2¾ x ⅝	str.—sl. curved	blunt	------	4—5	medium
Mardelah	2—2½ x ½	str.—sl. curved	blunt	light	4—6	medium
Pride	2¾—3¾ x ⅝	straight	semi-blunt	dark	6—9	medium
Teton	2¾—3⅜ x ¾	straight	blunt	------	4—6	large
Thomas Lawton	2¼—2¾ x ⅝	straight	blunt	dark	4—6	medium
Wisconsin Early Sweet	1¾—2¼ x ½	straight	semi-blunt	light	4—6	small

Key: sl.—slightly; str.—straight.

Mardelah is a promising early variety. The pods are rather small for market use, but might be acceptable in some home gardens. The variety was especially developed for canning.

Pride is a productive mid-season variety, with larger, more attractive pods than Mardelah. Home gardeners should try this variety.

Thomas Laxton. The strains of this nationally popular variety tried at the Station since the first report on peas in 1935 (4) have been somewhat more productive than those on which that report was based. However, under Winter Haven conditions it does not equal Pride in yielding capacity. In a section where killing frosts can sometimes occur in the fall before harvest time, Thomas Laxton has an advantage over Pride in earliness. Canners report that the variety is well suited to the quick freezing process.

Wisconsin Early Sweet is another of the early maturing, small podded varieties having fair to good productivity.

Pepper (Hot), *Capsicum frutescens*

Since the brief report in Texas Station Bulletin 508, most of the varieties of hot peppers have been studied in greater detail in a series of cooperative tests with the United States Bureau of Plant Industry. The characteristics of these varieties are given in Table 10. Although some of the varieites are similar, nearly all are distinct from each other on some characteristic. There are thus numerous possibilities for the grower who likes hot peppers, for all are well adapted. Choice of a variety depends on the preferences of the grower, and the purpose for which he is growing it, so no attempt to discuss individual varieties has been made.

Pepper (Sweet), *Capsicum frutescens*

The Station has also cooperated with the Bureau of Plant Industry, United States Department of Agriculture, in testing varieties of sweet peppers over a period of years. Like the hot peppers, the sweet peppers are well adapted, although as a class they are more likely to set fruit poorly during the summer when temperatures are high, and relative humidity often low. Some of the more important varieties were covered in Bulletin 508 but because of the extensive trials since then, California Wonder and Worldbeater are discussed again below, although they have not been re-described in Table 11 which gives the chief characteristics of the varieties recently tested.

California Wonder (Figure 9) is still the most important variety commercially in the Winter Garden area. After all these years of testing, however, it can be safely said that it is not the best adapted. That does not necessarily mean that growers should change to some other variety as there is no question but that California Wonder satisfies the requirements of many markets as few other varieties do. California Wonder, however, noticeably fails to set fruit when temperatures are still high and the relative humidity of the air still comparatively low. This means that in the fall season it is among the latest to come into full bearing. The plants of this variety—at least under Station conditions—have also always been among the slowest to adapt themselves to field conditions following transplanting.

Florida Giant is similar to California Wonder, having both the advantages and disadvantages of that variety.

Neapolitan (Figure 10) is highly recommended for the home graden, although one would probably not want to depend on this variety alone. It is one of the earliest sweet peppers to set fruit, being only slightly affected by hot weather. Once started bearing, the plants continue to produce profusely throughout the season. The fruits are somewhat conical, 3 to 3½ inches long and 1 to 1½ inches wide at stem end, and

Table 10. Varietal characteristics of peppers (hot)

Variety	Chief use	Season of maturity	Plant		Fruit						
			Habit	Size	Position	Shape	Length (ins.)	No. of cells* Range:Mode	Immature color† (green)	Flavor	Flesh thickness
Anaheim Chili	culinary	late	med. erect	large	pendant	long conic	3½—7	2—3:2	medium	pungent	thin
Bullnose	culinary	midseason	sl. spread.	small—med.	pendant	blocky	1½—2¾	3—4:4	medium	mildly pungent	medium
Floral Gem	pickling	early	spreading	med.—large	pendant	conical	1⅛—1½	2—3:3	light yellowish	pungent	thin
Green Mexican Pickling	pickling	late	sl. spread.	large	pendant	conical	1½—2½	2—3:3	dark	very pungent	thin
Hungarian Wax	culinary	v. early	spreading	medium	pendant	conical	3½—5½	2—3:3	light yellowish	mildly pungent	thin—med.
Long Red Cayenne	canning, pickling, drying	early	sl. spread.	large	pendant	cylindro-conic	1½—3½	2—3:2	dark	pungent	thin
Long Thick Cayenne	canning, pickling, drying	early	sl. spread.	large	pendant	cylindro-conic	2½—5½	2—3:2	medium	pungent	thin
Mexican Chili	chili powder	very late	erect	large	pendant	conical	2—4	3—3:3	dark	very pungent	thin
Red Cherry	pickling	late	erect	large	erect	oblate	⅜—¾	3—3:3	medium	very pungent	thin
Red Chili	pickling, sauce	late	sl. spread.	large	erect	conical	¾—1½	2—2:2	yellowish	very pungent	very thin
Small Red Cayenne	pickling, sauce	late	erect	large	erect	conical	1⅜—2	2—2:2	medium	very pungent	thin
Sport	------	very late	erect	large	erect	conical	½—1½	2—2:2	dark	very pungent	thin
Tabasco	pickling, sauce	very late	erect	v. large	erect	conical	½—1½	2—2:2	light yellowish	very pungent	very thin

*When pod is cut in cross section, it appears to contain cells, the boundaries of which are the outside walls, the placenta, and radial walls which may or may not be completely formed. These cells often correspond to lobes which can be seen externally, but a count based on the lobes may be inaccurate.

†All varieties listed are red at maturity,

Key: med.—medium; sl —slight; v.—very.

Variety	Chief use	Season of maturity	Plant		Fruit						Remarks
			Habit	Size	Position	Shape	Length (ins.)	No. of cells† Range:Mode	Immature color (green)	Flesh thickness	
Bloomsdale Giant	home	midseason	spreading	medium	pendant	blocky	3—4¼	3—4:4	medium	medium	Fair
Bloomsdale Wonder	home	early	spreading	medium	pendant	blocky	2¾—4	3—4:_	medium	medinm	Fair
Florida Giant	home, market	late	erect	medium	semi-pendant	blocky	2¾—4	3—4:4	dark	thick	Similar to California Wonder
Golden Dawn	home	late	erect	medium	pendant	blocky	2—2½	3—4:_	medium	thin	Yellow when mature
Golden Queen	home	late	erect	medium	pendant	blocky	2½—3¼	3—4:_	medium	thin	Yellow when mature
Harris Earliest	home	early	sl. spreading	medium	pendant	broad heart	1½—2	3—4:_	medium	thin	Fruit too small
Harris Wonder	home	late	erect	medium	semi-pendant	blocky	2¾—3½	3—4:_	medium	medium	Fair, but late
Imperial Collosal	home, market	early	semi-erect	medium	pendant	blocky-tapering	3—3½	3—4:_	medium	thin	Good
King of the North	home	early	spreading	medium	pendant	blocky-tapering	3¼—4	3—4:4	medium	thin	Fair
Neapolitan	home	very early	spreading	small	semi-erect	tapering	2¾—3½	3—4:3	yellowish	thin	Excellent for home garden
Oakview Wonder	home, market	late	sl. spreading	medium	pendant	blocky	2¾—4	3—4:4	dark	thick	Similar to California Wonder
Squash (or Tomato)	home	early	spreading	large	semi-erect	oblate	1—2	4—4:4	dark	thick	Excellent for home garden
Sunnybrook	home	early	spreading	large	semi-erect	oblate	1—2	4—4:4	dark	thick	Excellent for home garden
Waltham Beauty	home	early	erect	medium	erect	broad heart	1¾—2¼	3—3:3	dark	medium	Fair
Windsor A	home	early	erect	medium	pendant	tapering	2¾—3¼	3—4:3	medium	medium	Fair
Yellow Sweet	home	------	erect	small	erect	tapering	1¾—2¼	3—4:_	yellow‡	thin—medium	Fair
PAPRIKA TYPES											
Dennes Special	paprika	early	spreading	medium	semi-pendant	conical	2—2½	3—3:3	dark	medium	Probably best of paprikas
Dina	paprika	early	spreading	medium	pendant	conical	2—4	3—3:3	dark	medium	Probably next best
Kalinkov	paprika	early	spreading	medium	semi-pendant	blocky	2¾—3¾	------	medium	medium	Later than two above
Spanish Strain	paprika	late	semi-erect	medium	pendant	blocky—tapering	5—6	3—4:3	medium	medium	Too late
Tomato-Shaped	paprika	midseason	spreading	small	semi-pendant	oblate	1—2	4—4:4	dark	medium—thick	Pungency a drawback

*All varieties listed are supposed to lack pungency; Tomato-Shaped Paprika was an exception being slightly pungent.

†When pod is cut in cross section, it appears to contain cells, the boundaries of which are the outside walls, the placenta, and radial walls which may or may not be completely formed. These cells often correspond to lobes which can be seen externally, but a count based on the lobes may be inaccurate.

‡Actually yellow, not yellow-green.

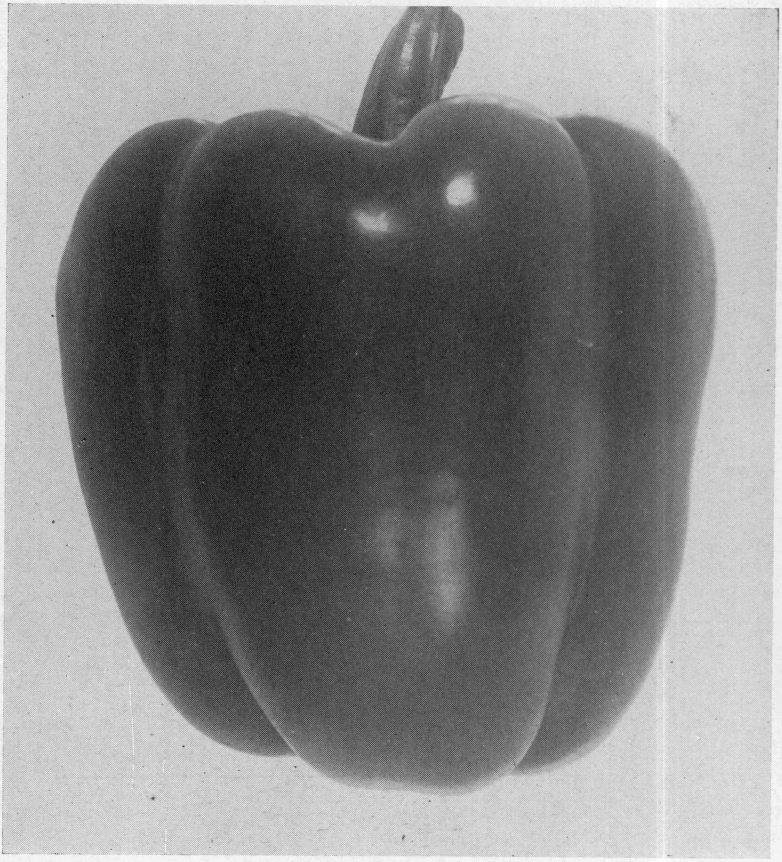

Figure 9. California Wonder.

light yellowish green in color in the green market state. Like most peppers they are a bright red later.

Oakview Wonder is still another variety somewhat on the order of California Wonder. It has however slightly longer fruits. In some localities it is reported as earlier than California Wonder. The size, uniformity, and appearnance of the fruit make the variety worthy of trial by those growing this type.

Squash, sometimes called Tomato pepper, is excellently adapted. It is also a fine home garden variety. The fruit has the shape of a small, flat tomato. The flesh is usually very thick, thus differing from Neapolitan which has thin flesh. The Squash variety is prolific, and exceeds Neapolitan in yield, although later.

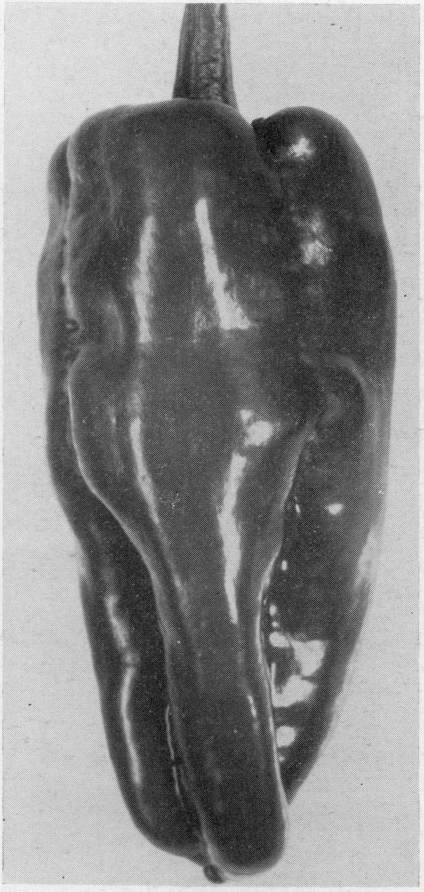

Figure 10. Neopolitan. The fruit normally ranges from 2¾ to 3½ inches long.

Worldbeater (Figure 11), as mentioned in the report of 1935 (4), is better adapted than California Wonder. Although it is already grown to some extent in the Winter Garden region, its adaptability and its fairly wide acceptance in the trade should warrant wider commercial production of this variety.

Pepper (Paprika), *Capsicum frutescens*

During 1940 five varieties and strains of paprika pepper were tried at the Station (See Table 11). All grew well. In type of plant and foliage they resemble sweet peppers more than a hot type, but in shape of fruit they might be tentatively classified as either sweet or hot de-

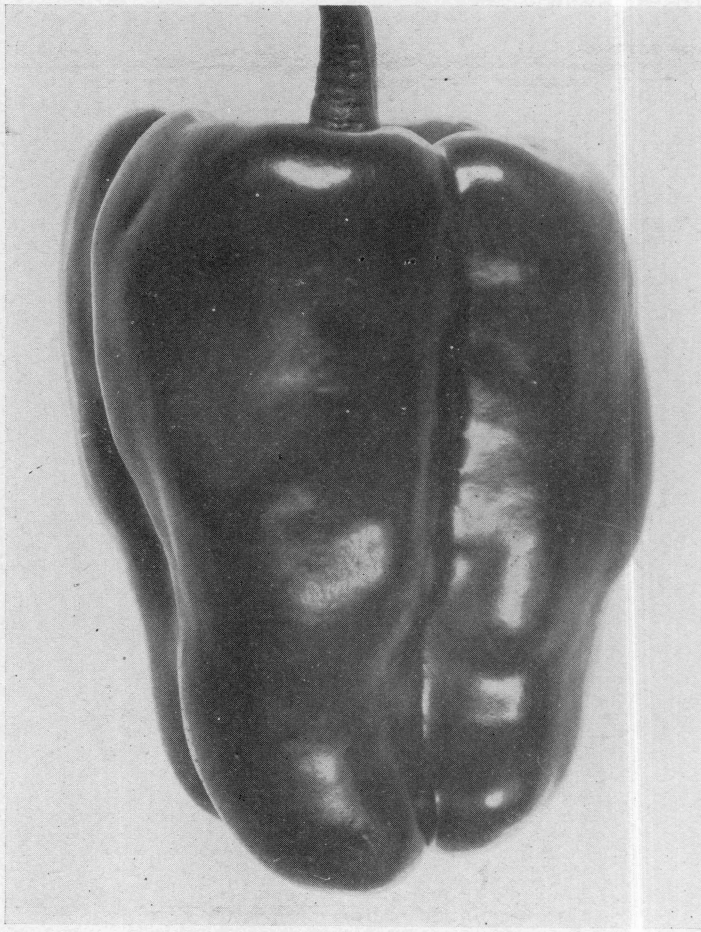

Figure 11. Worldbeater is better adapted to Winter Garden than is California Wonder.

pending on the variety. The type reported as being the most acceptable to the trade resembles in fruit shape a hot variety rather than a sweet one, but in flavor of flesh, placenta and seeds it would, of course, definitely classify with the sweet. A good paprika should not have any pungency at all.

Dennes Special (Figure 12) so far as is known represents the type of paprika most desired by manufacturers. The fruit is conical in shape and around 2 to 2½ inches long. It has a pleasantly mild, sweet flavor when red ripe. It is a heavy producer.

Dini (Figure 12) resembles Dennes Special more than any of the other paprika varieties listed in Table 11. Its fruits are the same shape, but often longer, ranging from 2 to 4 inches in length.

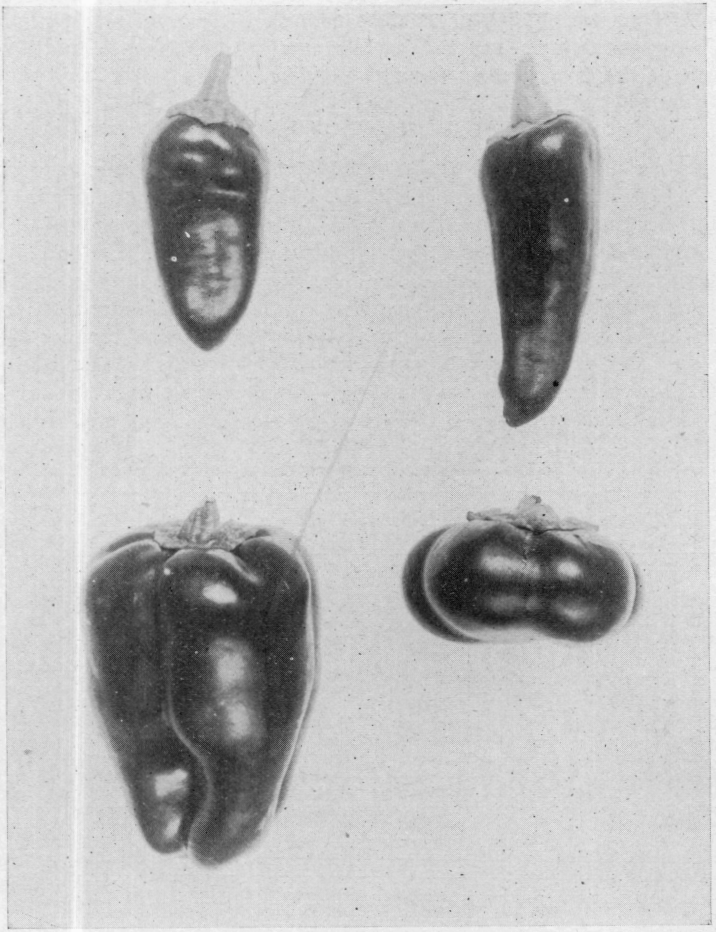

Figure 12. Four varieties of paprika pepper. Left to right (above): Dennes Special, Dini; (below): Kalinkov, Tomato Shaped.

Kalinkov (Figure 12) is later than the two varieties just described and has fruit which can be characterized as having the shape of a slightly tapered California Wonder. The variety is not as prolific as either Dennes Special or Dini.

Spanish has the largest fruits of all the Paprika varieties listed in Table 11. Shaped somewhat like the fruit of Ruby King, they are 5 to 6

inches long, and 1¾ to 2¼ inches wide at the base. This variety is so late that it is unadapted to Winter Garden conditions, at least when planted for a fall crop.

Tomato-shaped Paprika (Figure 12) has fruits of about the same size and shape as the Squash or Tomato pepper. These are slightly pungent. This characteristic makes the variety undesirable for use in the manufacture of the best quality paprika pepper.

Tomato, *Lycopersicum esculentum*

Since the publication of Bulletin 546 (5), tomatoes, especially the fall crop, have continued to increase in commercial importance in the Winter Garden region. New varieties of tomatoes continue to appear in many parts of the country where they have been developed. Many of these are similar to each other, as well as to older varieties, not only in appearance but, according to some comprehensive studies in Michigan (18), also in historical background and breeding. Because of the importance of tomatoes, and the ever increasing number of new varieties the Station has given more attention to variety trials of this crop than to any other. Every fall there has been a trial, and quite often there has been one in

Table 12a. Varietal characteristics of tomatoes

Variety	Chief use	Season	Plant size	Foliage density	Leaf color (green)
Bloomsdale Early No. 2	market, canning	early	------	------	------
Bloomsdale Midseason	shipping	midseason	------	------	------
Bloomsdale Self Topper	market, canning	midseason	------	------	------
Bounty	home	early	small	open	medium
Cardinal	market, canning	early midseason	medium	slight	medium
Cleo	shipping	late	large	dense	medium
Danmark	home	first early	small	open	medium
Early Sensation	home	first early	small	open	medium
Fruit Tomato	home	midseason	medium	medium	medium
Gloriana	home	first early	medium	slight	medium
Harkness	home	early	large	medium	medium
Illinois Pride	market, canning	late	large	dense	medium
Louisiana Dixie	home	midseason	medium	medium	light
Morse's 133-6	market, canning	late	medium	------	------
Ojo de Venado	home	early midseason	medium	medium	medium
Pan America	shipping	late	large	dense	light
Pearson	home, market	midseason	medium	medium	medium
Red Heart	home	early midseason	medium	slight	medium
Riverside	home	midseason	large	dense	medium
San Marzano	paste	late	medium	------	medium
Table Talk	home	late	medium	medium	medium
Tangerine	home, novelty	late	medium	medium	medium
Valiant	home, market	early	medium	slight	medium
Wasatch Beauty	home	midseason	small	slight	medium

Table 12b. Varietal characteristics of tomatoes

Variety	Fruit				Remarks
	Size, ounces	Shape	Color*	Cell No.	
Bloomsdale Early No. 2	3¾—4¾	oblate	red	4—7	Fair; some puffing
Bloomsdale Midseason	3½—4½	deep oblate	red	4—7	Attractive, but others more suited
Bloomsdale Self Topper	3½—4½	deep oblate	red	4—6	Some puffing; many irregular
Bounty	4—5	globe	red	5—8	Much puffing
Cardinal	4¼—5¼	oblate	red	5—8	Too many irregular
Cleo	3½—4½	deep oblate	red	4—5	Too many irregular; also puffy
Danmark	1½—2½	globe	red	3—7	Uniform. Very productive
Early Sensation	2½—3½	flattened	red	7—12	Small Earliana type
Fruit Tomato	2¾—3¾	globe	pink	4—9	Many puffy; also irregular
Gloriana	3¾—4¾	deep oblate	red	5—12	Many irregular fruits
Harkness	2½—3½	oblate	red	3—6	Productive, but lacks uniformity
Illinois Pride	4¼—5¼	oblate	red	6—9	Many cat faces
Louisiana Dixie	4—5¾	oblate	pink	5—10	Too much puffing
Morse's 133-6	4—5	globe	red	4—9	Too many irregular fruits
Ojo de Venado	½—¾	oblate	pink	2—7	Prolific; not commercial type
Pan America	4—5	globe	red	4—8	Too late; some puffing
Pearson	4¼—5¼	deep oblate	red	----	Productive
Red Heart	2¾—3¾	globe	red	4—6	Distinct. Too small for commercial use
Riverside	4¼—5¼	deep oblate	red	5—6	Some puffing
San Marzano	------	long	red	2	Nearly devoid of juice
Table Talk	3¾—4¾	globe	red	4—7	Fairly attractive; too late
Tangerine	3—4	globe	red	4—8	Puffy. Tends orange red
Valiant	4—5	globe	red	4—7	Fairly productive
Wasatch Beauty	3¾—4¾	deep oblate	red	5—8	Fairly productive

*The varieties have been simply classified according to the commonly used terms—pink, red (scarlet), and yellow.

the spring too. In addition to these there have been some special tests during the summer in an effort to find a variety adapted to the unfavorable conditions at that time. Tables 12a and 12b list the varieties grown in spring and fall trials and not reported upon previously. Table 13 lists those grown especially in summer trials. Seedlessness is a common characteristic of all fruits of any variety producing during the summer, with the exception of Red Cherry. With this variety seedlessness is more likely to be an exception rather than the rule. Fruits of all summer varieties including Red Cherry are normally smaller during the most adverse portion of the summer.

Bison (Figure 13) is one of very few varieties brought in from the North that will produce fruit during the summer. It was developed by the North Dakota Experiment Station (23). The fruits of Bison tend to be larger than those of Summerset (see Table 13), but are often very rough and irregular. The red color of maturity also develops unevenly under South Texas conditions. Combined with these drawbacks is the additional one of a very small determinate plant. This last characteristic leaves the fruit unprotected and subject to sunscald, a likely trouble during the summers in the Winter Garden region. Although obviously not

Table 13. Varietal characteristics of tomatoes adapted to summer conditions*

Variety	Plant growth	Fruit				Remarks
		Av. weight of fruit, ounces†	Shape	Color‡	Cell No.	
Allred	det.	1.12	oblate	red	6—10	Low productivity. Unsatisfactory.
Bison	det.	.99	deep oblate	red	5—11	Sets well, but many drawbacks; see text
Farthest North	det.	.16	globe	red	2—3	Sets well, but plant AND fruits too small
Golden Bison	det.	.74	flattened	yellow	4—10	Sets well, but many drawbacks; see text
Porter	indet.	.42	deep globe	pink	2	Popular summer sort, but small
Red Cherry	indet.	.08	globe	red	2	Most prolific, but fruit very small
Red River	indet.	.74	deep oblate	red	5—7	Low productivity. Unsatisfactory
Summerset	indet.	.80	deep oblate	red	3—5	New. Developed especially for the summer

*In addition to the eight varieties listed, the following varieties were also tested under summer conditions, but failed to produce fruit in sufficient quantity, if at all, for a description to be made: Blair Forcing, Globelle, Hill's Earliana, Lloyd Forcing, Long Calyx Forcing, Pink Heart, Prairiana, Surest Forcing, and Urbana.

†During the most adverse portion of the summer. Fruit of all varieties is larger in cooler weather.

‡The varieties have been simply classified according to the commonly used terms—pink, red (scarlet), and yellow.

Key: det.—determinate; indet.—indeterminate.

an ideal variety, home gardeners would do well to try Bison because at best there are still so few varieties which will set fruit at all during the summer.

Golden Bison is a yellow fruited strain of Bison, in which such characteristics as roughness of fruit and uneveness of color tend to show up still more.

Farthest North. As grown at Winter Haven, this variety has the smallest determinate plant of any named variety offered in the seed trade. It sets well, but the fruit although averaging twice the size of Red Cherry by weight (See Table 13) is actually still so small as compared to Bison and Summerset, that it does not pay to grow the variety.

Porter (Figure 13), developed especially for Texas and the Southwest by a Texas Seedsman, sets fruits under summer conditions in which ordinary varieties fail to set any at all. In summer trials at Winter Haven, however, it has never shown the productivity of Summerset, although in spring and fall trials it has been exceptionally productive. Unpublished reports from other localities in Texas and Oklahoma indicate great productivity. Porter probably is at its best under conditions a little less severe than those normally encountered at Winter Haven dur-

ing the summer. The fruit has the shape of a plum, is pink in color, and is about five times the size of Red Cherry by weight.

Rutgers was included in the 1937 report on vegetable varieties (5). The tremendous increase in importance of this variety both nationally and in South Texas warrants a re-evaluation. On the basis of Station trials in recent years, Rutgers still can not be recommended as ideal for the Winter Garden region. As previously reported it tends to be too

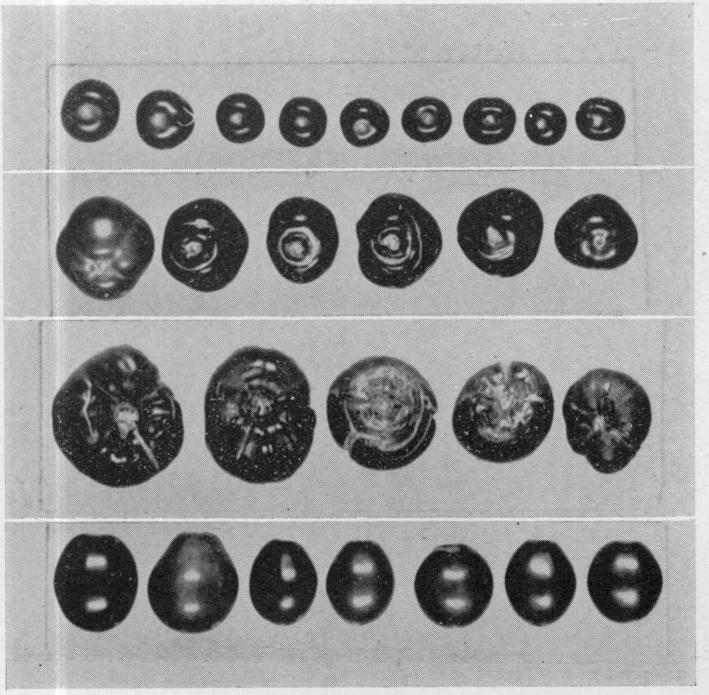

Figure 13. Four varieties of tomatoes that set well in the summer: First (top) row: Red Cherry; second row: Summerset; third row: Bison; fourth row: Porter.

late. In all Station trials it has failed to equal Stokesdale in productivity, and has even failed to equal that vareity in shape and size of fruit too. Rutgers has proved to be a better variety than Marglobe, and it has also apparently given more satisfactory yields on the heavier darker soils than it has on lighter sandy soils. Thus growers in South Texas have benefited by its introduction, but anyone observing it season after season in the comparative trials of varieties at Winter Haven would never give it a top rating for adaptability and usefulness.

Stokesdale was also included in the 1937 report on vegetable varieties (5). Like Rutgers it has also gained much in national importance since then and has become a particularly valuable variety in South Texas, although it is not grown on so large an acreage as Rutgers. On the basis of Station tests Stokesdale deserves much wider trial. Although it has rarely exceeded Bonny Best in yield, it has approached that variety more closely than any other at Winter Haven in its capacity to produce. In the

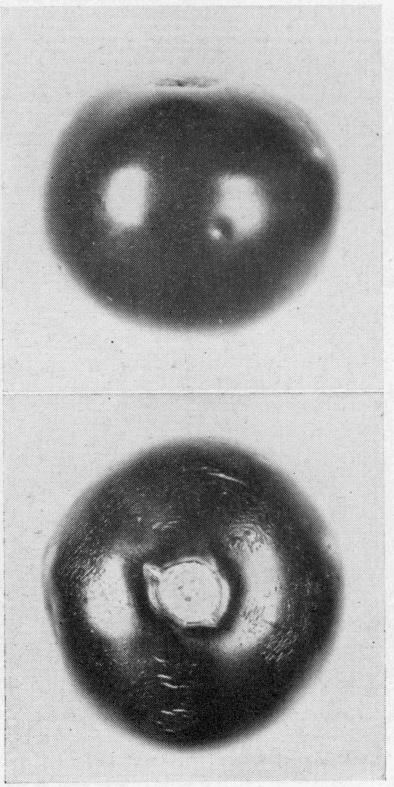

Figure 14. Summerset tomato, about natural size.

fall of 1940 Stokesdale from several sources exceeded by wide margins the marketable yields of varieties like Rutgers, Pritchard, and Marglobe. Again, in the fall of 1941 in a replicated randomized block test, Stokesdale outyielded Rutgers, Master Marglobe and Grothen's Globe by a significantly wide margin. The acre yields in pounds of marketable fruit were as follows: Stokesdale, 19,794; Grothen's Globe, 11,076; Crown Picked Rutgers, 10,386; ordinary Rutgers, 9,878; and Master Marglobe, 6,513. Technically, it might be stated that the F value as derived by an

analysis of variances according to the method suggested by Snedecor (21) was 24.62, when all that was needed for significance at the 1 percent level was 6.42. A difference in yield between varieties to be valid had to exceed 3065 pounds per acre. The difference between Stokesdale and the variety with the next highest yield was 8718 pounds, exceeding this minimum by a wide margin. Unlike Bonny Best, Stokesdale combines with its productiveness some of the desirable shipping qualities found in such a variety as Marglobe. For example, the majority of Stokesdale fruits

Figure 15. A plant of Summerset tomato producing fruit in mid-August at Winter Haven. Notice number and size of fruit.

are truly globular. By actual count in several seasons, Stokesdale has had higher percentages of globular fruit than such a well shaped variety as Master Marglobe. Most of the fruit too has the solidity desirable for packing and shipping. To obtain maximum size in Stokesdale, as with any other variety, the plant should, of course, be adequately fertilized.

Summerset (Figures 14 and 15) developed at Substation No. 19 specifically for summer conditions has already been described (6). The fruit

of Summerset, while not always as large as that of Bison, is smoother and more evenly shaped, and more uniform in size. The red color of the ripe fruit develops evenly all over. The vine is indeterminate in habit, with a moderately dense growth, and thus protects the fruit. Like any of these summer tomatoes, Summerset is a small tomato as compared with varieties such as Stokesdale and Rutgers, but even so it is a great improvement over Red Cherry, exceeding it by seven to ten times in size. Favorable reports have been received on Summerset from many localities in Texas and Oklahoma. Anywhere there is difficulty in getting tomatoes to set fruit in the summer, Summerset and varieties such as Bison and Porter should be tried. It should be remembered, too, that although Summerset has been reported—and probably correctly so—as drought resistant, it was developed under irrigated conditions and like all varieties produces best when supplied with adequate soil moisture and fertility.

Watermelon, *Citrullus vulgaris*

Since the last report on this crop in 1937 (5), a fairly large number of new varieties and names have been tried (Tables 14a and 14b). The general picture with watermelons in the Winter Garden region is about the same as it has been for the past ten years or so, except that Tom Watson is much less popular now than formerly with commercial growers. Cletex or Spotted Watson has taken its place, and recently Florida Giant, better known in the Winter Garden as Black Diamond has come to take the place of Cletex with some growers,

Black Diamond is the same as Florida Giant under which name it was grown at the Station. See below and also Tables 14a and 14b.

Cletex has been popular in recent years with commercial growers around Pearsall and Dilley. The fruit is cylindrical, and the exterior color is a medium green, mottled or spotted irregularly with a lighter green. The rind is tough. The flesh is dark pink, and white hearts are much less common than with old strains of Tom Watson.

Early Kansas will please some home gardeners as an early melon of fair quality. It is one of the early melons worth trying.

Florida Giant, frequently grown as Black Diamond, is rapidly gaining in popularity with commercial growers in the Winter Garden region. This variety is also very similar to Clara Lee (Tables 14a and 14b). It has large fruit, globular or short oval, similar to Stone Mountain in shape. In weight it is among the heaviest. The rind is fairly tough, and a very dark green in color. The flesh has a deep red color. In recent Station trials, this fine interior color has been maintained more consistently than nearly any other variety. Although for some markets it may be less desirable than Cletex, in the opinion of a number of growers it is a much better melon than that variety.

Table 14a. Varietal characteristics of watermelons

Variety	Chief use	Season	Productivity	Fruit interior, flesh color	Seed color
Baby Delight	home	midseason	unproductive	pink	light brown
Blue Banner	--------	midseason	unproductive	red	white
Blue Rind Watson	shipping	midseason	med. productive	deep red	brown
Carolina Bradford	home, ship.	midseason	med. productive	pink	white
Clara Lee	home, ship.	midseason	med. productive	red	dark brown
Cletex	shipping	midseason	med. productive	dark pink	light brown
Cole's Early	home	very early	med. productive	pale pink	black
Cut Red Tom Watson	shipping	midseason	productive	deep red	brown
Early Arizona	home	early	productive	red	brown
Early Canada	home	very early	med. productive	red	brown
Early Kansas	home	very early	med. productive	dark pink	brown
Florida Giant	home, ship.	midseason	productive	red	brown
Golden Cream	home	early	med. productive	golden yellow	white
Golden Sweet	home	early	productive	golden yellow	white
Improved Kleckley Sweet No. 6	home, market	midseason	med. productive	dark pink	white
Jackson	home	midseason	med. productive	pink	white
John Smith	home	midseason	unproductive	light yellow	white, black margin
Leesburg	home, ship.	midseason	med. productive	deep red	white
Luscious Golden Sweet	home	early	med. productive	golden yellow	white
New Winter	home	midseason	med. productive	pink	black
Northern Sweet	home	early	productive	red	light brown, dark brown tip
Panmure All Heart	home	midseason	med. productive	pink	brown
Perfection	home	early	med. productive	dark pink	white, brown margin
Queen of Parker	home	midseason	med. productive	deep yellow	black
Ribault	shipping	midseason	med. productive	dark pink	white, brown tip
Royal Golden	novelty	midseason	unproductive	dark pink	light brown
Spotted Watson	shipping	midseason	med. productive	dark pink	light brown
State Fair	home, ship.	midseason	med. productive	red	white
Striped Klondike	home	midseason	unproductive	red	black
Sugar Stick	shipping	midseason	productive	pink	black
Sunnybrook	shipping	midseason	med. productive	red	light brown
Tendersweet	home	midseason	med. productive	deep yellow	white, black margin
Texas Sweet	home, market	midseason	unproductive	red	black
Yellow Watson	home, market	midseason	med. productive	pinkish yellow	brown

Key: med.—medium; ship.—shipping.

Leesburg was introduced by the Florida Experiment Station in 1936 as a wilt-resistant variety (3,22). This characteristic is important when-

Table 14b. Varietal characteristics of watermelons

Variety	Fruit					Remarks
	Length x diameter (inches)	Weight, pounds	Shape	Color	Rind	
Baby Delight	6 x 6½	5—7	globular	dark green	medium tough	Too small for most
Blue Banner	16—20 x 8½—9	18—31	long cylindrical	dark green	medium tough	Sunburns
Blue Rind Watson	19½—21 x 8—9	20—36	long cylindrical	dark blue green	tough	Attractive flesh
Carolina Bradford	----------	------	long cylindrical	medium green	medium tough	Similar to Alabama Sweet
Clara Lee	14—16 x 11—12½	28—50	short oval	dark green	medium tough	Similar to Florida Giant
Cletex	16—20 x 8½—10	23—43	cylindrical	medium green; mottled	tough	Better than Tom Watson
Cole's Early	11—12 x 8	16—20	oval	striped; light and dark green	medium tough	Unadapted
Cut Red Tom Watson	20—22½ x 8—9½	18—30	cylindrical	dark green	tough	Attractive flesh
Early Arizona	8—12 x 8—9	11—15	short oval	very dark green	thin, tender	Attractive
Early Canada	10—11 x 8	11—19	oval	very light green	tender	Fair
Early Kansas	11—14 x 10—13	20—40	short oval	medium green; light striped	medium tough	Fine for early type
Florida Giant	14—16 x 11—12½	28—50	short oval	dark green	medium tough	Very good; also known as Black Diamond
Golden Cream	12—15 x 8½	14—25	oblong	very dark green	medium tough	Good
Golden Sweet	14—18 x 8	14—25	oblong	very dark green	medium tough	Good
Improved Kleckley Sweet No. 6	13—14½ x 11	17—30	long oval	medium green	medium tough	Fair
Jackson	15—17½ x 7	13—17	long oval	medium green	tender	Only fair
John Smith	10—11½ x 9½—11	17—30	globular	medium green; light stripe	tender	Cracks badly
Leesburg	16—17 x 7½—8	20—24	long oval	dark green	tough	Sunburns, but wilt resistant
Luscious Golden Sweet	14—18 x 8	22—32	oblong	very dark green	medium tough	Sunburns easily
New Winter	9½—10 x 9	13—17	globular	grey	tough	Uniform
Northern Sweet	7—10 x 9	12—16	globular	dark green	medium tough	Fine for early home use
Panmure A 1 Heart	17—20 x 7—8	15—23	long oval	medium green; dark stripe	tender	Only fair
Perfection	13—16 x 8—8½	12—21	oblong	dark green	medium tough	Only fair
Queen of Parker	13—14 x 11½—12	30—40	short oval	dark green; medium stripe	tough	Attractive; distinct
Ribault	8—20 x 8½—9	23—38	oblong	medium green	tough	Fair
Royal Golden	9—10½ x 9½—10	11—25	globular	dark green	tough	Foliage yellow. Novelty
Spotted Watson	16—20 x 8½—10	23—43	cylindrical	medium green; mottled	tough	Identical with Cletex
State Fair	12—13 x 11	25—33	short oval	medium green	medium tough	Good
Striped Klondike	14—16 x 8—10	15—28	long oval	medium green; light stripe	medium tough	No advantage over Klondike

Sugar Stick	----------	20—28	cylindrical	light green	tough	Fair
Sunnybrook	20—23 x 8½	25—33	long	grey	tough	A resemblance to Thurmond Gray
Tendersweet	14—19 x 8½—9	15—35	long oval	medium green; light stripe	tender to medium	Fine yellow fleshed melon
Texas Sweet	17½—23 x 10—11	------	oblong	medium green; light stripe	medium tough	Attractive
Yellow Watson	16—18 x 10—10½	20—50	cylindrical	dark green	tough	Good

Key: lt.—light; med.—medium.

ever wilt is a problem. As grown at Winter Haven the variety has tended to sunburn too much, but aside from this has been fairly satisfactory.

Northern Sweet is another early maturing melon well worth trying in the home garden. It is quite productive and if conditions are at all favorable usually has good interior color.

Spotted Watson. Identical with Cletex; see above.

Tendersweet is an excellent yellow fleshed melon well worth growing in the home garden. The flesh, in addition to having a good yellow color, usually entirely lacks fiber thus giving the fruit a high quality.

Summary of Promising Varieties

A number of varieties introduced in recent years have proved better adapted and more valuable than the older varieties previously recommended. In some instances, fairly new varieties suggested in previous reports as worthy of further trial, have justified those tentative predictions of their possible value and are now commonly grown in the Winter Garden region.

A summary of the latest recommendations follows:

Bean: To the varieties previously recommended—Henderson and Jackson Wonder (home garden only) dwarf lima beans; and Giant Stringless Green Pod, Burpee's Stringless Green Pod, Bountiful dwarf snap beans—Blue Lake pole snap bean can now be added.

Beet: Variety still a matter of preference, as all are excellently adapted.

Carrot: All varieties are excellenty adapted, but Imperator is now the leading commercial variety.

Sweet Corn: Honey June is still the leading white sweet corn. Among the yellow sorts, Ioana and Ioglen both reported under breeding numbers in 1937, are now available from several sources in the trade, because of their popularity.

Edible Cowpea: Cream Crowder is still the most satisfactory variety obtainable locally. However, both Early Wilt Resistant Ramshorn, and Giant Wilt Restistant Ramshorn have shown up in recent trials as fine, very productive varieties of the Blackeye type.

Cucumber: The long fruited, darker green varieties are definitely more popular than they were even five years ago. It is still impossible to say which of these is best, but such varieties as Colorado, A and C and similar sorts are much more firmly established than formerly with commercial growers. Mission and Special Dark Green have shown promise in recent trials.

Eggplant: A good strain of Black Beauty is one of the most desirable and useful of varieties. For those who prefer the Florida High Bush type, Fort Myers is highly recommended and is to be preferred to most strains of the old Florida High Bush. New Hampshire Hybrid is suggested as an early, small fruited, productive variety for home gardens.

Lettuce: All varieties adapted. Within the New York type, recent tests indicate that the following strains are among the most promising and probably in the order given: Imperial 44, Imperial 152, and Imperial 847.

Muskmelon: Seed Breeders, (Powdery) Mildew Resistant No. 45 and Arizona Nugget are now the leading commercial varieties grown. Coopers Sweetheart has shown commercial possibilities. These are all suitable for the home garden also, and for that purpose the non-commercial varieties Green-Fleshed Rocky Dew and Orange-Fleshed Rocky Dew are also suggested because of their resistance to downy mildew.

Okra: White Velvet still recommended. The new variety Clemson Spineless is also recommended because of its uniformity and productivity.

Onion: The Bermuda varieties are still the most important commercially. However, Early Grano or Babosa has also become important in South Texas. No variety representing a white type of Early Grano is completely satisfactory as yet.

English Pea: Tests indicate that time of planting greatly affects the number of days required from planting to edible maturity. To the varieties previously recommended—Little Marvel, Nott's Excelsior, Laxton's Progress, Horsford Market Garden—can be added Pride and Thomas Laxton.

Peppers, Hot: Variety still a matter of preference; all equally adapted.

Peppers, Sweet: California Wonder still leads commercially. However, on basis of extensive observations Worldbeater is considered better adapted. For the home garden Neapolitan and Squash are also recommended.

Pepper, Paprika: Desirable varieties are well adapted. Dennes Special is most satisfactory, and Dini is a good second choice.

Tomato: For spring and fall commercial seasons, Stokesdale is first recommendation, although Rutger's is now being grown fairly satisfactorily in many commercial plantings. For the summer, Summerset and Bison both set well, but the former especially developed for South Texas, has a large indeterminate vine which affords protection to a comparatively small but smooth fruit, while the latter has a small determinate vine giving little or no protection to fruits which are rather small and in addition usually rough and unevenly colored. Porter is also suggested for summer but it does not equal Summerset and Bison under all conditions.

Watermelon: Cletex is now as important commercially as Tom Watson used to be. Florida Giant, better known in the Winter Garden as Black Diamond, is highly recommended, and is gaining increasing popularity with growers. Early Kansas and Northern Sweet are among the best of the very early varieties suitable for the home garden. Tendersweet is an excellent yellow fleshed variety.

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LITERATURE CITED

1. Beckenbach, J. R., F. S. Jamison, R. W. Ruprecht, and F. S. Andrews, 1941. Crisp-head lettuce in Florida. Fla. Agr. Exp. Sta. Bul. 365.
2. Haber, E. S., 1940. Sweet corn hybrids. Iowa Agr. Exp. Sta. Bul. P15 (New series).
3. Haskell, R. J., and V. R. Boswell, 1940. Disease resistant varieties of vegetables for the home garden. U.S.D.A. Leaflet 203.
4. Hawthorn, Leslie R., 1935. Vegetable varieties for the Winter Garden region of Texas. Tex. Agr. Exp. Sta. Bul. 508.
5. Hawthorn, Leslie R., 1937. Further tests of vegetable varieties for the Winter Garden region. Tex. Agr. Exp. Sta. Bul. 546.
6. Hawthorn, Leslie R., 1941. Summerset, a new tomato for Texas' summers. Tex. Agr. Exp. Sta. Progress Report 732.
7. Hutchins, A. E., 1937. The Mincu, a new pickling cucumber. Minnesota Horticulturist, September.
8. Ivanoff, S. S., 1941. Breeding onions for disease resistance. 54th Annual Report of Texas Agr. Exp. Sta., p. 181.
9. Jagger, I. C. and G. W. Scott, 1937. Development of powdery mildew resistant cantaloupe No. 45. U.S.D.A. Circ. 441.
10. Jagger, I. C., T. W. Whitaker, J. J. Uselman, and W. M. Owen, 1941. The Imperial strains of lettuce. U.S.D.A. Circ. 596.
11. Janes, M. J., 1937. Eggplant yellows control. 50th Annual Report of Tex. Agr. Exp. Sta., p. 303.
12. Jones, S. E., 1938. Eggplant yellows. 51st Annual Report of Texas Agr. Exp. Sta., p. 262.
13. Jones, S. E. and M. J. Janes, 1936. Eggplant yellows. 49th Annual Report of Texas Agr. Exp. Sta., p. 326.
14. Knott, J. E., E. M. Anderson and R. D. Sweet, 1939. Problems in the production of Iceberg lettuce in New York. Cornell Univ. Agr. Exp. Sta. Bul. 714.
15. Magruder, Roy, et al, 1940. Descriptions of types of principal American varieties of red garden beets. U.S.D.A. Misc. Pub. 374.
16. Magruder, Roy, et al, 1940. Descriptions of types of principal American varieties of orange-fleshed carrots. U.S.D.A. Misc. Pub. 361.
17. Magruder, Roy, et al, 1941. Descriptions of types of principal American varieties of onions. U.S.D.A. Misc. Pub. 435.
18. Morrison, Gordon, 1938. Tomato varieties. Mich. Agr. Exp. Sta. Spec. Bul. 290.
19. Platenius, Hans, and J. E. Knott, 1941. Factors affecting onion pungency. Jour. Agr. Res. Vol. 62, No. 6, pp. 271-380.
20. Porter, D. R., H. A. Jones, and G. N. Davis, 1941. Newly developed vegetable varieties for use in California. Calif. Agr. Exp. Sta. Bul. 646.
21. Snedecor, George W., 1934. Calculation and Interpretation of Analysis of Variance and Covariance. Ames, Iowa.
22. Walker, M. N., 1936. A wilt-resistant watermelon for Florida. Fla. Agr. Exp. Sta. Bul. 288.
23. Yeager, A. F., 1933. Tomato breeding. N. Dak. Agr. Exp. Sta. Bul. 276.