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Standardization and Group Classification of Potato Varieties for Michigan
Michigan State University Extension Service

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EXTENSION SERIES

APRIL, 1916

STANDARDIZATION AND GROUP CLASSIFICATION OF POTATO
VARIETIES FOR MICHIGAN.

By C. W. WAID.

RECOMMENDED AS LEADING COMMERCIAL VARIETIES.

Early:

1. Irish Cobbler (Fig. I).
2. Early Ohio (Fig. IV).

Late:

1. Green Mountain (Fig. VI).
2. Rural (Fig. VII).
 - (a) Rural New Yorker No. 2.
 - (b) Sir Walter Raleigh.
 - (c) Carman No. 3.
3. Russet Rural (Late Petoskey) (Fig. VIII).

STANDARDIZATION OF POTATO VARIETIES FOR MICHIGAN.

One of the present pressing needs for the improvement of the potato crop for Michigan is standardization of varieties. This is particularly necessary for the potato growers who cater to the shipping trade. There are, in most sections of the state, *too many varieties*. It is not unusual to see cars of Michigan potatoes on the Chicago or other large markets which are made up of long and round white potatoes, some with smooth and others with russet skin and with a liberal sprinkling of pink or red potatoes. It is the exception rather than the rule, however, to see a car on these markets that has been loaded with potatoes which are strictly uniform as to shape and color and of a desirable size. *The need is not only for one car of potatoes which is uniform in all respects but for hundreds of cars of high quality between which there would be practically no choice.* This is the key to the entire marketing problem.

If such a condition is realized in this state, it will mean much to the potato growers. It would increase the demand for Michigan potatoes. At the present time potatoes from this state sell for a lower price on

the same markets than Maine potatoes or those from other states where only a few varieties are grown and where the potatoes are graded and sorted more carefully than in this state. Michigan has as good natural conditions of soil and climate for potato production as has Maine or any other heavy potato producing state. The chief reason why the Michigan growers are compelled to sell their potatoes for less money than the growers in other states is because the crop in this state is not properly standardized.

Standardization of varieties is not the only thing needed; we must use better seed, employ better cultural practices and above all, establish standards of grades for table and seed stock and do better grading and sorting. However, standardization of varieties must come first or the efforts along other lines will be of little or no value.

To secure standardization of varieties, we must have organization and cooperation. The potato growers in each community from which potatoes are shipped should form an organization if they are not already organized. These organizations may cooperate if they wish by affiliating with the Michigan State Potato Association.

One of the first things the members of such an organization should do is to select one variety of potatoes which they will all agree to grow. When there is considerable variation in the soil, it may be necessary to grow two varieties, of the same season of ripening, in a community but it should not be done unless necessary. When both early and late varieties are grown in a community, it will be necessary of course to grow at least two varieties; and when potatoes are grown to supply the seed trade such varieties must be grown as will meet the demand. A community bordering a city where the potatoes are sold direct to the retailer or consumer has a greater leeway in the matter of the number of varieties of potatoes which can profitably be grown because each grower markets his own production. In nearly all such communities, however, the number of varieties now grown could very profitably be considerably reduced.

GROUP CLASSIFICATION AND DESCRIPTION OF POTATO VARIETIES.

In the group classification of varieties given in this circular, an effort will be made to point out those best adapted to Michigan conditions as well as to call attention to some varieties, which the writer believes should not be grown commercially in this state. The varietal classification and description of varieties here given was taken very largely from Bulletin 176 of the United States Department of Agriculture, written by Dr. Wm. Stuart, Horticulturist in the Bureau of Plant Industry. This classification is based upon the shape of the tubers and the color of the skin, sprouts and flowers. The groups are named after the most typical variety in the group.

GROUP I. COBBLER.

Group Description: Matures early. Vines medium to above medium in size, with somewhat spreading habit of growth. Stems dark green, stocky and rather short jointed. Leaves large, flat, medium dark green. Flowers numerous, rather large, light purple or rose-lilac in color. Tubers roundish with blunt ends, the stem end often being notched rather deeply and giving a shouldered appearance to the tuber. Eyes medium in number and variable in depth, often quite deep.

Skin smooth (netted on Irish Cobbler) and of a light creamy white color. Sprouts short and rather stubby, usually with a reddish violet coloration.

The following varieties belong to the cobbler group and are practically identical:

Early Dixie	Early Standard	Flourball
Early Eureka	Early Victor	Irish Cobbler
Early Petoskey	Extra Early Eureka	Potentate.

This group was named from the Irish Cobbler (Fig. 1) which is by far the most extensively grown variety of early potatoes. The origin of

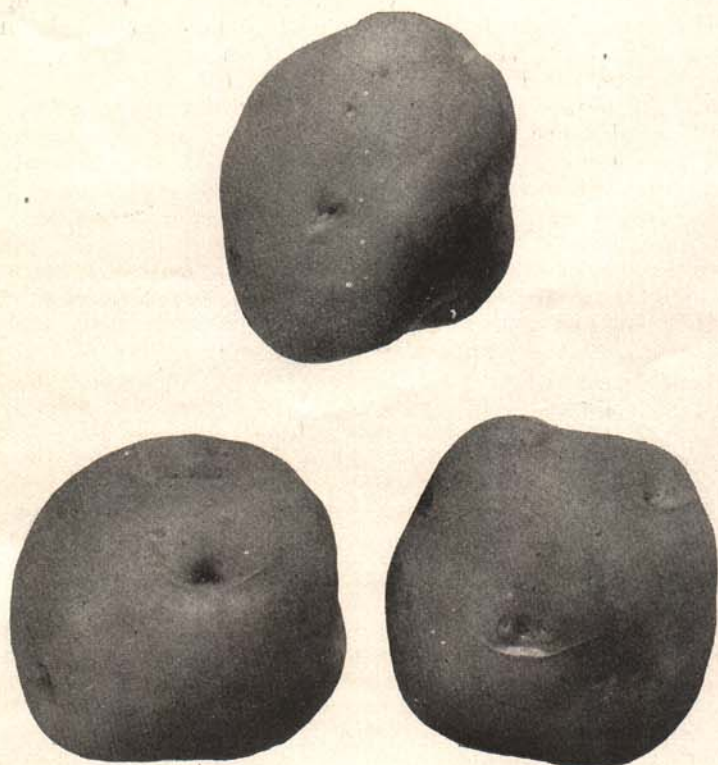


FIG. NO. 1.—IRISH COBBLER.
 $\frac{3}{4}$ Natural Size.

this variety is not known. Some seedsmen claim that it was first grown by an Irish shoemaker of Marblehead, Massachusetts. Dr. Stuart is of the opinion that it is simply a strain of Early Eureka and that at the present time the two are so mixed as to be undistinguishable. The Irish Cobbler is almost universally raised in the Norfolk and East Shore trucking districts of Virginia and Maryland. It is also extensively grown in other trucking centers and is gradually supplanting such varieties as Triumph and Early Rose. Large quantities of Irish Cobbler are also grown in northern Maine to supply seed for southern truck growers. It is of fair cooking quality and very popular as a market sort on most northern markets especially during the summer months. It is one of

the varieties that Michigan growers will need to plant if they grow seed for the Southern trade. It is a better yielder than the Early Ohio but not as good in most sections of the state, as the late maturing varieties that are commonly grown. It is very difficult to get Irish Cobbler seed which is pure and free from disease.

GROUP II. TRIUMPH.

Group Description: Ripens very early, but the yield is unusually low. Vines dwarfed and fairly compact, not much branched. Stems short, stocky, dark green. Leaves medium large and dark green. Flowers purple or rose-lilac in color. Tubers round with blunt ends, more or less shouldered. Eyes medium in

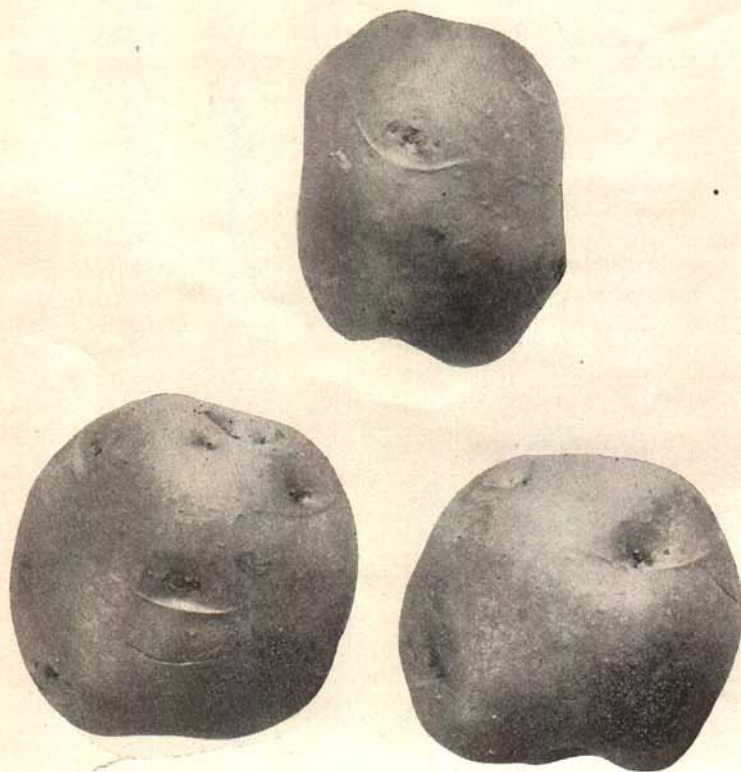


FIG. NO. 2.—TRIUMPH.
 $\frac{2}{3}$ Natural Size.

number and depth; bud-eye cluster usually deep set. Skin creamy white, occasionally with pink eyes or splashes (as in the White Triumph), with few or many splashes of crimson (as in the Quick Lunch and Noroton Beauty), or solid red or occasionally splashed with carmine (as in the Triumph). Flesh a creamy white. Sprouts more or less diffused with reddish violet.

The varieties which seem to belong to the triumph group are the following:

Honeoye Rose	Noroton Beauty	Quick Lunch
Triumph (Bliss's)		White Triumph

This group is named after the Triumph (Fig. 2) variety which is the

only one of the group having any considerable commercial value. It originated in Connecticut and is claimed to be a seedling of Peerless crossed with a seedling of Early Rose. It was introduced by B. K. Bliss and Sons in 1878. As this variety is grown extensively in the extreme southern part of the United States, particularly in Florida and Texas, the only place there seems to be for it in Michigan is to grow a limited amount of seed for the southern seed trade. It is doubtful considering the low yield usually secured whether it will pay to grow the Triumph even for seed purposes except in certain localities and particularly in the Upper Peninsula.

GROUP III. EARLY MICHIGAN.

Group Description: Vines of medium size, resembling those of the Early Ohio group. Flowers white. Tubers oblong-flattened to elongated flattened or ovoid. Eyes numerous. Skin white or creamy white or, in the case of the Early Albino, occasionally suffused with pink around the bud-eye cluster. Sprouts light rose-purple or nearly white.

The varieties in the Early Michigan group are Early Albino, Early Michigan and Early Puritan.

The Early Michigan from which the group is named was originated by Martin Bovee, Northville, Michigan, parentage not known. It was introduced by H. N. Hammond in 1895. While this variety is grown to some extent in Michigan it has no considerable commercial value at the present time.

GROUP IV. ROSE.

Group Description: Section 1: Vines of medium height with stout, rather erect dark green stems and medium to large leaves. Flowers rather abundant and white. Tubers elongated or oblong, usually flattish at the center and tapering gradually toward each end. Stem and seed end rather blunt. Eyes numerous, shallow to medium in depth, but sharply marked, sometimes protuberant. Skin smooth and, except in the Extra Early White Rose, of a rather deeper shade of flesh color or pink than the Early Ohio. Flesh creamy white, sometimes streaked with red. Sprouts rather long, medium thick, usually tinted with rose-lilac.

The following varieties are included in Section 1 of the Rose group:

Clark's No. 1	Early Thoroughbred	Houlton Rose
Early Durham	Early Vermont	Late Rose
Early Fortune	Early Walters	Northern Beauty
Early Maine	Extra-Early Fillbasket	Rochester Rose
Early Northern	Extra-Early Vermont	Somer's Extra-Early
Early Rose	Extra-Early White Rose	Thorburn
Early Roser		

Section 2: This section differs from section one of this group principally in the more luxuriant vine growth and the tubers are broad-roundish or short-oblong instead of elongated or oblong. The skin is slightly deeper in color than that of the Early Rose and the sprouts are shorter and thicker and mauve in color.

The varieties of section 2 of the Rose group are Early Manistee, Improved Manistee and Spaulding No. 4.

Section 3: This section is similar in foliage to section 1. The tubers are oblong, rather broad and thick, more or less flattened, large. Eyes numerous, usually deep colored. Skin much deeper pink than that of the Early Rose. Sprouts short, stubby and mauve in color.

The varieties that belong in Section 3 of the Rose group are:

Crine's Lightning	Lee's Favorite	New Scotch Rose
Extra Early Red Rose	Livingston	Old Early Rose
Jones Pink-Eyed Seedling	New Ideal	Seneca Beauty

All of the varieties of the Rose (Fig. 3) group have pink skinned

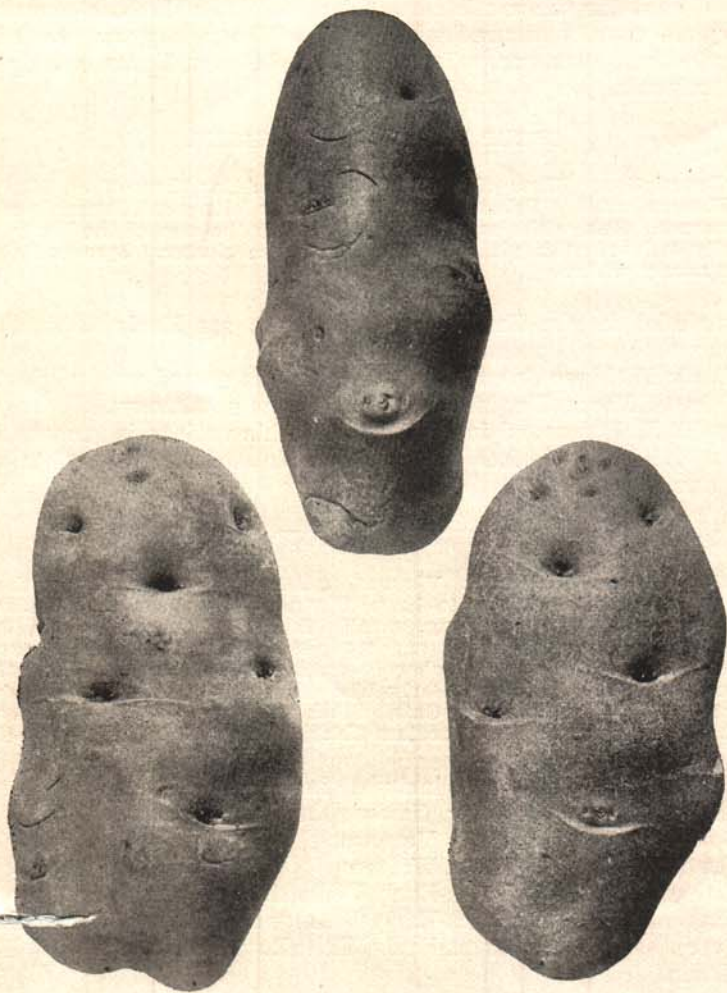


FIG. NO. 3.—EARLY ROSE.
 $\frac{3}{4}$ Natural Size.

tubers except Extra Early White Rose and all but Late Rose are considered early maturing. The Early Rose from which this group is named was originated by Albert Bresee, Hubbardton, Vt., in 1861. It is claimed to be a seedling of Garnet Chili. Introduced by B. K. Bliss and Sons in 1868. It was at one time quite a popular variety but owing to the tendency to grow long and rather rough it is being replaced by other varieties. Seneca Beauty of Section 3 of this group is of better shape

than Early Rose and of good quality. It is a good variety for the home garden. This group strikingly illustrates the fact that we have too many varieties. With the possible exception of the Seneca Beauty none of those in this group are of sufficient superiority to the Early Rose to have taken a prominent place as desirable commercial sorts.

GROUP V. EARLY OHIO.

Group Description: Vines are very similar to those of the Early Rose in habit

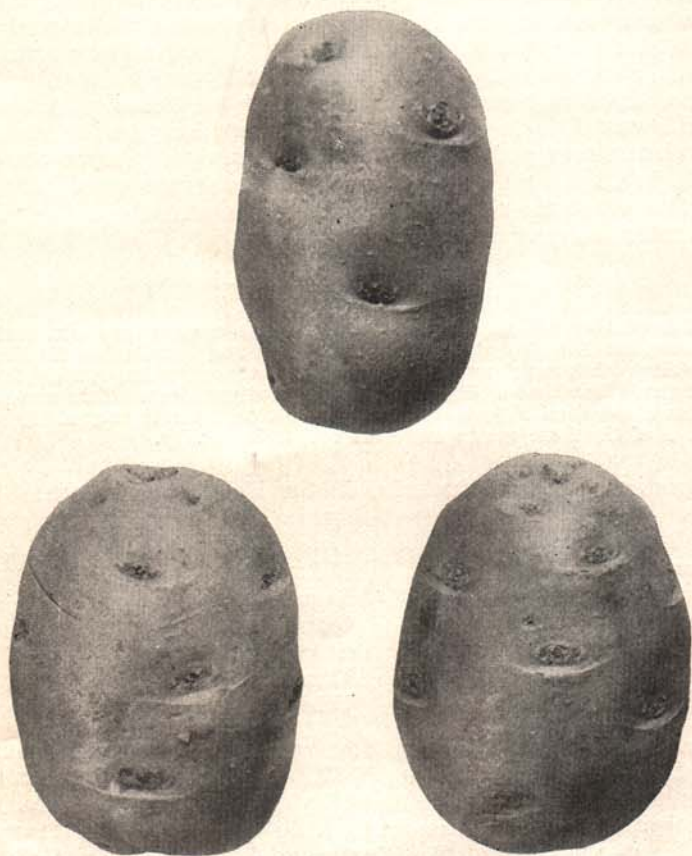


FIG. NO. 4.—EARLY OHIO.
¾ Natural Size.

of growth, character of foliage and color of flowers; they mature a little earlier, however. Flowers white. Tubers round-oblong with full, rounded seed and stem ends. Eyes numerous, rather shallow, but strong and sometimes protuberant. Skin and flesh light pink, except in the case of the White Ohio, with deeper color around the eyes and particularly around the bud-eye cluster. Surface of skin more or less dotted with small corky dots. These dots do not occur at all or are relatively inconspicuous on the Rose varieties. Sprouts short, much enlarged at base, color carmine-violet to violet-lilac.

Most of the members of the Early Ohio group are simply renamed

Early Ohio, or at least this statement is true of the first four named in the list:

Early Ohio	Ratakin's Red River Special	Late Ohio
Early Market	Early Acme	White Ohio
Prize Early Dakota	Early Six Weeks	

The Early Ohio (Fig. IV) from which this group was named was originated by Alfred Reese in 1871 and is claimed to be a seedling of Early Rose. It was introduced by J. J. H. Gregory in 1875. The Early Ohio is of good cooking quality and next to Irish Cobbler probably the most extensively grown early variety. It is not a heavy yielder but because of its earliness, good shape and quality and evenness of size of tubers is a deservedly popular sort, both for the home garden and as a commercial variety. It is grown very extensively in Minnesota and North Dakota; many of the potatoes of this variety from these states being sold in Ohio, and adjacent states for seed purposes. It is one of the varieties which the northern Michigan growers should include in the list of potatoes to grow for the seed trade.

GROUP VI. HEBRON.

Group Description: The varieties of this group mature medium early except in the case of the Late Beauty of Hebron. Vines very similar to the Early Rose. Flowers white. Tubers elongated, somewhat flattened, with rather blunt ends, occasionally spindle shaped. Eyes numerous, medium deep. Skin creamy white, more or less clouded with flesh color or light pink. Sprouts very similar to those in Section 1 of the Rose group but with rather less color.

The varieties which are included in the Hebron group are:

Columbus	Junior Pride
Country Gentlemen	Late Beauty of Hebron
Crown Jewel	Milwaukee
Early Beauty of Hebron	New Queen
Early Bovee	Quick Lunch
Gem of Aroostook	Star of the East
Harbinger	Vigorousa
Improved Beauty of Hebron	White Elephant

The Early Beauty of Hebron from which this group is named was originated by E. L. Coy, Hebron, N. Y. and is claimed to be a seedling of Garnet Chili. It was introduced by J. M. Thorburn & Co. in 1878. The varieties in this group are distinguished from the Rose group chiefly by the color of the tubers. The Early and Late Beauty of Hebron were quite extensively grown a quarter of a century or more ago, but are now seldom grown commercially. Their decadence has been largely due to the fact that they are very susceptible to the late-blight. Another factor which may have had some influence in this direction is the shape of the tuber which is undesirably long.

GROUP VII. BURBANK.

Group Description: Vines bushy and medium large. Stems light to medium green, branched and spreading. Leaves abundant and medium in size, medium green in color. Flowers white.

Section 1: Tubers long, cylindrical or slightly flattened in shape and inclined to be prongy when climatic conditions are abnormal. Eyes numerous and well

distributed, rather shallow, occasionally protuberant. Skin white or dull white, smooth to glistening. Sprouts creamy white or faintly tinged with magenta.

Section 2: Tubers have russet skin, heavily netted. In all other respects very similar to those in Section 1.

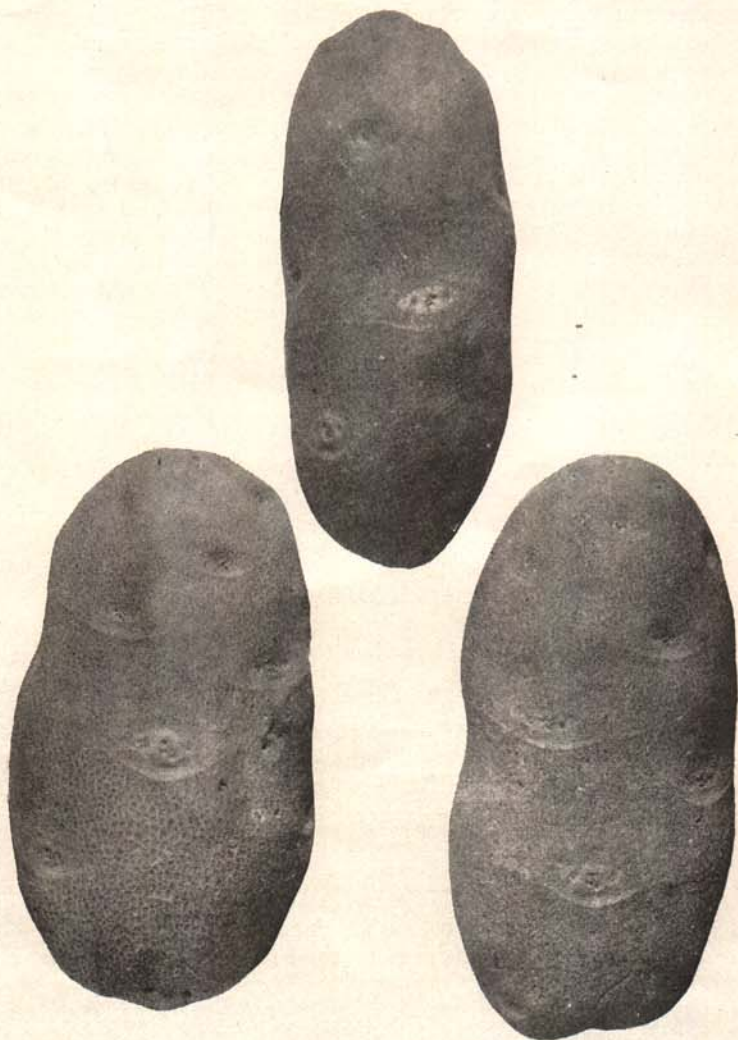


FIG. NO. 5.—RUSSET BURBANK.
 $\frac{3}{4}$ Natural Size.

The following varieties belong to the Burbank group:

Section 1.
 Burbank or Burbank Seedling
 Money Maker
 Pride of Multnomah
 White Beauty
 White Chief

Section 2.
 California Russet
 Cambridge Russet
 Old's Golden Russet
 New Wonderful
 Russet Burbank
 Scabproof

The Burbank from which this group received its name was originated by Luther Burbank in 1873 and is claimed to be a seedling of Early Rose. It was introduced by J. J. H. Gregory in 1876. The potatoes of this group are very much more widely grown in the west than in the east, their production being greatest in California. The California Russet, Cambridge Russet and Russet Burbank (Fig. V) are practically identi-

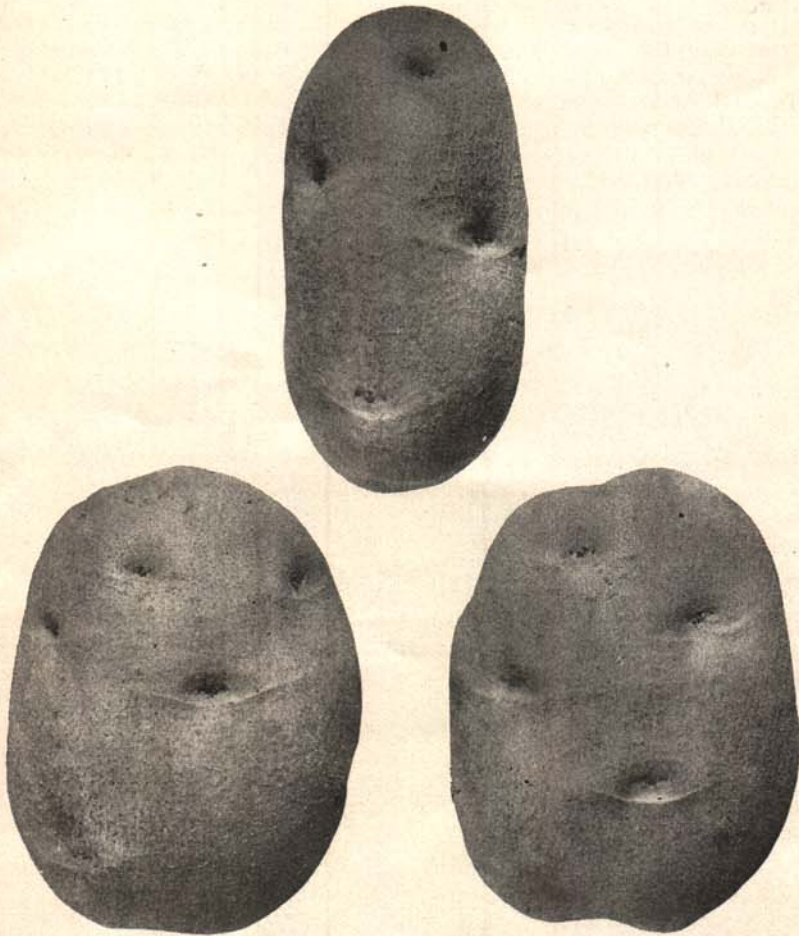


FIG. NO. 6.—GREEN MOUNTAIN.
¾ Natural Size.

cal. This variety of the Burbank group is grown to some extent in Michigan and because of its good baking quality will no doubt continue to be grown in home gardens. It is not the right shape, being too long for a first class commercial sort. The very heavy netting either resists the scab germs or makes the scab difficult to see; thus the claim often made for it of being scabproof.

GROUP VIII. GREEN MOUNTAIN.

Group Description: Vines large, strong, vigorous, and well branched. Stems nearly upright in early stages of growth, but gradually assuming a spreading habit toward the latter end of the season. Flowers white, abundant, rarely producing seed balls. Tubers broadly roundish-flattened to distinctly oblong-flattened; ends usually blunt, especially the seed end. Eyes medium in number, rather shallow, with strong bud-eye cluster. Skin dull creamy white, more or less netted, frequently with russet-colored splashes toward the seed end. Sprouts rather short and stubby. In Section 1, they are white. Those in Section 2, with the exception of the Twentieth Century and Late Puritan are mostly without color at the base while the tips are usually faintly or distinctly tinged with lilac or magenta.

The following varieties are placed in the white-sprout division or Section 1 of the Green Mountain group:

Bethel Beauty	Freeman	Long Island Wonder
Blightless Wonder	Gold Coin	Norcross
Carman No. 1	Green Mountain	Pride
Clyde	Green Mountain, Jr.	Snow
Delaware	Gurney's White Harvest	State of Maine
Empire State	Keystone	Uncle Sam
Farmer	Late Blightless	White Mountain

Section 2 of the Green Mountain group or the colored sprout division consists of:

Charles Downing	Idaho Rural	Rustproof
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The Green Mountain (Fig. VI) after which this group was named was originated by O. H. Alexander, Charlotte, Vt. in 1878. It is claimed to be a seedling from a cross between Dunmore and Excelsior. It was introduced by J. A. Everitt & Co. in 1885.

This group is next to the Rural in commercial importance. The Green Mountain and Gold Coin are the varieties of this group most commonly grown in Michigan. The Green Mountain is of slightly better quality than the Rural but is best adapted to sections where the rainfall is abundant. It is the leading variety in the famous Aroostook County potato growing section of Maine. This variety sets tubers somewhat earlier in the growth of the plants than the Rural and for that reason is more liable to injury than the Rural by drouth during the latter part of August or in September. This variety is, however, gaining in popularity and deservedly so in many places in Michigan.

GROUP IX. RURAL.

Group Description: Vines medium large. Primary stem upright, long jointed and rather sparsely covered with foliage; lateral branches more or less decumbent, giving the plant a straggly appearance. Stems more or less distinctly streaked with dark purple. Leaves rather small, dark green, more or less crumpled and leathery to the touch. Flowers medium abundant and of fair size; the central portion of the carolla is deep violet-purple, which gradually shades into a lighter tone toward the outer edge. The color is practically absent on the upper side of the five points of the corolla. Tubers round-flattened to broadly roundish oblong flattened or distinctly oblong. Eyes few, very shallow, bud-eye cluster, strong and frequently depressed. Skin creamy white and occasionally netted in the varieties of Section 1 while in those varieties belonging to section 2, it is a deep russet color, and much netted. Sprouts short, base enlarged, dull white; tips medium to deep purple or pansy violet.

The varieties which have been recognized as belonging to section 1 of

the Rural group appear in many cases to be old ones under new names; as for example Late Victor, Lily White, No. 9, Noxall, Ohio Wonder, Prosperity, Rhind's Hybrid and White Giant. These varieties are all considered to be practically identical with Rural New Yorker No. 2.

The following Varieties are classified as belonging to the Rural Group:

Section 1:	No. 9
Arcadia	Ohio Wonder
Carman No. 3	Peerless
Great Divide	Prosperity
Jackson White	Rhind's Hybrid
Late Victor	Rural New Yorker No. 2
Lily White	Sir Walter Raleigh
Million Dollar	White Giant
Noxall	White Swan

Section 2: Russet Rural (Late Petoskey)

The Rural New Yorker No. 2 (Fig. VII) from which this group was named was originated by E. S. Carman and is claimed to be a seedling of seedlings grown through several generations. It was introduced to the subscribers of the Rural New York, of which Mr. Carman was editor, in a limited way in 1888. It was offered to the public by J. M. Thorburn & Co. in 1889. Carman No. 3 of this group was also originated by E. S. Carman in 1888. It was introduced by J. M. Thorburn & Co. in 1895.

The Sir Walter Raleigh was originated by E. S. Carman and is claimed to be a seedling of the Rural New Yorker No. 2. It was introduced by Peter Henderson and Co. in 1897.

These three varieties are the leading ones of Section 1 of this group which are grown in Michigan. They have become so mixed or changed through selection that it is not possible at the present time to always be able to distinguish between them. In New York State the Rural group is spoken of as the "blue sprout" potatoes as compared with the "white sprout" potatoes of the Green Mountain group. To the trade in general those of the Rural group are known as "Round White" stock or the "Rurals." The tubers of this group keep well in storage and are slow to sprout in the spring. The vines develop slowly at first but as the season advances, they branch rather freely and develop reasonably large plants. The tuber formation is also delayed as compared with the Green Mountain group but toward the latter part of the season they develop very rapidly. This characteristic of very rapid late growth is no doubt largely responsible for the tendency of the Rural group to become hollow especially during seasons of excessive rainfall when the tubers are making the most rapid growth. As a group, the tubers are of desirable shape, attractive color, and good table quality and the vines are fairly resistant to drought and to diseases other than late-blight.

The Rural group are by far the most important of any from a commercial standpoint at least to Michigan growers. The white skinned varieties of this group are popular on all markets. The Russet Rural (Fig. VIII) is popular on some markets but owing to its somewhat dirty and sometimes dark skin it is discriminated against on other markets. It is, however, a popular variety with many growers in this state because of its high yielding ability and other desirable qualities. It should not be grown on soils which tend to produce dark skinned potatoes.

GROUP X. PEARL.

Group Description: Vines medium to large, strong, vigorous and as a rule well branched; stems dark green, more or less upright in early stages of growth, but gradually assuming a somewhat decumbent position as the vines approach maturity. Leaves medium to large, rather flat, dark green. Flowers white. Tubers medium to large, solid fleshed and heavy, round-flattened to heart-shaped flattened, usually heavily shouldered and broader at stem end. Under unfavorable conditions the tubers have a tendency to elongate and become less flattened. Eyes rather shallow, sometimes rather protuberant, or in off-type specimens inclined to

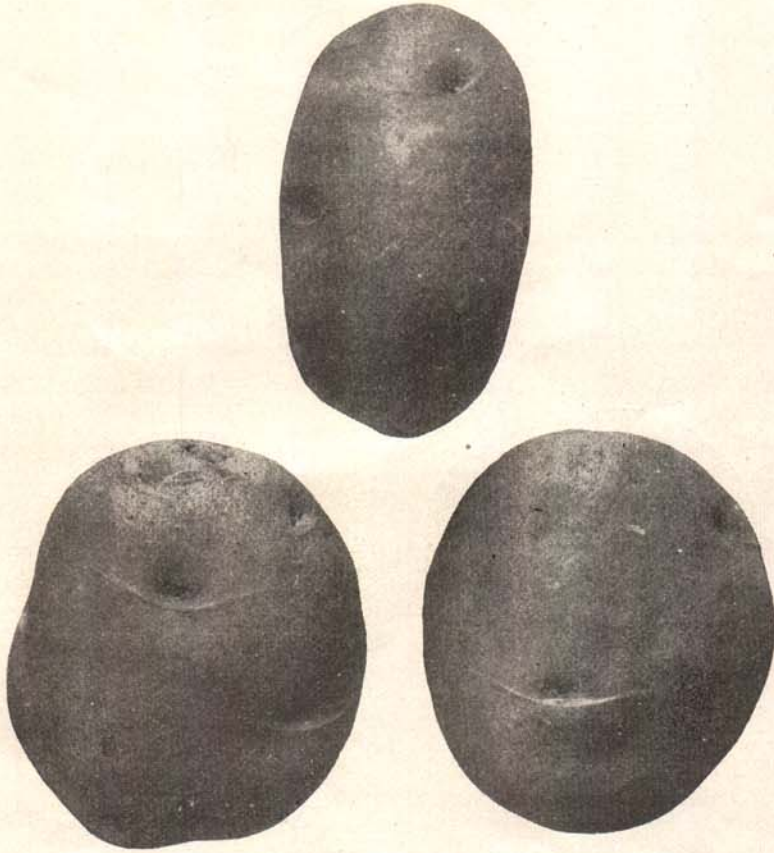


FIG. NO. 7.—RURALS.
 $\frac{3}{4}$ Natural Size.

be deep with heavy eyebrows. When freshly dug the Pearl tubers have a pinkish or light-purple tinge around the eyes, but when exposed to the light this color almost or quite disappears. Skin varying from a dull white or a dull russet with the Pearl or People's to a deep violet-blue often with creamy-white splashes around the eyes as in the Blue Victor. Sprouts of Section 1 are suffused with light lilac while in Section 2 they are mauve.

The varieties in Section 1 of the Pearl group are Pearl and Peoples; Section 2, Blue Victor.

The varieties of Section 1 are grown quite extensively in Colorado,

Idaho and adjoining states and to some extent in Wisconsin. They are grown but very little in Michigan. The Blue Victor is grown only occasionally and mostly as a novelty.

GROUP XI. PEACHBLOW.

Group Description: Vines strong, erect, vigorous, and deep rooted. Stems large, strong, woody and medium green in color. Leaves medium in abundance,

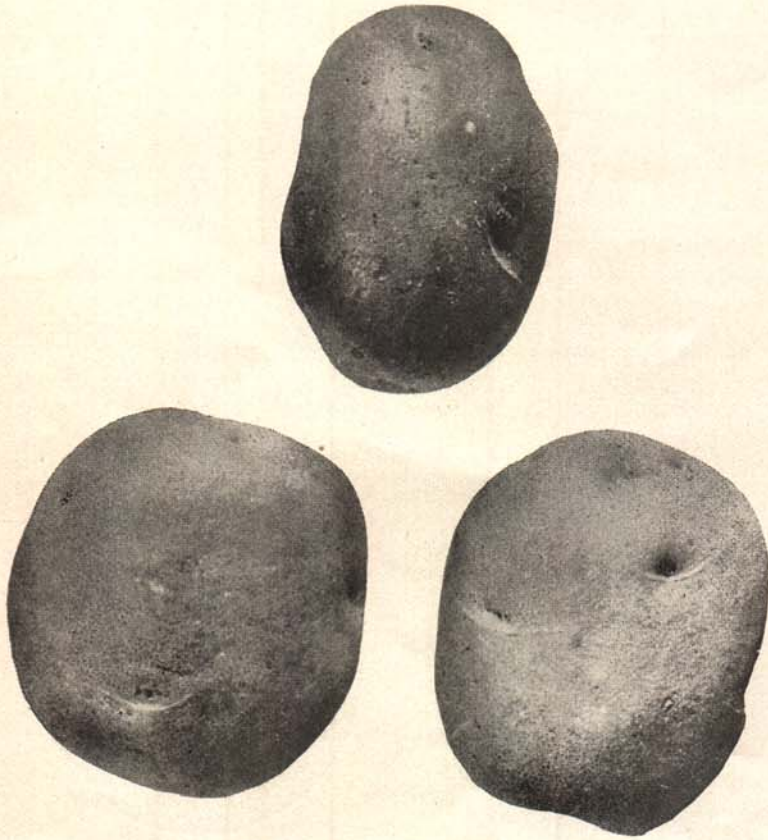


FIG. NO. 8.—RUSSET RURAL.
¾ Natural Size.

rather thick, crumpled, medium to large, and rather dark green. Flowers usually abundant, purple and inclined to produce potato balls freely when conditions are favorable. Tubers round to round-flattened or round-oblong. Eyes medium to numerous and shallow to deep, depending upon the variety, invariably suffused with carmine or crimson the intensity of which is variable. Skin creamy white to white splashed with crimson or flesh color or light or dark pink. Sprouts reddish violet.

The varieties belonging to the Peachblow group are:

Dykeman	Jersey Peachblow	Nott's Peachblow
Early Peachblow	McCormick	Perfect Peachblow
Extra Early Peachblow	New Imp. Peachblow	White Peachblow
Improved Peachblow	New White Peachblow	

The potatoes of this group have in the past occupied a very prominent place but at the present time they are little grown commercially except in a restricted area in Colorado and in a limited way as a late crop in Maryland and Virginia.

