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Selecting, Exhibiting & Judging POTATOES

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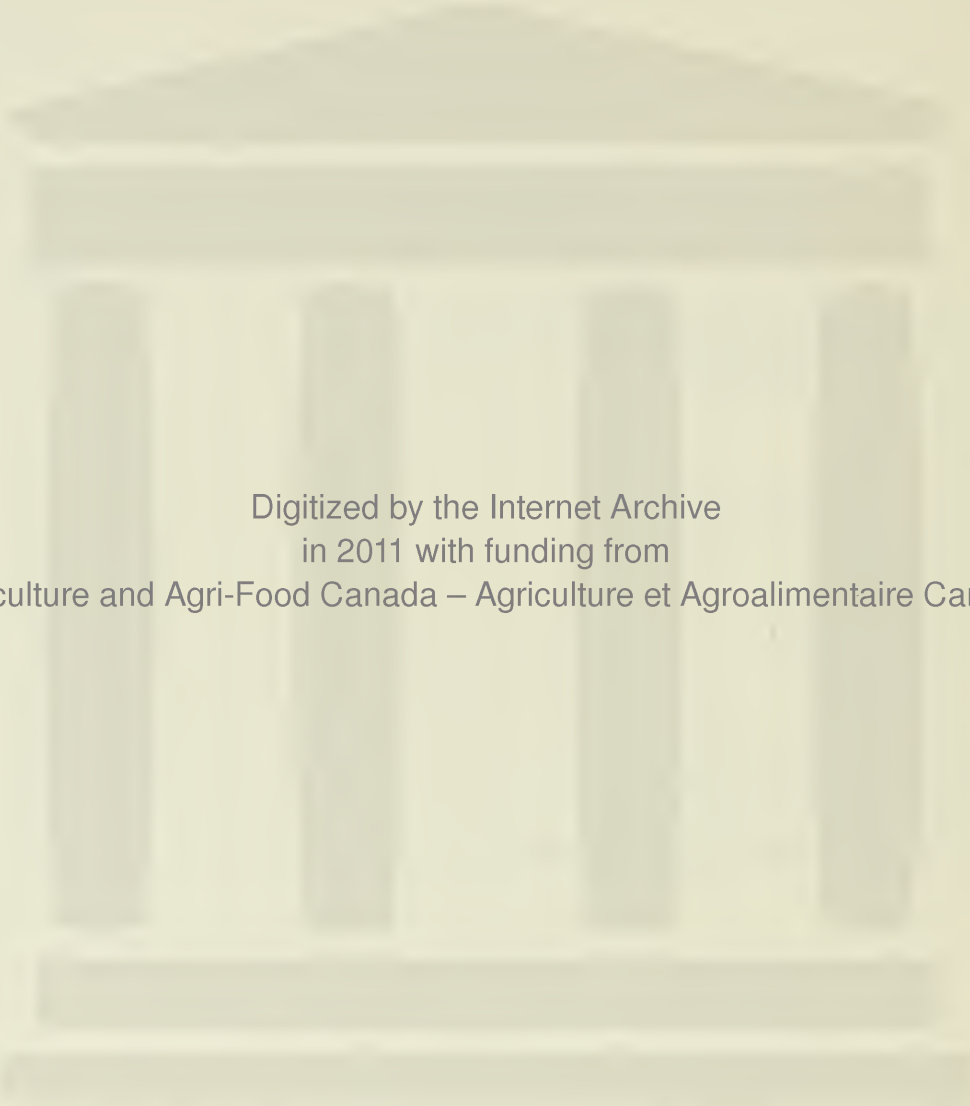
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Selecting, Exhibiting and Judging POTATOES

E.H. PETERS

Plant Protection Division, Ottawa

Selection and preparation of potato exhibits

Before choosing specimens for a show, you must know what to look for. One of the best guides is the official description of each potato variety summarized on page 9.

SELECTION

During the growing season, select and stake the best potato plants. They are the ones most likely to produce the best tubers. The best time to choose prize-winning potatoes is during the harvest when the soil is dry. The tubers are mature then, and the outdoor light is better than artificial light in a storage area. Also, you have a better chance of picking winners on a cool, clear day in the outdoors when potatoes are spread out on top of the ground than when they are piled in a bin or packed in bags or barrels.

After digging, leave the potatoes in the rows to dry for a few hours, to avoid skin peeling (feathering) or breaking problems. But don't let an overnight frost damage them. Potatoes grown in sand or silt soils are easier to clean than those grown in clay or muck soils.

Pick about three or four times as many potatoes in the field as you will need for your exhibit. This will allow for discards. Bring them indoors in a newspaper-padded box or cardboard container, handling them as gently as eggs to avoid bruising. Air checks, which look like thumbnail cracks on the surface of potatoes, can be caused by differences between indoor and outdoor temperatures.

All potatoes should match the variety description. When doubtful about size, weigh them on a scale that registers ounces, such as postal or fruit scales (table potatoes should weigh 9 ounces and seed potatoes 6 to 8 ounces, depending on

shape). Measure the length, width and thickness of the potatoes in inches and discard any that are out of proportion for the particular variety.

Reject potatoes with pointed ends because this may be a disease symptom. Skin color should be normal for the variety; reject unusually dark or light potatoes. Select the ideal potato from the group, then match it to the remainder to form your exhibit and include two spares.

GROOMING

Do not wash potatoes. Remove dirt and dust from the surface with a fine soft-bristled brush, taking care not to damage the skin. Some experts recommend a soft cloth. For a final finish before show day, rub the potatoes gently with lamb's wool or a woolen sock to impart a fine luster.

STORING AND SHIPPING

Wrap each potato in a sheet of clean, soft wrapping paper or tissue. This paper should *not* have any colored printing on it, because potatoes are living organisms that respire and give off gases and moisture that could mix with printer's ink and discolor the skin. Wrapping potatoes helps to prevent injuries and shields them from light, which causes greening (some varieties, such as Katahdin, green more rapidly than others). Large sheets of brown wrapping paper covering bins or boxes of seed potatoes before selection are helpful. Low-wattage light bulbs should be used in storages, except in the grading area. Place wrapped potatoes in a newspaper-padded wooden box, if you intend to ship them by express. Store potatoes at 40° F, in dark, frost-proof, well-ventilated storage.

Immediately before shipping examine the potatoes for blemishes. Rewrap individually and cushion them in crumpled or shredded paper to prevent jolting in transit. Fill out the printed exhibit tags with your name and address, and the variety and class of your entry.

Judging

There are two sets of judging standards for potatoes, one for table-stock, or table potatoes and the other for seed potatoes.

TABLE POTATOES

Factors that promote the appeal and sale of potatoes are the most important in judging table potatoes. These include appearance, maturity, and freedom from disease and injury. Trueness to variety is a secondary factor in table potatoes, but all samples in the exhibit must be of the same variety.

Freedom from disease — Potatoes should be free from all disease. Diseases are wasteful and detract from appearance.

Freedom from mechanical, insect and other injuries — Samples should not show any injury resulting from harvesting, handling, quack grass, insects, slugs, sunburn, frost injury, cuts, fertilizer injury, sprouts, second growth and growth cracks.

Size — In general, large potatoes weighing about 9 ounces are selected for table-stock classes.

Uniformity – This means uniform in size, shape, color of skin, and placement of eyes and eyebrows. An eye is the natural depression from which a sprout will grow to form a stalk. The eyebrow is a line just above the eye and it resembles a human eyebrow. Bulgy eyebrows are not typical of any variety and should be rejected.

Shape – Shape should be typical for the variety as outlined in the description. As a general rule, potatoes are classified as round, oblong or long, but the Cherokee variety has an elliptical shape and is somewhat flattened on one side near the stem end. The shoulders at the ends of a potato should not be ‘pinched.’ Potatoes that have started second growth or slight knobs should be discarded.

Quality and texture of flesh, and maturity – In North America most varieties have white flesh. Some have rose or red splashes that are a distinct characteristic of the variety. Blue potatoes have blue or purplish splashes in white flesh. The flesh should be firm, solid, close-grained and true to color for the variety.

Potatoes are fully developed when the tops die naturally. A mature potato tuber has a firm skin and solid flesh. Immaturity in potatoes is shown by feathering, or peeling of the skin. This defect is usually accompanied by scalds (brownish discolorations), which are really injuries to the exposed flesh. Potatoes possess the best table quality when they are well matured.

Potatoes are also classified as early, mid-season or late, to describe their maturity. There are minor modifications of these terms.

General appearance – Samples should have a bright, clean, smooth, attractive appearance. Care should be taken that the natural color and bloom of the skin are not destroyed by excessive rubbing or brushing. “Bright” describes potatoes that are free from dirt, or other foreign matter, damage or discoloration from any cause.

Sunburned tubers (those greened by light) should be discarded in favor of those with normal coloring. The normal skin of the Katahdin variety shows a light golden-green translucence. Potatoes with enlarged lenticels and other skin defects should not be shown.

Purity of variety (formerly called “Type” or “Trueness to variety”) – The tuber characteristics of the variety should be true in all respects. Some points to consider are: shape, size, color of skin, color of flesh and eyes, depth and placement of eyes, prominence and correctness of eyebrows, netting, smoothness and any other feature listed in the official description.

SEED POTATOES

In Canada, seed potatoes must pass field and tuber inspections of the seed potato certification regulations administered by the Plant Protection Division of the Canada Department of Agriculture. Entries in seed potato classes must be accompanied by an official certification tag for the current crop year. At major competitions, the classes are designated by number and generally stipulate the color, shape, maturity and eligible varieties.

The main points in judging seed potatoes are: General appearance including shape and type; uniformity and size; purity of variety; and freedom from disease, defects and injuries.

Varietal type is stressed more in exhibiting and judging seed potatoes than

table potatoes. It is therefore essential to plant, select and show only those tubers that resemble the official description. Select seed tubers of 6 ounces for the round and oblong classes. For long varieties, such as Netted Gem and White Rose, the preferred size is 8 ounces. If the size of tubers has been established by the Seed Committee of a fair, select the size stated in the prize list.

The eyes of seed potatoes should conform as nearly as possible to the official description. John Tucker* explained this matter very well when he wrote: "There are certain true outstanding characteristics in every variety which must not be sacrificed in seed classes such as, for instance, in the Irish Cobbler variety, the round type with seed-end eyes not too shallow. Shallow eyes for this variety are not amiss in table stock classes and are preferred from the housewife's standpoint, but the correct depth of eye is required in seed stock.

"Seed selection has considerable influence on type. Varietal type refers to the shape and form of the tuber, to the texture and color of skin, to the number, depth and location of eyes. These are more or less variable and depend upon environmental and also inherent factors, but type may be said to be fairly constant within a variety."

SCORE CARDS

Score cards are used for evaluating certain units, or factors, considered in judging exhibits. A definite number of points is assigned to each factor, with a total of 100 points. A score card is a useful guide for persons learning to judge.

Score Card for Judging Table Potatoes

	Score
General appearance (clean, bright, attractive)	10
Uniformity and size (9 ounces preferred)	10
Purity of variety (conforming to type)	20
Freedom from disease, scab, rhizoctonia, blight and silver scurf	20
Freedom from defects (cuts, bruises, sunburn and insect injury)	20
Maturity, quality and texture of skin	10
Smoothness (according to variety)	<u>10</u>
	100

Score Card for Judging Seed Potatoes

	Score
General appearance (shape and type)	15
Uniformity and size (6 to 8 ounces)	15
Purity of variety	25
Freedom from defects and injuries	20
Freedom from disease	<u>25</u>
	100

INSTRUCTIONS FOR JUDGES

1. Before the fair, review the official tuber characteristics and proper terms used in judging. Consult the fair's prize list about their classes and regulations.

*Formerly in charge of Seed Potato Certification for Canada.

2. Look over the classes, or class. Select your top and bottom placings first, then decide the placing of the remainder of each class based on freedom from defects, etc. Some judges use numbered slips of paper that can be rearranged, particularly when there are many exhibits.
3. In close placings, examine each tuber by looking at both sides and ends, because blemishes are often turned downwards.
4. It is wrong and unethical to look at the names and addresses of the exhibitors before placing the class.
5. When a placing has to be made between an off-type exhibit and another with a minor surface disease, for example, russet scab or slight rhizoctonia, you should place the slightly diseased sample ahead of the off-type tuber. The reasoning behind this is that seed treatment will control slight scab or rhizoctonia but off-type has no cure.
6. For your own satisfaction, sign and date the entry sheet and, if you wish, make a list of the awards.
7. It is preferable to do the judging before the general public is admitted, to avoid interruption.
8. As judge, your decision is final.

Show disqualifications

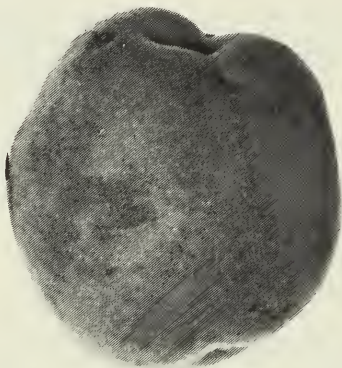
Exhibitors should read thoroughly the rules governing exhibits or any regulations of the show concerning entry qualifications. These rules are generally outlined in the fair's prize list. Some show disqualifications are:

1. Potatoes not properly prepared; they should *not* be washed (removes the natural bloom) nor waxed.
2. Mixed varieties.
3. Incorrectly named varieties.
4. An entry made in the wrong class.
5. Incorrect quantity of tubers.
6. Attempting to interfere with or influence a judge.
7. Improperly tagged exhibits; a tag should show grower's name and address, variety, class and, in some cases, the section number. A similar tag should be placed inside the containers.
8. Deadline for entry not met; most class A fairs or exhibitions have a specific date by which entries and fees must be received.

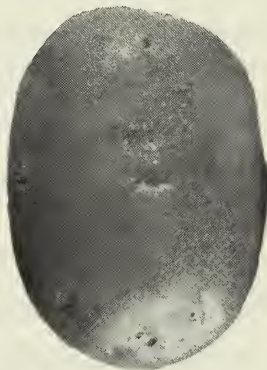
Potato varieties on seed list

The following notes describe the tuber characteristics and maturity of each of the 46 seed potatoes presently licensed for sale in Canada. Measurements are approximate.

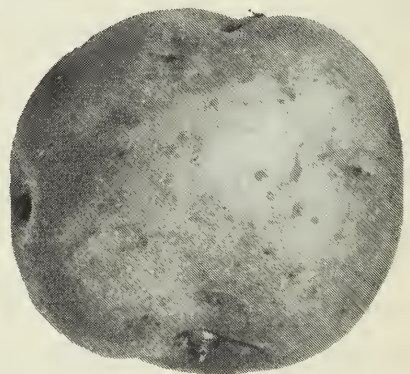
<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Arran Consul	Early	Oblong to oval, white skin, shallow eyes, white flesh.
Avon	Mid-season	Short oblong, $3\frac{1}{4} \times 3 \times 2\frac{1}{2}$ inches, smooth dark cream-buff skin, medium-deep eyes, medium-long inconspicuous curved eyebrows, white flesh.
Bliss Triumph	Early	Large to medium round, thick, $3 \times 3\frac{1}{4} \times 2\frac{3}{4}$ inches, red skin, medium-deep eyes, medium-long curved eyebrows, white flesh.
Canus	Mid-season	Roundish oblong somewhat flattened, $3\frac{1}{4} \times 3 \times 2\frac{1}{4}$ inches, smooth creamy-white skin, few shallow eyes, white flesh.
Cariboo	Late	Oblong, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, cream-buff skin with pink patches, shallow pink eyes, white flesh.
Cherokee	Mid-season	Short, elliptical, somewhat flattened on one side near stem end, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, slightly flaked ivory-yellow skin, white in commercial trade, medium-shallow self-colored eyes, white flesh.
Chinook	Mid-season	Similar to Irish Cobbler, $4 \times 3\frac{3}{4} \times 2\frac{1}{2}$ inches, slightly netted or feathered golden-sandy skin, shallow eyes more numerous near bud end,* white flesh.



Avon



Cariboo



Cherokee

* Also known as blossom, seed, eye, rose or apical end.

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Chippewa	Mid-season	Smooth, large, elliptical to oblong, medium thick, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, cream-buff skin, shallow eyes, white flesh.
Columbia Russet	Late	Medium-long tubers, $4\frac{1}{2} \times 2\frac{3}{4} \times 2\frac{1}{4}$ inches, russet skin, medium-deep eyes, white flesh.
Early Ohio	Early	Round oblong, $3\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{4}$ inches, numerous shallow pink eyes, pink skin, white flesh sometimes pink near skin.
Early Rose	Early	Oblong or elongated, medium size, blunt ends, smooth pink skin, shallow pink eyes, medium long slightly curved eyebrows, white flesh streaked with red.
Epicure	Early	Round, irregular shape, white skin that turns pink in storage or on exposure, deep eyes, prominent eyebrows, white flesh.
Fundy	Mid-season	Elliptical, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, slightly netted dark-cream skin, shallow eyes, white flesh.
Gold Coin	Late	Slightly oblong, rather broad, very thick with rounded ends, thin smooth glossy light-golden skin, white flesh.

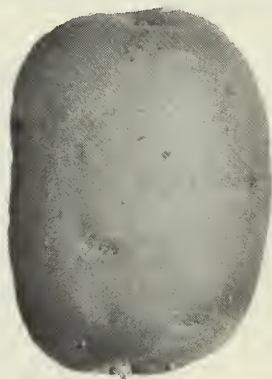


Chinook

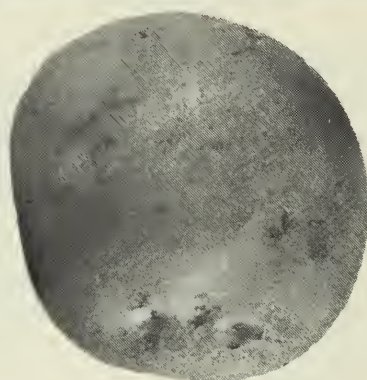


Grand Falls

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Grand Falls	Mid-season	Oblong, flattened, medium thick, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, smooth cream-buff skin, moderately deep eyes same color as skin, more eyes at bud end, long not-very-prominent eyebrows, white flesh.
Green Mountain	Late	Large, broad, oblong, flattened with blunt ends, $4 \times 2\frac{1}{2} \times 2$ inches, skin either smooth white or slightly netted, medium-deep eyes, medium-long slightly curved eyebrows, white flesh.
Hunter	Mid-season	Elliptical, medium thick, $3\frac{1}{4} \times 3 \times 2\frac{1}{4}$ inches, smooth dark cream-buff skin, shallow eyes, medium-long curved eyebrows, white flesh.
Huron	Very late	Flattened oblong, medium thick, $3\frac{1}{4} \times 2\frac{3}{4} \times 2$ inches, white flaked skin, medium-deep eyes, white flesh.
Irish Cobbler	Early	Large to medium round with blunt ends, deep eyes, stem end often deeply notched, white skin and flesh, about the size of a baseball — $3 \times 2\frac{3}{4} \times 2\frac{3}{4}$ inches — and should sit upright on each end.
Katahdin	Late	Large but short elliptical roundish, medium thick, $3\frac{1}{4} \times 3 \times 2\frac{1}{4}$ inches, smooth glossy skin, shallow eyes, medium-long curved eyebrows, white flesh.



Green Mountain

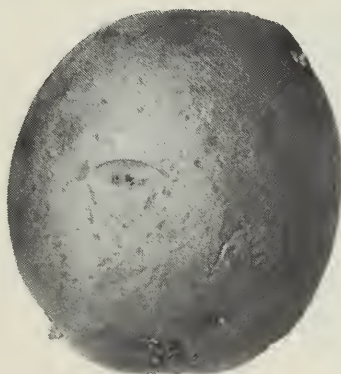


Hunter

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Kennebec	Late	Elliptical to oblong, $3\frac{1}{2} \times 2\frac{3}{4} \times 2\frac{1}{4}$ inches, smooth creamy-buff skin, shallow eyes, medium-long curved medium-prominent eyebrows, white flesh.
Keswick	Mid-season	Elliptical to oblong, medium thick, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, smooth dark creamy-buff skin, medium-deep eyes, short to medium-long curved eyebrows, white flesh.
La Rouge	Mid-season	Similar to Irish Cobbler but slightly longer, smooth red skin, $3\frac{1}{4} \times 2\frac{1}{2} \times 2$ inches, many well-distributed red medium-deep eyes, medium-white to creamy flesh.
Manota	Mid-season	Oblong, $3\frac{1}{2} \times 2\frac{3}{4} \times 2\frac{1}{4}$ inches, smooth creamy-white skin, very shallow eyes, curved inconspicuous eyebrows, very white flesh.
McIntyre	Late	Oblong, slightly flattened, medium thick, $5\frac{1}{4} \times 2\frac{1}{2} \times 2$ inches, creamy-white skin with purple splashes, definitely purple around bud end, sometimes slightly russeted, numerous eyes moderately deep with purple shading, eyebrows purple tint almost straight, flesh light cream tinged with purple at bud end.



Irish Cobbler

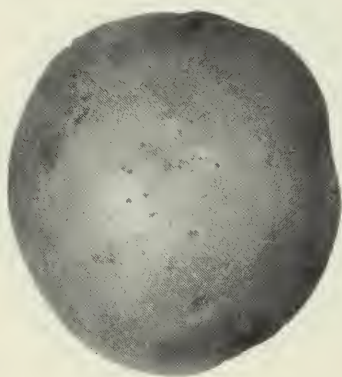


Katahdin



Kennebec

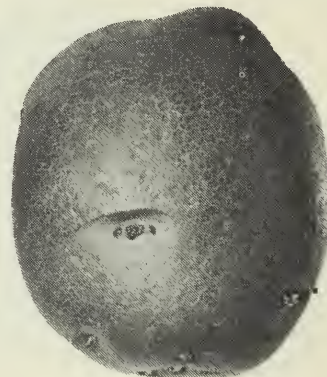
<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Netted Gem	Late	Long slightly flattened, show size 8 oz, $4\frac{1}{2} \times 2\frac{3}{4} \times 2\frac{1}{4}$ inches, heavily netted russet skin, numerous well-distributed shallow eyes, short inconspicuous curved eyebrows, white flesh. Other names in U.S.A. are: Russet Burbank, California Russet, Idaho Russet, Golden Russet. "Idaho Baker" name has been trade-marked recently by the State of Idaho.
Norgold Russet	Early	Oblong to long, $3\frac{1}{2} \times 2 \times 1\frac{1}{2}$ inches, uniform russetting, heavily netted skin, well-distributed shallow eyes that turn pinkish in storage, very white flesh.
Norland	Very early	Medium oblong, slightly flattened, $3\frac{1}{4} \times 3 \times 3$ inches, soft red skin, few eyes of medium depth, white flesh.
Pink Pearl	Mid-season to late	Oval, $3\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ inches, smooth pink skin, medium-shallow eyes more numerous at bud end, white flesh.
Pontiac	Late	Large, oblong to round with blunt ends, $3\frac{1}{4} \times 3 \times 2\frac{3}{4}$ inches, smooth yet sometimes netted red skin, medium-deep red eyes, medium-long slightly curved inconspicuous eyebrows, white flesh.



Keswick



Netted Gem

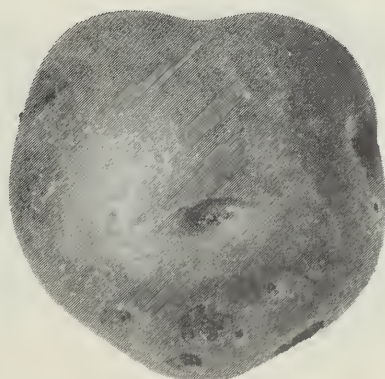


Norland

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Pungo	Mid-season to late	Elliptical to round elliptical, $3\frac{1}{4} \times 3 \times 2\frac{1}{2}$ inches, flaked dark cream-buff skin, medium-deep eyes, medium-long curved prominent eyebrows, white flesh.
Raritan	Mid-season to late	Oblong to round, $3\frac{1}{2} \times 2\frac{1}{2} \times 2$ inches, netted skin, shallow eyes, white flesh.
Red La Soda	Mid-season	Elliptical to slightly oblong but tapering slightly to bud end, $3\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ inches, bright deep-red skin, wide medium-deep eyes, curved prominent eyebrows, white flesh. This is a red-colored mutant of La Soda, a white-skinned variety.
Red Pontiac	Late	A deeper-red mutant of Pontiac identical in shape, size, eyes and color of flesh.
Red Warba	Early	A red-colored mutant of Warba, with same size and shape.
Russet Rural	Late	Large broad oblong, flattened, netted russet skin, few shallow eyes, bud eye and cluster depressed, medium-sized curved eyebrows, white flesh. A genetic russet skin mutant of Rural New Yorker No. 2; occasionally tubers are only partly russeted.



Pink Pearl



Red Pontiac

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Sable	Mid-season	Elliptical to oblong, uniform size, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, shallow eyes, medium-long inconspicuous eyebrows, white skin and flesh.
Sebago	Late	Large, elliptical to round elliptical, medium-thick, $3\frac{1}{4} \times 3 \times 2\frac{1}{2}$ inches, smooth white skin, shallow eyes, short curved medium-prominent eyebrows, white flesh.
Superior	Mid-season	Oval to oblong, uniform size, tan, smooth or flaky, slightly netted skin, medium-deep eyes, white flesh.
Teton	Late	Round to oblong, slightly flattened, $3\frac{1}{4} \times 3 \times 2\frac{1}{2}$ inches, slightly yellow skin, few shallow eyes, white flesh.
Viking	Mid-season	Oblong, round, $3\frac{1}{2} \times 3 \times 2\frac{1}{2}$ inches, smooth red skin, shallow well-distributed eyes, white flesh.



Sable



Sebago

<i>Variety</i>	<i>Maturity</i>	<i>Tuber characteristics</i>
Warba	Early	Short, round, $2\frac{3}{4} \times 2\frac{3}{4} \times 2\frac{3}{4}$ inches, creamy-white skin with deep pink eyes, long slightly curved eyebrows appear distinct because of reddish color, white flesh.
Waseca	Very early	Medium to large, oblong to round, medium thick, smooth red skin, medium-shallow red eyes, white flesh.
Wauseon	Mid-season to late	Round to oblong, slightly flattened, $3\frac{1}{4} \times 3\frac{1}{4} \times 2\frac{1}{2}$ inches, smooth light cream-buff skin (considered white), white eyes and flesh.
White Rose	Early	Large, long, elliptical, flattened, usually irregular shape, $5\frac{1}{4} \times 2\frac{3}{4} \times 2\frac{3}{4}$ inches, smooth white skin, numerous medium-deep eyes, white flesh.
York	Early to mid-season	Smooth, oblong, $3\frac{1}{2} \times 3 \times 2\frac{1}{4}$ inches, slightly flaked to lightly netted light-tan skin, shallow white eyes well distributed but more numerous at bud end of tuber, creamy-white flesh.



Viking



White Rose



York

CONVERSION FACTORS FOR METRIC SYSTEM

Imperial units	Approximate conversion factor	Results in:
LINEAR		
inch	x 25	millimetre (mm)
foot	x 30	centimetre (cm)
yard	x 0.9	metre (m)
mile	x 1.6	kilometre (km)
AREA		
square inch	x 6.5	square centimetre (cm ²)
square foot	x 0.09	square metre (m ²)
acre	x 0.40	hectare (ha)
VOLUME		
cubic inch	x 16	cubic centimetre (cm ³)
cubic foot	x 28	cubic decimetre (dm ³)
cubic yard	x 0.8	cubic metre (m ³)
fluid ounce	x 28	millilitre (ml)
pint	x 0.57	litre (ℓ)
quart	x 1.1	litre (ℓ)
gallon	x 4.5	litre (ℓ)
WEIGHT		
ounce	x 28	gram (g)
pound	x 0.45	kilogram (kg)
short ton (2000 lb)	x 0.9	tonne (t)
TEMPERATURE		
degrees Fahrenheit	(°F-32) x 0.56 or (°F-32) x 5/9	degrees Celsius (°C)
PRESSURE		
pounds per square inch	x 6.9	kilopascal (kPa)
POWER		
horsepower	x 746 x 0.75	watt (W) kilowatt (kW)
SPEED		
feet per second	x 0.30	metres per second (m/s)
miles per hour	x 1.6	kilometres per hour (km/h)
AGRICULTURE		
gallons per acre	x 11.23	litres per hectare (ℓ/ha)
quarts per acre	x 2.8	litres per hectare (ℓ/ha)
pints per acre	x 1.4	litres per hectare (ℓ/ha)
fluid ounces per acre	x 70	millilitres per hectare (ml/ha)
tons per acre	x 2.24	tonnes per hectare (t/ha)
pounds per acre	x 1.12	kilograms per hectare (kg/ha)
ounces per acre	x 70	grams per hectare (g/ha)
plants per acre	x 2.47	plants per hectare (plants/ha)

