Methods For Identifying Varieties of Peaches

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The variety factor in the commercial production of the peach is a more important essential for profit than ever before. The competition between such fruits as oranges, grapefruit, pineapples, bananas, and melons has become very keen in the market. The consumer demand is now more selective and fruit processors will more and more seek certain varieties for special uses.

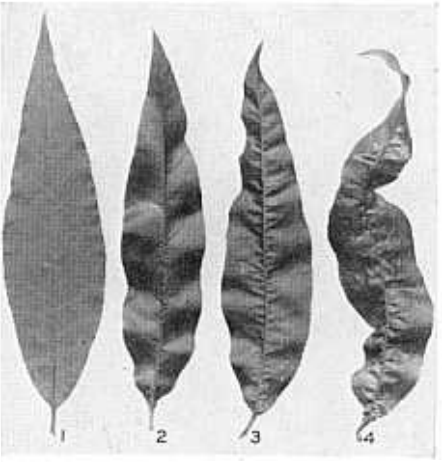
The time that a variety ripens often determines whether or not it sells well. Such characters as hardiness, productiveness, and resistance to injurious pests may each determine whether or not a variety is profitable. It becomes quite clear that from the standpoint of the commercial grower, varieties cannot be too accurately described, propagated, and distributed for planting.

In these modern times when three distinct kinds of peaches are sold under the same name and no one knows which is really entitled to bear the name, there is dire need for an improvement in our practice of introducing varieties. The statement is not infrequently made that a certain new variety resembles either the Persian or the Chinese type of peach; yet the distinguishing character differences between the two cannot be presented.

The various varieties of peaches are much more difficult to identify than apples, either as trees or ripe fruits. Peaches do possess, however, many characters which lend themselves to classification and standardization in a practical manner. Every advantage should be taken of these characteristics to develop better practical means of identifying and classifying both the trees and fruits of our commercial varieties. The external characters most helpful in such work are the dormant fruit buds, the leaves, flowers, fruits, and the pits or stones. It will not be possible, in a short article, to discuss any of these except very briefly.

Leaf Characteristics

Trees which bear yellow-fleshed fruits can be distinguished from those which bear white-fleshed fruits by means of several characters, including the leaves and flowers. The midrib, veins, and even the blades of the leaves of yellow-fleshed varieties possess distinctly yellow shades of green as compared to very little or no



Peach leaves illustrating four classes of leaf conformation. 1. flat, 2. wavy, 3. slightly wavy and crinkled, 4. distinctly wavy and crinkled.

yellow in the case of white-fleshed varieties. When the trees are in full foliage those of yellow-fleshed varieties can often be distinguished from white-fleshed varieties at some distance. There is really no excuse for failure to note mixtures of yellow- and white-fleshed varieties in the nursery row.

The leaves of the peach are regular in form but the blades vary in width to length ratio, in base and apex angles, and in general conformation of the surface of the blade. The conformation of the leaves may vary from flat, to wavy, to slightly wavy and crinkled, and to distinctly wavy and crinkled as illustrated in the accompanying photograph. The leaves of different varieties also vary in width to length ratio and in base and apex angles of the blades. Four classes of the range in base angles are shown in the accompanying illustration. Hiley leaves are characterized by an acute angled base while those of Chinese Blood develop a very broad obtuse-angled base. To be of much practical value such descriptive terms need to be in numerical form as illustrated by the brief accompanying table. The angles given are for 6 to 7 inch leaves.

The glands at the base of leaf blades and on the petioles have long been used for varietal identification purposes. All of the wild types of peaches from China have reniform glands; likewise Chinese Cling and Elberta. When a new peach possessing globose glands is given a name which includes Elberta or Hale, it is evident that the name is not appropriate from a pomological point of view. The peach is likely to behave too much like the Crawfords.

Peach leaves illustrating four classes of base angles. 1. narrow acute (Sleepers Dwarf), 2. acute (Hiley), 3. broadly acute (Japan Cling), 4. obtuse (Chinese blood).

Flower Characteristics

The petals of the flowers of the peach are often most helpful in the identifica-

ANGLE FORMED BY THE BASE OF LEAF BLADES OF DIFFERENT PEACH VARIETIES

Class	Description	Angle Range	Variety	Actual Range
	Narrow acute	59° and less	Sleeper	50°
	Acute	60 to 74°	Valiant	69°
3	Broadly acute	75 to 84°	Eclipse	80°
4	Obtuse	85° and plus	Hardee	92°

tion of varieties, particularly of young trees before they begin to bear. Some varieties, such as Carman, Eclipse, and Hiley, develop large showy petals; others, such as Elberta and Belle, develop nonshowy but large dished petals; some develop medium-sized nonshowy petals; and still others develop very small petals. These different classes of flowers are rather easily classified when a length of petal standard is employed.

The flowers of any variety fluctuate in size on the same tree and under varying weather conditions so care must be used to select representative flowers. If proper evaluations are to be made it is also necessary to appreciate the variations in petal size which may result from low temperatures.

It may be noted that the petals of large, showy flowers have a length of .70 inch or more at New Brunswick, New Jersey while those of medium, showy flowers may vary from .55 to .69 inch in length. Such numerical standards are of value in enabling anyone to determine whether or not the flowers of a given variety are of normal size in any given season.

Two varieties of white-fleshed peaches, such as Cumberland and Raritan Rose, which ripen at the same season can be readily distinguished because the former develops showy petals and the latter develops nonshowy petals. Elberta and J. H. Hale both develop nonshowy flowers but are rather easily distinguished since Elberta petals are longer than those of J. H. Hale and the flowers of the latter are self-sterile.

Pit or Stone Markings

The pit or stone markings of the peach have not been employed to any extend for the purpose of varietal identification but are too valuable for this purpose to be neglected. When all species and varieties are considered, the stones present an

CLASSIFICATION OF PEACH FLOWERS

I SHOWY FLAT PETALS

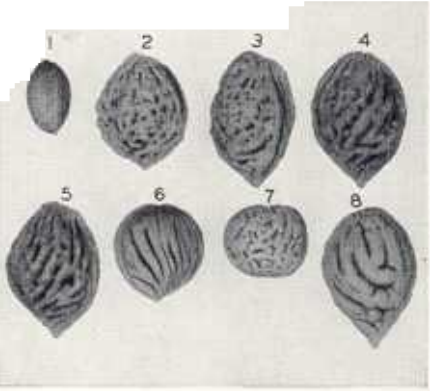
Description	Class Specification (length)	Round Petals Class		Oval Petals Class	
	inches				
Large	.70 and plus		Early Wheeler	4	General Lee
Medium	.55 - .69	2	Duke of York	5	Hiley
Small	under .55	3	Bolivian	6	N. J. Red Leaf

II NONSHOWY DISHED PETALS

Description	Class Specification (length)	Class	Representative Variety
	inches		
Large	.45 and plus	7	Elberta
Medium	.35 - .44	8	Late Crawford
Small	under .35	9	Smock

array of pittings and grooves that form many distinctive patterns. One classified collection of these is illustrated in this article. The pit markings often furnish valuable evidence as to whether a variety is a pure European or a combination of the European and the Chinese Cling.

A rather comprehensive study of many of the leaf, flower, fruit, and stone characters of the peach has been made at the New Jersey Station over a period of some years. The object has been to develop practical standards by means of which the varieties of peaches can be more accurately described. A manuscript covering this work has been presented for publication in bulletin form.



Peach stones illustrating various surface markings. 1. no prominent markings, 2. single pits, 3. rosettes of pits, 4. chains of pits, 5. pit grooves, 6. line grooves, 7. short forked grooves, 8. long branches grooves.

The Latham Raspberry in Illinois

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The Latham red raspberry is the variety most generally planted in Illinois. The writer first saw it growing in this state in 1922 at the Cutler place at East Dubuque in Jo Daviess County. We encouraged its culture in southern Illinois and it has been grown there and in widely scattered areas elsewhere in the state since that time.

Characteristics of Latham

Latham was introduced by the Minnesota Agricultural Experiment Station largely on the basis of its winter hardiness in that state. Subsequent tests in other areas have shown some interesting variations in its winter hardiness. During recent years we have found in Illinois that this varietal characteristic may not be so desirable as would be an inherent ability to remain longer in what is known as the "rest period" during the late fall months. Temperature fluctuations which sometimes occur during the dormant season in this area often cause the so-called "winter injury" in Lathams resulting in partial or complete crop loss the following June. As many of our red raspberry growers know, W. G. Brierley of Minnesota is making a comprehensive study of rest and dormancy in this variety.