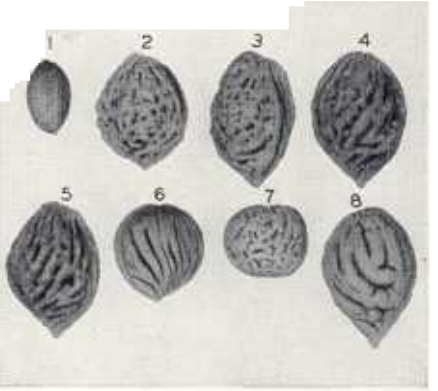
array of pittings and grooves that form many distinctive patterns. One classified collection of these is illustrated in this article. The pit markings often furnish valuable evidence as to whether a variety is a pure European or a combination of the European and the Chinese Cling.

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.

### Limiting Factors

There are, however, several other limiting factors in Latham raspberry production in this area. The first is anthracnose. This disease can be effectively controlled by fungicidal sprays, properly times and applied. A second problem has to do with correct soil management methods. While the plants grow well on a variety of soil types, a patch appears to be most profitable, if other conditions are met, when the soil is of at least average fertility, is well drained and well supplied with organic matter.

Fig. 1. Deep cultivation is objectionable.

### Cultural Practices

Methods of soil management deserve further study by station workers and attention on the grower's part. Some growers use clean cultivation to keep down weeds. This practice, illustrated in a closeup in Fig. 1, tends to dry out the soil and also burns up valuable humus. Damage is intensified when the cultivator is run deeply and close to the plants, cutting off many roots and lifting others from the soil. The crown gall organism also gains easy entrance through injured root surfaces[1].

Other Latham growers do not cultivate, but mulch their patches. Fig. 2 illustrates a method used in northern Illinois. The photograph, taken in early July during an unusually hot summer, shows good plant growth and production when the patch was covered with an over-all mulch of strawy manure to a depth of three inches. The ground was cool and moist underneath the mulch. Note the dwarfing and leaf curling of the sweet corn to the right of the raspberry row.

In southern Illinois, the Latham is usually planted on the square with the hills about seven feet apart each way and the canes tied to stakes. Most growers cultivate; only a few mulch their plants with straw or similar material. In Fig. 3 we see a Latham patch that has been set on a site with some natural protection from the prevailing winds; the plants were tied to stakes and fertilized and mulched with cow manure applied around the hills in early spring. Any natural cover that appeared between the plants were kept down by an occasional mowing. No cultivation was practised. The owner netted approximately $170 per acre from this patch the year the photograph was taken.

### The Cost of Neglect

The Latham raspberry cannot be ex-

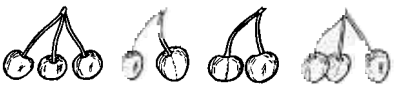
Fig. 2. A high yielding Latham patch in a dry season when mulched.

[1]Colby, A. S. Preliminary Report on Raspberry Root Systems. Proc. Amer. Soc. Hort. Sci. 35:375. 1936.

pected to take care of itself. We visited the same patch illustrated in Fig. 3, two years after that photograph was taken. What we saw then is illustrated in Fig. 4. Here we have a striking example of the results of neglect. The owner, trying to operate a dairy farm and peach orchard under war conditions with a scarcity of labor, was unable to take care of his raspberries.

A profitable Latham patch in southern Illinois.

Fig. 4. A neglected Latham raspberry patch



# Michigan and Indiana Growers Appraise Fruit Varieties

By JOHN T. BREGGER
Chairman, Variety Appraisal Committee

In the preceding issue of this magazine, I attempted to describe in a brief way the plans and purposes of the American Pomological Society's project of fruit variety appraisal. Now it is possible to present the first findings of this survey. Although this first report is but a small part of the total survey, it indicates the type of information which will be available for subsequent summaries.

Michigan and Indiana are two of the most important apple and peach states in the North. What growers of these two states think about apple and peach varieties should give a definite clue as to the trend of new plantings and tree removals in that part of the country. While not all individual fruit growers think alike, there is a surprising uniformity of opinion among them.