

### Suggestions

Where possible, cleanly threshed straw, free of seeds, should be used. Where chaffy or seed-infested straw is used, the bales should be spread over the fields in October on their sides with one or both wires clipped so as to absorb the fall rains and germinate all seeds before spreading time. Straw used from a stack can also be spread about so as to be wet by the fall rains; or be forked over so that most of the seeds drop out.

### Amount to Apply

In the Paducah section tests have shown that 1½ tons of straw per acre gives better results than 2 tons on ordinary years. In the Greenville and Bowling Green section 2 tons should be about right while around Louisville and Covington, 2 to 2½ tons should be about right.

### Time to Apply

No set date for mulching can be stated. The plants should be allowed to harden up by fall frosts and light freezes. However, as a rule, the mulch should be on hand and available by late November or early December. By that time the entire state frequently has cold spells with temperatures as low as 10° to 15° above zero. The best suggestion seems to be to spread strawberry mulch in Kentucky when temperatures threaten to go as low as 15° to 20°; for it has been established that considerable damage to the strawberry crown is caused by those temperatures, especially in late November or early December before the plants have become fully hardened.

So, in general, it seems the time to spread strawberry mulch in Kentucky varies from late November on through mid-December, **depending on the weather.**

Very early fall mulching is not advisable because it is desired for the plants to harden off and develop as much as possible before the mulch is applied.

Old, second year fields generally do not benefit from mulch as much as new, first year plantings.

## ROTATING APPLE ORCHARD KEEP YOUNG TREES COMING ALONG TO REPLACE OLD ONES

By DR. J. H. GOURLEY, Ohio Experiment Station, in "Wisconsin Horticulture"

Trees grow old. Yet the trees of any given variety are all a part of an original seedling, mutant, or chimera which may have come into existence many years ago. Each one is renewed in vigor by being propagated vegetatively, thrives for a time, and ultimately declines.

Now if a tree grew in an environment free of all hazards, there is no reason why it should decline except from senility. No insects, no disease, no weather injury, no excess or deficiency of water or nutrients—what a Utopia! But fruit trees are not only subject to all of these and more, but also one branch is a competitor of another, they grow too tall, shading effects enter, some branches are enfeebled, fruit becomes small, fails to color properly, costs of care mount, net profits are reduced or lacking. In addition to this not too favorable a picture, the variety itself may have become obsolete or the actual site may prove to be unfavorable.

True, this is not always so; some trees and orchards reach an advanced age and are still profitable but the trend of thinking in America is away from old orchards. Of course, the fine point to decide is when an orchard has received the proper care to keep it young and what we mean by old.

### Have Young Trees Coming Along

But I am not particularly arguing for less or more acreage in this paper so much as the desirability of producing part of the fruit from youngish trees, of always having more young trees coming along.

It is indeed difficult to say when apple trees should be removed because they are no longer profitable and any answer that is too arbitrary is bound to be wrong under many conditions. It depends upon the site of the orchard, trees per acre, varieties, size, age and the treatment the trees have received.

It is clear that economical production depends in considerable part upon the yield per acre. Unless an