

CULTIVATION MULCH



May 16, 1931

Question: Does a thick mulch tend to bring roots to the surface?

Dr. Coit: Yes, I think it does but not all roots, only a certain proportion of feeder roots, particularly if the mulch is maintained.

Question: Is this dangerous when trees are less than four or five years old?

Dr. Coit: It is not dangerous so long as the mulch is maintained but if you bring the roots to the surface by the use of the mulch, you will then be in the position where you have to continue your mulch or drop a crop if you switch to the cultivation system. You can cultivate your place and destroy the surface roots and that will probably result in dropping one year's crop. Next year it will resume bearing. If anybody here disagrees with me, just please say so.

Questioner: Will it benefit the tree?

Dr. Coit: As far as I know and I have seen a lot of groves and talked to a lot of growers, many favor cultivation but what cultivation they do is for the purpose of keeping down the weed-growth or for the purpose of appearance—to make the grove look pretty so the subdivision will sell faster, or for the purpose of making the water go into the soil better. I don't believe that the avocado tree particularly benefits by soil tillage as such. I do feel that the citrus tree does. We have seen so many cases where the same system is applied to both citrus and avocado trees in mixed plantings and the citrus tree does seem to benefit by a certain amount of culture and soil stirring up around the roots—that is true particularly on heavy soil and to a less degree on light soil. I can take you within a few minutes' drive from this spot to eighteen-year-old Fuerte trees twenty-four feet apart with their branches touching. Everything is healthy and in heavy bearing. There never has been any soil stirring or a tractor or horse on the place. The leaves fall down and a new mulch put in. The caretaker moves the sprinkler all around the orchard and the trees seem to be absolutely happy and bearing well. That is a medium soil,

foothill gravelly loam.

Question: Basin system is considered best up to three years. What is best after that?

Answer: Well I should say it depends altogether on the conditions. In some localities, it may be best to continue the basins, enlarging them gradually indefinitely. But in most fairly good slopes, we find that after the third year there is not so much water saved by the basin system and it takes much more labor, therefore, we can at that time switch to furrow irrigation. I don't believe, however, that it is a good plan to switch too suddenly. My plan in a number of groves in which I am interested is to run furrows in addition to basins until the fourth year and then gradually cut out basins after the root system becomes accustomed to the furrows. It is not wise to change too suddenly after adaptation to one system.

*See McCulloch's article, page 125.

Wahlberg's article, page 131.