

CASE STUDY

Avocado Orchard Drainage in Heavy Clay Soils

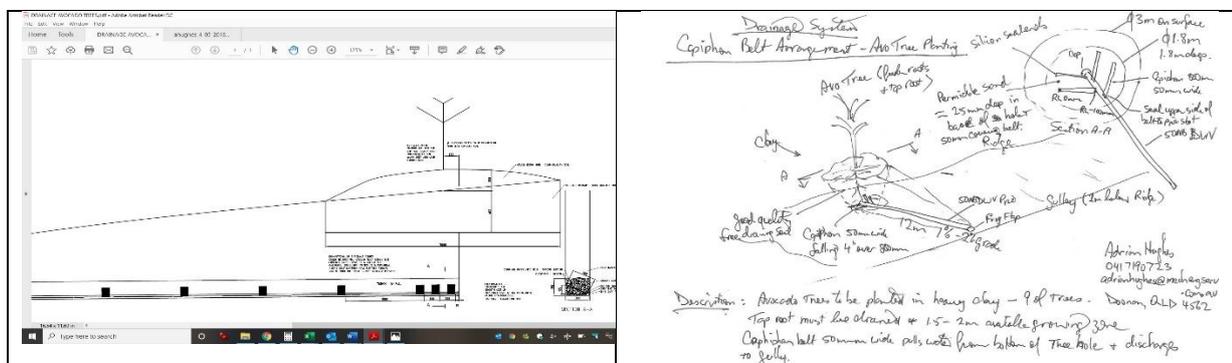
Location: Doonan, Sunshine Coast

Trees can grow well in clay soils – they are nutritionally rich, and they hold water into the dry season. But clays are impermeable which can lead to waterlogging if water remains around the roots. This is especially a problem when trees are planted into a hole, even if it is filled with topsoil and/or manure. This can create a pond, as can garden paths or driveways which prevent surface water from flowing away.

Here is an enquiry we received in August 2019

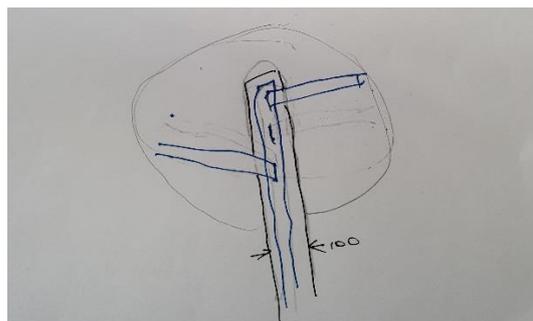
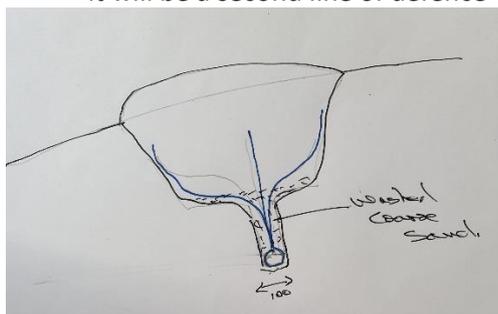
Hi Capiphon,

Thanks for the discussion yesterday and interest in my application of your Capiphon belt. Attached is the sketch of my proposed method to drain 9 avocado tree planting holes – heavy clay surrounds. The grafted trees are about 1.7m high and planting them within the next 2-3 weeks. The project [is] to plant 8 avocado trees in clay with the [drainage] to a gully on my property.



Here's our sketch for your avocado trees.

- I'm assuming that you will have a row of trees, in which case you can run the 100mm trench the entire way down the middle of the row. Whichever is easier in terms of digging.
- Otherwise you will need to have a trench from each hole/tree to the gully.
- The 50mm DWV collector pipe can run down the length on a thin bed of washed coarse sand.
- I would put in at least three strips of belt (I think you planned four)
 - One vertical (offset the slot at 15°)
 - One each side of that running up opposing sides of the large hole, laid on a thin bed of washed coarse sand.
 - Offset the slots at 15° to help in keeping soil/sand out.
 - Do all the rest according to the guidelines
- Backfill at least the trench with the same washed coarse sand.
- You might want to continue backfilling the trench with the sand all the way to the gully. As you say, it will be a second line of defence 😊



The client sent us these photos.



Hi Capiphon,

An update on the installation of Capiphon drainage system for my avocado tree sites: Attached is a video.

Last night we had 60mm of rain in a downpour – first since installing the Capiphon. I have been waiting for a wetter time to plant the avocado trees.

The 10m 40NB pipe is buried about 1.8m down at the tree site. The Capiphon strips are inserted in the pipe at 300mm spacings under the 3m tree zone and 1m spacings down to the pipe outfall. The sand trench is not emitting water but all pipes are discharging clean water. Most pleasing!



(Click on the photo to watch)

Thanks for your guidance. I believe your product will keep my avocado tree tap root in drained soil when installed in a clay filled hillside.