Observatioins

Hypothesis :

1. A soil is good if it has high moisture holding capacity so deep soil is good and can provide better growing environment for crop to grow
2. Shallow soil not only has low moisture holding capacity but also has high ground water percolation fraction (0.4) which indicates that shallow soil cannot retain water for much long
3. So shallow soil is not ideal for plant growth

Results :

1. Runoff is only dependent on rainfall but not the soil so both the soils recieve same amount of infiltration (if it is less than moisture holding capacity)
2. Deep soil retains more water than shallow soil for instance on 2022-06-08 deep soil retained 1.6 mm of soil moisture and shallow soil retainded 1.4 mm of soil moisture
3. As a result the uptake of water on next day is 1.96 and 1.94 respectively which indicates the lack of moisture retention of shallow soil
4. On 14 th, 15 th and 16 th , there is no rain . The uptake of water on these days are

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deep:      4   4   3.66
shallow :  4   4   1.1
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which is a tremendous drop in uptake from deep to shallow soil

5. This is due to the moisture on previous days are 14.08, 8.4 and 3.66 for deep soil and 11.86,5.61 and 1.1 for shallow soil

Conclusion:

Shallow soil is bad and deep soil is good because

1. moisture holding capacity of deep is greater than shallow
2. Ground water percolation of shallow soil is greter than deep soil