



# Study soil properties that affect flowering of jasmine trees.

Research team : Ms.Korapin Aransan Mr.Krittaphas Choopromwong Ms.Chiranan Mitrat Ms.Thanyalak Sriyotee Ms.Benjamaporn Onsamang  
 Adviso : Mr. Chumpon Chareesan

## Abstract

From studying the number of jasmine flowers in perfect and imperfect trees, it was found that perfect trees had more jasmine flowers than imperfect trees, that is, tree 1 had 28 flowers, tree 2 and tree 3 had as many flowers. at 30 and 29 flowers, while in the imperfect plants, plant 1 had 8 flowers, plant 2 and plant 3 had 6 and 7 flowers, respectively, that is, plants that were perfect had the number of jasmine flowers that More than an imperfect tree To measure the salinity of the soil around the jasmine tree at a distance of 50 cm. between the perfect tree and the imperfect tree. that affects the flowering of jasmine trees, it was found that all 3 jasmine trees had soil salinity values that were at That is, the first perfect plant had a pH value of 4.7, the second and third plants had a pH value of 6.6 and 7.2, respectively. Meanwhile, the first immature plant had a pH value of 6.3, the second plant and The third plant had a pH value of 6.4 and 6.5, respectively, within a distance of 100 cm. The first healthy plant had a pH value of 7.0, the second plant and the third plant had a pH value of 7.1 and 7.9, respectively. Meanwhile, the second plant had a pH value of 7.1 and 7.9, respectively. Incomplete plant 1 had a pH value of 6.2, plant 2 and plant 3 had a pH value of 6.6 and 6.6, respectively, indicating that the pH of the soil in the area was not uniform and some areas showed acidity, and the bass comes out This will affect the flowering of the jasmine tree. Measuring the soil moisture value around the jasmine tree at a distance of 50 cm. between the perfect tree and the imperfect tree. affecting the flowering of jasmine trees, it was found that the first perfect tree had a value of 50%, the second and third trees had values of 40% and 50%, respectively, while the first imperfect tree had The value is 20%. The 2nd and 3rd trees have values of 30% and 20% respectively within a distance of 1000 cm. The 1st healthy tree has a value of 40%. The 2nd and 3rd trees have values of 40% and 50%, respectively, while the first imperfect plant had a value of 20%, the second and third plants had values of 30% and 30%, respectively. The moisture value of the tree should not be >50%. Because there will be too much moisture and it shouldn't be <30% either because the soil will be too dry. It shows that the healthy jasmine trees are within the appropriate humidity level. But immature jasmine trees are at a lower level and therefore are not suitable because they will affect growth and flowering. and measuring the nutrient value of the soil around the jasmine tree at a distance of 50 cm. and a distance of 100 cm. between the perfect tree and the imperfect tree. That affects the flowering of jasmine trees. The results were concluded that all 3 perfect trees had a FERTILITY value of IDEAL, indicating the completeness of nutrients in the soil in that area, while all 3 imperfect trees had a FERTILITY value of TOO LITTLE, which indicates incomplete nutrition in that area

## Introduction



jasmine garland



Jasmine planting plot



suitable soil



The perfect jasmine tree

## Goal of the Project

To study soil properties that affect the flowering of jasmine trees.

## Method And Experimental

### Materials and equipment



Nutrient meter



Moisture meter



Salinity meter



pH meter

### Experimental method

#### Part 1



**Part 1 :** Measure the number of jasmine flowers.  
**1.1** Measure the number of 3 complete jasmine tree.  
**1.2** Measure the number of 3 incomplete jasmine tree.

#### Part 2



**Part 2 :** studied the salinity of the soil around the jasmine tree that affects the flowering of the jasmine tree.  
**2.1** Measure the salinity of the soil around 3 incomplete jasmine trees using the EC Soil Meter model ECB801, planted into the soil to a depth of 11 cm.  
**2.2** Measure the salinity of the soil around 3 complete jasmine trees using the EC Soil Meter, model ECB801, planted into the soil to a depth of 11 cm.

#### Part 3



**Part 3 :** studies the pH value of the soil around the jasmine tree that affects the flowering of the jasmine tree.  
**3.1** Measure the pH of the soil around three incomplete jasmine trees using the 4in1 soil survey tool into the soil to a depth of 15 cm.  
**3.2** Measure the pH of the soil around three complete jasmine trees using the 4in1 soil survey tool into the soil to a depth of 15 cm.

#### Part 4



**Part 4 :** studies the humidity around the jasmine tree that affects the flowering of the jasmine tree.  
**4.1** Measure the humidity around 3 incomplete jasmine trees using a moisture meter, model ETP306, into the soil to a depth of 12 cm.  
**4.2** Measure the humidity around three complete jasmine trees using a moisture meter, model ETP306, into the soil to a depth of 12 cm.

#### Part 5



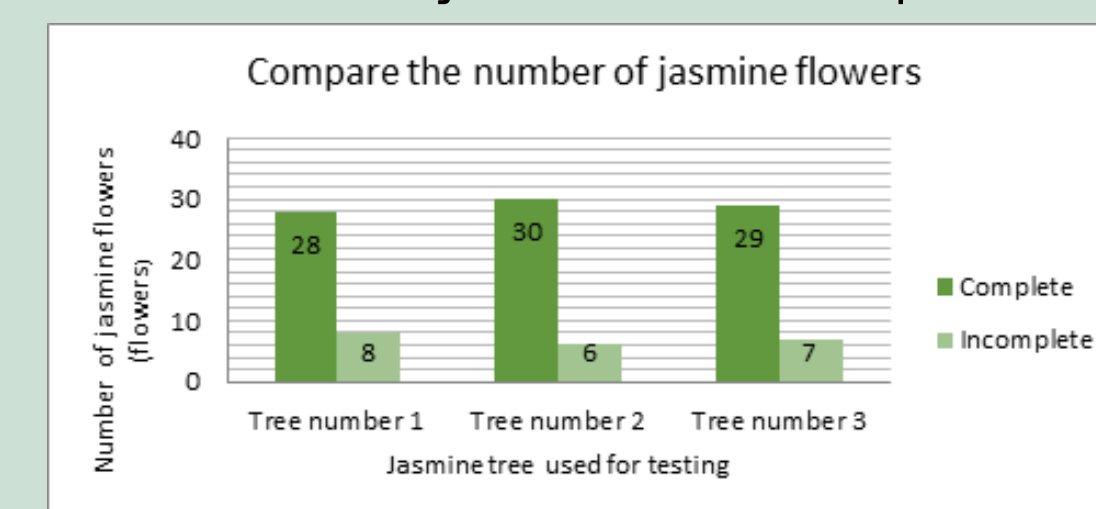
**Part 5 :** studies the nutritional value of the soil around the jasmine tree that affects the flowering of the jasmine tree.  
**5.1** Measure the nutrient value of the soil around 3 incomplete jasmine trees using the 2in1 Analyzer, planted into the soil to a depth of 8 cm.  
**5.2** Measure the nutrient value of the soil around 3 complete jasmine trees using the 2in1 Analyzer, planted into the soil to a depth of 8 cm.

\*\*\*and repeat the measurement for 2 more trees\*\*\*

## Results

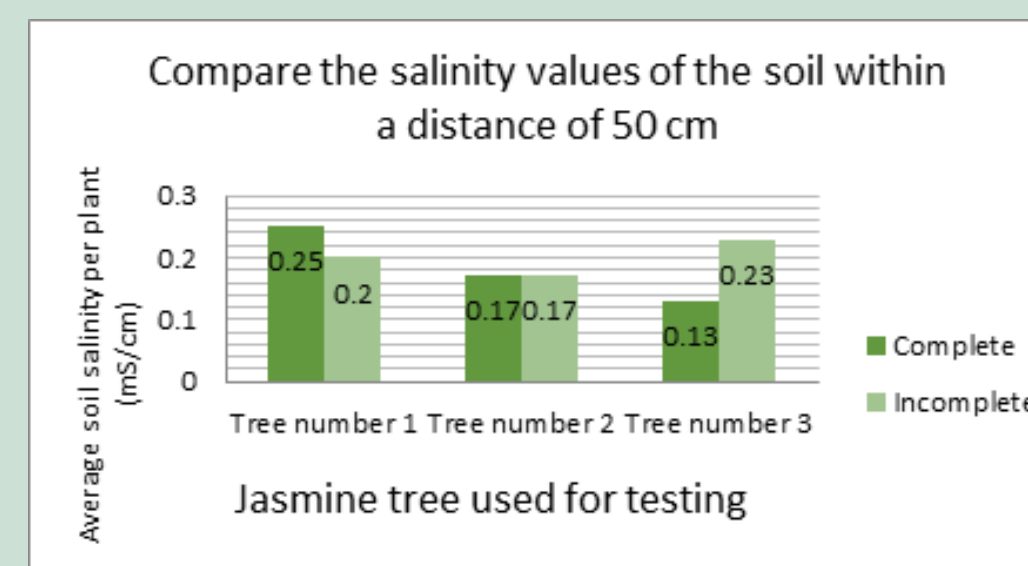
### Part 1

Graph 1 shows a comparison of the number of jasmine flowers in complete and incomplete plants.

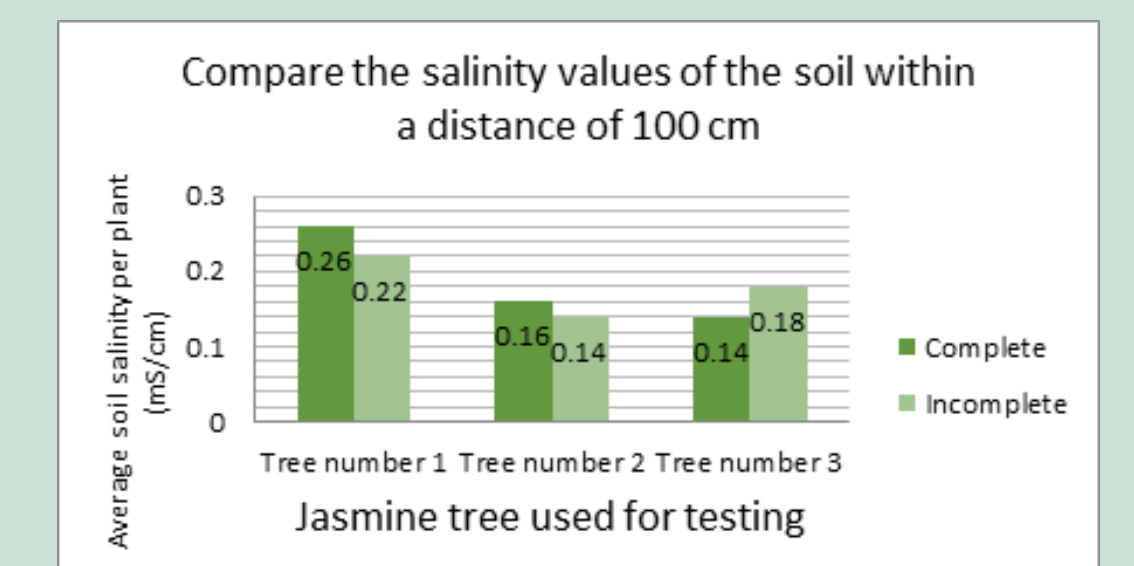


### Part 2

Graph 2 shows a comparison of soil salinity around jasmine flowers within a range of 50 centimeters between intact and incomplete plants that affect their flowering.

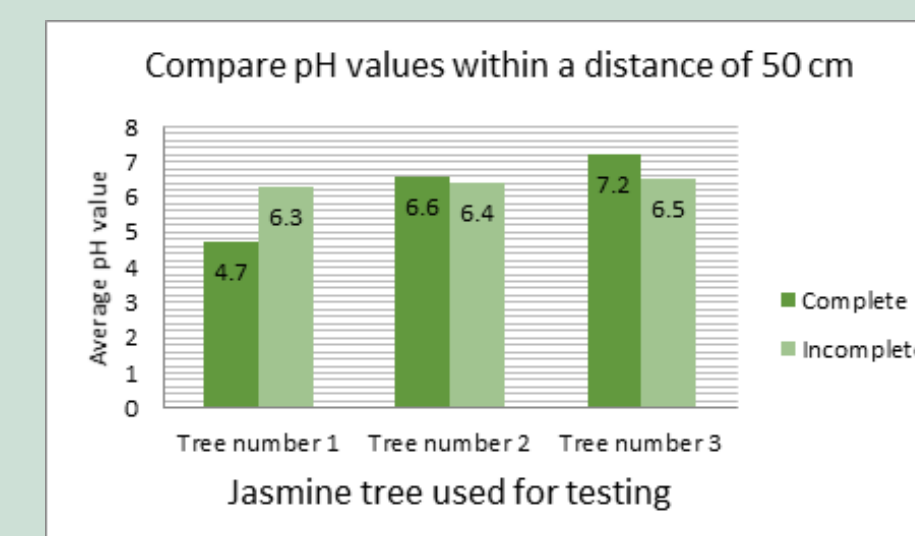


Graph 3 shows a comparison of soil salinity around jasmine flowers within a range of 100 centimeters between intact and incomplete plants that affect their flowering.

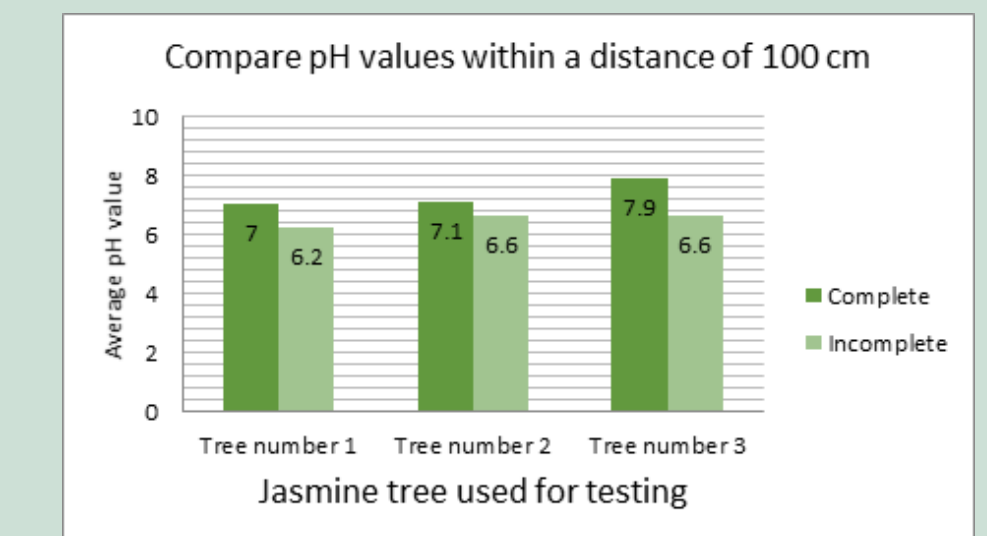


### Part 3

Graph 4 shows a comparison of soil pH values within a 50 centimeter range between intact and incomplete plants that affect the flowering of jasmine flowers.

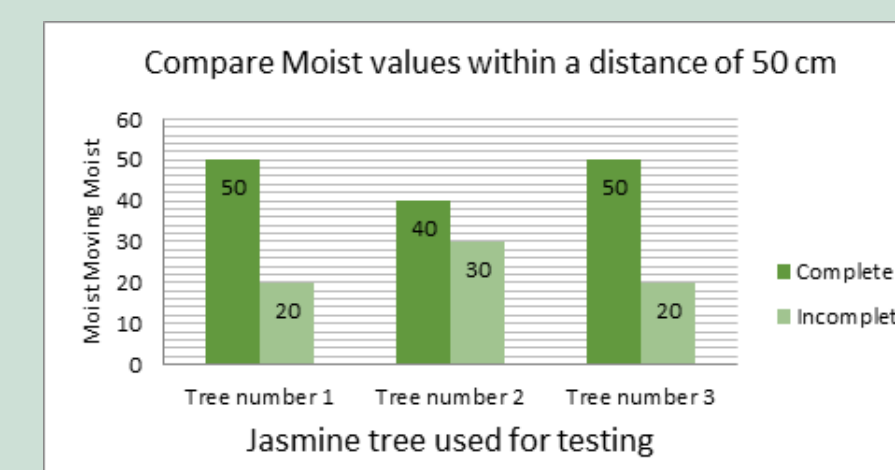


Graph 5 shows a comparison of soil pH values around jasmine flowers within a range of 100 centimeters between intact and incomplete plants that affect their flowering.

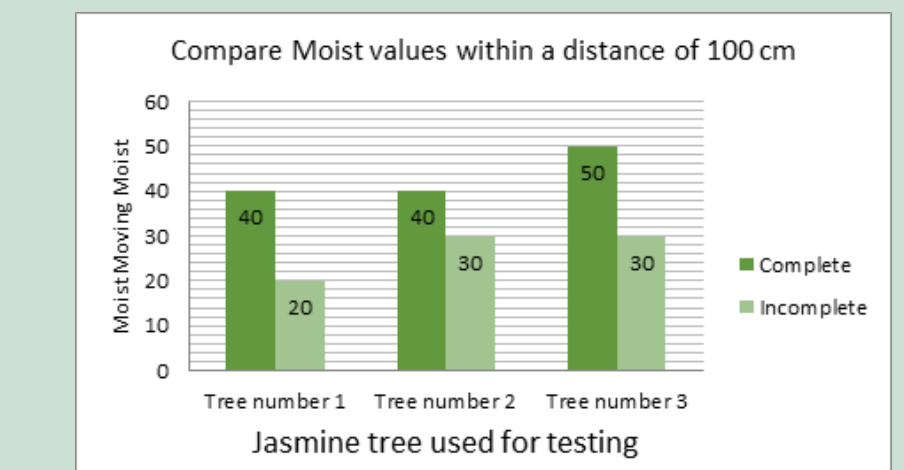


### Part 4

Graph 6 shows the results of comparing the humidity values of the soil around the jasmine tree within a distance of 50 cm. Between the perfect tree and the imperfect tree that affects the flowering of jasmine trees



Graph 7 shows the results of comparing the humidity values of the soil around the jasmine tree within 100 cm. Between the perfect tree and the imperfect tree that affects the flowering of jasmine trees



### Part 5

Table 1 shows the results of comparing the nutrient values of the soil around the jasmine tree in the range of 50 cm. Between the perfect tree and the imperfect tree that affects the flowering of jasmine trees

FERTILITY Value within 50 cm		
Jasmine tree	Complete	Incomplete
Tree number1	IDEAL	TOO LITTLE
Tree number2	IDEAL	TOO LITTLE
Tree number3	IDEAL	TOO LITTLE

Table 2 shows the results of comparing the nutrient values of the soil around the jasmine tree in the range of 100 cm. Between the perfect tree and the imperfect tree that affects the flowering of jasmine trees

FERTILITY Value within 100 cm		
Jasmine tree	Complete	Incomplete
Tree number1	IDEAL	TOO LITTLE
Tree number2	IDEAL	TOO LITTLE
Tree number3	IDEAL	TOO LITTLE

## Conclusion

Study of soil properties that affect the flowering of jasmine trees. By taking 3 complete and incomplete jasmine trees, repeating the experiment 5 times and then finding the average to compare. Between complete and incomplete trees within a distance of 50 cm. And 100 cm range. Therefore, the results can be concluded that A complete jasmine tree will have a higher number of jasmine flowers and an appropriate pH. There is soil moisture. and nutrients in the soil that are more suitable than the tree are incomplete, both within a distance of 50 cm. And 100 cm range. But complete and incomplete trees have salinity in the soil around the jasmine trees that is suitable for planting. That is, the salinity of the soil in that area does not affect the growth or flowering of jasmine trees

