



Wilayat of Dank
Sultanate of Oman
Governorate of AlDahira

Elayat Fida School 1-10

:Done by

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Summary

This research aims to study the reasons behind lack of maturity of lemon tree fruits. The questions are as below

- ?What are the reasons behind lack of maturity of lemon tree fruits in AlKadari village
- What are the external factors that impact on lack of maturity of lemon tress in AlKadari vil-
- ?lage
- ?Is there any difference in the characteristics of soil between AlDwahriya and AlKadari? Why
- ?What is the kind of soil in the two areas

We started field visits to the research site. We checked the area and we registered all what surround it. We also noted the factors that affect the area and we took samples from AlKadari soil and the water used in irrigation. Then, we went to water source that is used in irrigation in the area and we found a well. After that, we checked up AlDwahriya farm and we noted the factors that surround it. Furthermore, we took samples from water and soil used in irrigation. We searched for the source of that water and we found that it was well water. Then, we went to the school laboratory and we applied soil and water protocols for the regions. We noticed that salinity clearly affected the two regions. After that, we interviewed farmers to recognize other influential reasons. They agreed that due to lack of water and the source of water is very few, these caused to lack of maturity of lemon tree fruits. In fact, this is the main reason for lack of maturity of plant fruits because in other region, there is a water source and the plant is every-day irrigated with a large amount of water. They got benefit from a research done by Um Al-
."Hakam School entitled "Study the Reasons of Lemon Trees not blooming

Study the Reasons behind Lack of Maturity of Lemon Tree (Fruits in AlDwahriya Village (Wilayat of Dank



Research Questions

- What are the reasons behind lack of maturity of lemon tree fruits in AlKadari in wilayat of ?Dank 1-
- ?What are the external factors that impact on lack of maturity of lemon tress in AlKadari village 2-
- ?Is there any difference in the characteristics of soil between AlDwahriya and AlKadari? Why 3-
- ?What is the kind of soil in the two areas 4-



Recommendations

In this research, we were trying to recognize the reasons behind lack of maturity of lemon trees in the farms of AlKadari region. We did as students a practical experiment (by examining two samples of water and soil from AlKadari and AlDwahriya). We also made some field .visits

:We concluded

External factors such as amount of water consumed in crops irrigation which is a factor affects more in lack of maturity of lemon plant. Also, .the characteristics of water that is irrigated from

Through this, we found out that AlDwahriya soil's characteristics

.differ from the charateristics of AlKadari soil

Characteristics of AlDwahriya soil: muddy with remarkable alkalinity-

Characteristics of AlDwahriya water: moderate alkalinity and low sa- .linity

.Characteristics of AlKadari'soil: muddy, high salinity and acidity

Characteristics of AlKadari'swater: moderate alkalinity and high salin- .ity

We can apply the research once again by bringing samples from Al- Dwahriya soil and AlKadari soil. We will plant them in the school and noticing growth and flowering. Then, we will add the study of plant cover protocol.Through these results, all people in society should work .hard to find solutions that help this tree to mature

We also demand the governmental authorities that are responsible for agricultural development to provide the farmers' needs in the area. They also should work hard overcome the problem of lack of irriga- tion water for plant diversity in the quantity of water that need to .grow

We demand the parents to make other water source to irrigate the plants. They need other source to make more water which helps the plants to absorb their need of water to mature. We also suggest estab- lishing an office referred to Ministry of Agricultural Development so that any farmer who faces a problem can solve it after discussing it with specialists. They should also teach the farmers how to use devices .to avoid waste of time in attempt of plant maturity



Research Methods

At the beginning, we thought about our region, is there any problem that parents suffer from? We made some questions to some students and we found out that parents suffer from lack of maturity of lemon trees in AlKadari village. Then, we interviewed some parents to list the reasons that cause this problem. After that, we divided the team into two groups and we searched for a village where the lemon trees can be ripe in and we found that it was Al- Dwahriya village. A group went to study AlDwahriya village and the other group went to AlKadari. We discovered the place and we took soil samples from the two regions and samples from the water that irrigate that farm. We also took samples to school laboratory to apply soil and water protocols. We used protocol to find the reasons of lack of maturity and to know soil type in the two places. This is to know if it was one of the reasons that prevent fruits maturity in the farm. In addition, we checked the salinity and acidity of water and soil. After the team members wrote the data, we went to the site after a period of time. We studied the external factors that surround the place to find out the other reasons which might prevent fruits maturity. We searched for water source that irrigates the two areas and the amount of water that irrigates the crops. Indeed, we identified the areas height. We also noticed the period of sunrise to sunset for possible impact of amount of light which is absorbed by plants. After that, we searched for various references to .find other reasons that may prevent lemon trees maturity



period	Objectives to be implemented
September	Choose a topic
October & November 2018/2019	Collect research information
December & January 2018/2019	Field visit to research site and other sites, soil and water protocols
January 2018/2019	Extract and write results and recommendations
February 2018/2019	Review the research and find output
February 2018/2019	Design research poster
1 st March 2018/2019	Send the research

Second: Research Site

.Governorate of AlDahra – wilayat of Dank – AlDwahriya village) AlDwahriya village and AlKadari village)

(N 23, 31. 179) (E 056, 32. 644)

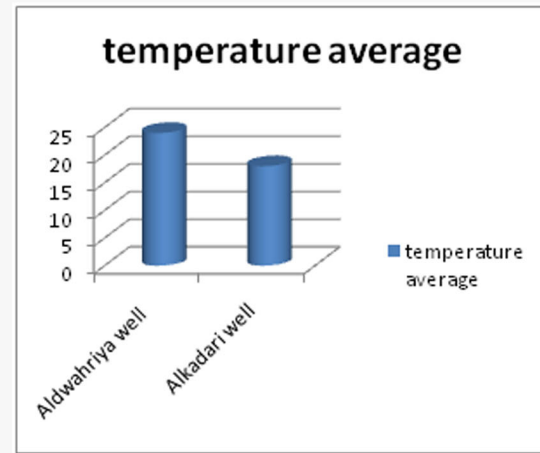
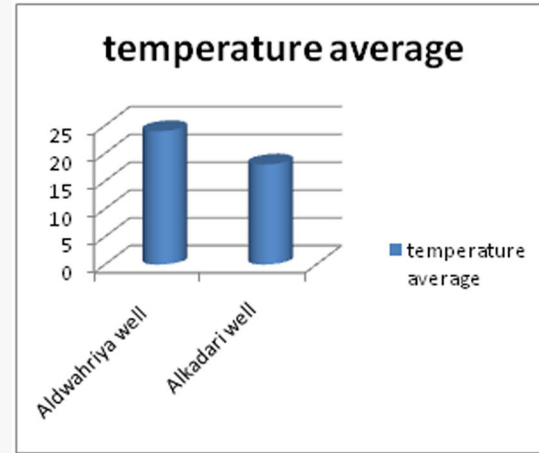
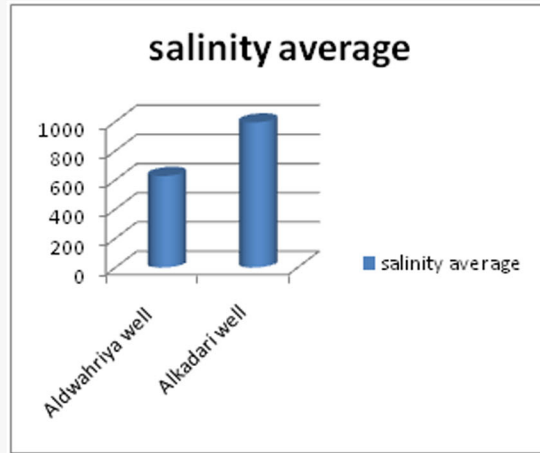
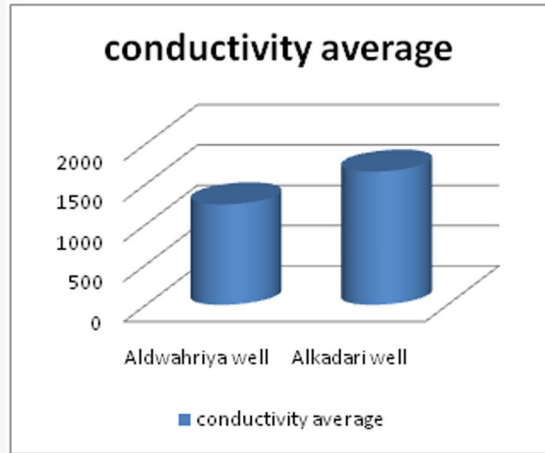
Third: Data Collection and Analysis

At the beginning, each student in the team was given a specific work and the role that everyone had to do. The students' works and protocols were identi- fied in a table. Then, the following steps were done

- Applying water protocol; two samples were taken and checked using the device of acidity, conductivity and salinity then using the average of the two 1-
- .Comparing water acidity in AlDwahriya and AlKadari water and getting to know the amount of change through samples used in each region .samples
- .Comparing the types of soil by applying soil protocol and its ability to absorb water 3-

Results

By applying soil and water protocols to the study site (AlDwahriya) and other site for comparison, photos were taken for :how data was collected as the following



.The data was reached through salinity, conductivity and acidity of AlDwahriya's and AlKadari's water

	Conductivity	Quantity of roots	Quantity of rocks	Quantity of carbon	salinity	pH
AlDwahriya farm soil	945	many	few	few	931	8.35
AlKadari farm soil	652	few	many	Many	642	8.33

Table(4): a comparison between soil of AlDwahriya well & soil of AlKadari well

References

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