

A study entitled/ Reasons for the lack of growth of seasonal crops and the death of perennial trees (palms) in the Al-Araja area in Wadi Al-Jizzi



Recommendations

- 1-Providing agricultural soil for farmers, providing everything that every farmer in the region needs, and working to eliminate the problem of lack of irrigation water by supplying farmers with safe water from nearby desalination plants.
- 2-Extracting these elements and processing them chemically and technically to separate the materials, and benefit from them, to return financial income to the state, and benefit from them in the medical, agricultural, and industrial fields.
- 3-Allocate a team by the companies operating the site to follow up on the environmental aspects of the facility and receive reports from residents of neighboring areas to receive any reports from residents.



Reference

Abzali, Hisham, Ghafar, Nawar (2015). "Contribution to the removal of lead and copper from industrial water using raw phosphate," unpublished master's thesis. Tishreen University, Syria.

Al-Khatib, Ahmed Shafiq, Khairallah, Youssef Suleiman. (2002). The comprehensive scientific encyclopedia. (1st edition). Lebanon office. Beirut. Lebanon.

Al-Jahani, Idris (2018). The effect of drought and salinity on the growth and productivity of the date palm (unpublished master's thesis). University of Benghazi, People's Republic of Libya.

Al-Kindi, Muhammad, (2018), The Story of Land and Life in Oman. (2nd ed.). Sultanate of Oman.

Results:

From the results the following is revealed: The death of seasonal plants (beans and grains) and the death of perennial trees such as palm trees. The reason is the inability of these plants to fix nitrogen in the soil due to high levels of harmful elements such as manganese, sulfur, magnesium, and other toxic elements present in high levels. Its presence in the soil and water leakage led to this problem.

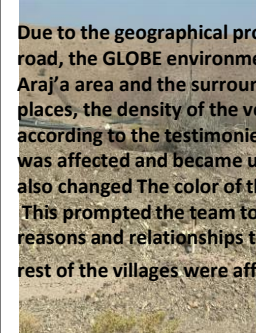


Time plan for preparing the research

Notes	Implementation officer	the plan	the month
Addressing the authorities concerned with the school's correspondence system	Student/Moza Al Shamsiyya Student/ Aisha Al-Rashidi In cooperation with the team and program supervisor GLOBE	Defining the problem Corresponding to the • Environment Authority of North Al Batinah Governorate Corresponding to the • governorate's Department of Agriculture Correspondence to • Mawarid Mining Company Providing project • • tools (providing water and soil protocol tools) •	September
Providing project tools	Student/Moza Al Shamsiyya Student/ Aisha Al-Rashidi Collaboration with the GLOBE team The Environment Agency and Sultan University	Apply the (soil) protocol in the specified locations Apply the (water) protocol in the specified locations Analysis of water and soil samples at Sultan Qaboos University and some private analysis laboratories	October
Data Entry Meetings with the team	Student/ Aisha Al-Rashidi Collaboration with the GLOBE team The Environment Agency and Sultan University	Entering data into the GLOBE website Cooperating with the competent authorities, developing recommendations, and starting to write the research	November
Summary, introduction and research problem (common application) Student/ Aisha Al-Rashidi,	Student/ Aisha Al-Rashidi Program supervisor GLOBE	Write your research and prepare to participate in the competition	December

The study Problem

Due to the geographical proximity between the villages located on the Wadi Al-Jizzi road, the GLOBE environmental team noticed the death of the vegetation in the Al-Araj'a area and the surrounding areas, while the further we moved away from these places, the density of the vegetation cover increased and the plants diversified, and according to the testimonies of the people of the Al-Araj' area, the soil in the area was affected and became unsuitable. For agriculture, the taste of groundwater has also changed. The color of the soil has become yellow and grey. This prompted the team to study the soil and water in the Al-Araj area and search for reasons and relationships to the change in soil properties, and the extent to which the rest of the villages were affected over time.



Research questions:

- 1-What are the reasons for seasonal legumes such as beans and grains not growing in the Al-Araj area?
- 2-What are the reasons for the weakness and death of perennial trees such as palm trees in the Al-Araj area?
- 3-How can the problem be addressed or reduced?



Introduction

The research aims to study the reasons for the non-growth of seasonal crops and the death of perennial trees (palms) in the Al-Araj'a area in Wadi Al-Jizzi. The research is based on the experimental method. We studied the properties of the soil in the Al-Araj'a area, and various samples were taken, and the pH, soil color, conductivity, salinity, and their properties were examined using the soil protocol. Other samples were taken from the Al-Sahila area, as well as cooperation with Sultan Qaboos University to analyze the components and elements of the soil. A water sample was taken from the Al-Araj'a area, and the water protocol was applied, as the Globe Environmental Team sought to search for solutions to treat the problem in cooperation with the concerned authorities and the STEM team.

