

Effect of cured sanitary water on agriculture crops and using it in food In walayit Ibri – village of Tenaam

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School: Amar Bin Yaser for Basic School (5-7)

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Summary of research:

The objective of research to study effect sanitary water which was uses in watering plants and reasons of poor of fertile of soil after period of time in farms which waters by it in Walayiat Ibri . the researchers asked about crops that waters by cured water of sanitary is it good or useful to uses by human and in food?, and why features of soil was changed which is waters by cured water of sanitary, and is station water of cured sanitary water in Taneem is doing in it cured against Bacteria which found it. And answers on this questions was used protocol of water and protocol of soil and also GPS in this study and was sent samples to laboratory of municipality of Ibri to test types of Bacteria. Results of study it was found in soil so much salts in soil which was watered by sanitary water and found in it infiltrations and substances changes features of soil but it is not effect on the soil and crops because this kind from some kinds are permission with it internationally. And also results of study to find kinds of Bacteria as alkolyfwarm and alalikolai and it is above measure that permission of it internationally and also study arrived to some recommendations: forbiddance use sanitary water in watering because it is damaging with reason of finds bacteria and cure it with righteous way with more progressive ,,, and also forbid dig wells near cured station of sanitary water,,, and must made enlighten campaign to the farmers whom are near station of sanitary water and must remembers them to do test to thier wells with continuous way.

Problems of research:

Is increase uses cured sanitary water in Walayiat Ibri . after studies effect of this kind of water in soil . whereas uses of cured sanitary water in irrigates in Walayiat Ibri , and that it has active effect in changes structure of soil and infiltrations as resulting of it and we also the soil become salt with pass of time . And this cause spreads of bacteria or crops may become not good to uses by human and also must sure that cured of sanitary water must be do with correct way whereas cured sanitary water may infiltrate or leak inside the soil and arrive to wells which is near it and may pollute it and causes some diseases.

Questions of researches:

1-Is crops irrigated by cured of sanitary water, is it benefit or good to use by human? And why?.

2-Features of soil irrigates by cured of sanitary water why it is changes?.

Supposition:

Known that water effects on soil and any change of features of water has active effects in soil and that is increase salt of soil which is irrigates by sanitary water and that maybe with reason of increase chemicals substances which was infiltrated or leaked in soil with passing of time. And also may be increase of parasites and that has active effect in decrease of Oxygen and increase alkalinity of water with reason of accumulation of salts and chemicals substances and this cause changes features of soil and especially number of Hydrogen and salty and it made layer of salt in soil. And also probably grow bacteria cause diseases and that with reason of irrigates with cured of sanitary water.

Boundaries of research:

Research is doing in Walayiat Ibri in Taneem village and farms near it because in Taneem village finds station of sanitary water, and study will take period of one month.

Procedures of the research:

Student visits the site in Taneem village and also visits farms near station of sanitary water and evaluation the situation.

| The site | Station of sanitary water | Farm(1) |
|---------------|---------------------------|-----------|
| Date of visit | 20\2\2017 | 20\2\2017 |

| Type of test | Transparency | conduction | Salty | PH |
|----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Type of sample | Cured sanitary water for irrigation |
| Date of test | 20\02\2017 | 20\02\2017 | 20\02\2017 | 20\02\2017 |

- -Must send some samples or specimen to laboratory of Ibri municipality to know amount or quantity of bacteria in water and it is percentage and compare it with another percentages that it has permission internationally.
- -used protocol of water and talk measures of :salty , conduction ,transparency and ph and that was done by students :Mohammed and Noman .
- -uses protocol of soil and took measures of :salty , conduction ,transparency and ph and that done by students Mazin , Anas and Yaziad .
- -We meets one worker is female in laboratory of Ibri municipality and she said to us in laboratory these are many kinds of bacteria in present or extant but when it is increase on permission level internationally it will become damaging and some times cause diseases and must not uses it absolutely.
- -Talk some information from another study of sanitary water and benefit from it.



Method of research:

- -Site of study which is using: Tenaam Village and also using GPS.
- -Protocol are using:
- *Protocol of water (temperature, number of hydrogen, transparency, salty, conduction) we use thermometer and Protocol of soil (kind of soil, salty, alkarponat, PH Meter and alkhal or vinegar).
- *Execute protocol of water in farms near Tenaam from station of cured sanitary water.
- *Execute protocol of soil in farms near Tenaam in station of sanitary water which are irrigates with sanitary water.
- * do analysis of data which was collected.
- * Collective samples of cured sanitary water which uses in irrigates crops.



collect and analysis of information:

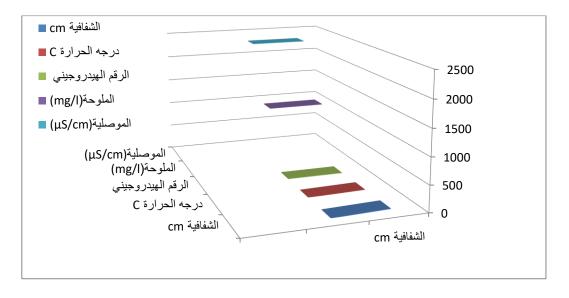
results test of cured sanitary water in station of sanitary water in Walayait Ibri (Tenaam).

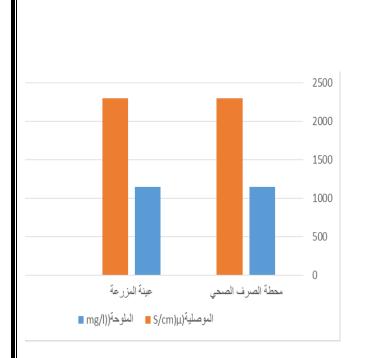
| days | Transparency CM | Centigrade C | number of hydrogen | Salty (US\CM) | conduction | Color |
|----------|-----------------|-----------------|-----------------------|------------------|------------|----------------------------|
| 1\2\2017 | 30 | 20 | 8,8 | 1155 | 2300 | Green near to yellow |

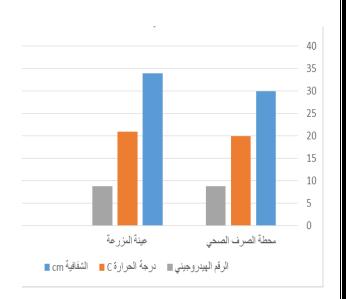
Results which was arrived to it from farms basins which is fill with 7 water of sanitary and irrigates by it as the following:

| days | Transparency CM | Centigrade C | number of hydrogen | Salty (mg\1) | Conduction (u S /CM) |
|------------------------|--------------------|-----------------|--------------------|-----------------|-------------------------|
| 1\2\2017 Farm No(1) | 24 CM | 21 C | 8,8 | 1155 | 2300 |

Data planning no (1) we were arrived to results from sample of cured sanitary water which uses to irrigate crops.







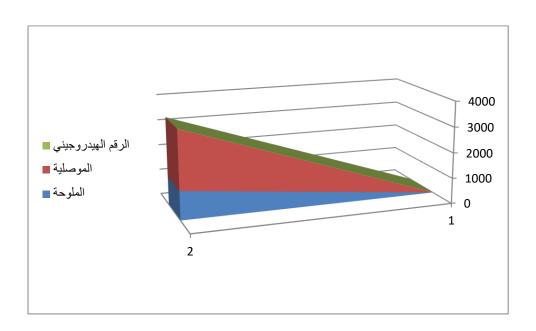
Planning No(2) and (3) comparison between treated or cured water in station of sanitary and sample of water from farm which irrigates with the same water.

Results of soil sample from farm irrigates with sanitary water:

| days | Salty | Conduction | number of hydrogen |
|------------|-------------|------------|--------------------|
| 20\02\2016 | 2000 (mg\1) | 2300 | 8,3 |
| | | (u S /CM) | |

Results of sample analysis from sanitary water from laboratory of municipality of Ibri:

| Percentage of salty (mg\1) | 1122 |
|---------------------------------------|------|
| Communication of electricity(u S /CM) | 2290 |
| number of hydrogen PH | 8,53 |
| Lees (NTU) | >5 |
| | |



Planning of water (4) results of test of Ibri Municipality laboratory

Analysis pollution of bacteria by Ibri Municipality laboratory for sample of cured sanitary water which farmer irrigates by it

| Total number of alkwglform (MPN/100) | 2419,6 |
|--------------------------------------|--------|
| Total number of alaikolay (MPN/100) | 2419,6 |

Results:

From past results we notice that sanitary water we find in it one problem and it is very effect on agriculture crops and we found in it very high percentage of bacteria also purity of water very few and it is consider it has muddy but number of hydrogen in it in concern with salty, number of hydrogen and conduction all are allows with them , but there are problems of bacteria it is let water is not healthy to use by human absolutely and it is not healthy to grow kinds of crops.

Recommendations:

- 1- Forbiddance uses fresh sanitary water in irrigation because it is very damaging because bacteria finds in it .
- 2-Disinfection or sterilization of water in station of cured sanitary water with best way and more developed.
- 3-Make enlighten campaign to the farmers near station and remember them to test wells with continuous way and sure that farmers are not irrigate their crops with cured sanitary water of station.

Final or termination:

Research depend on protocols programs of GLOP and some laboratory measures but there are numerous of measures it is difficult do it for instance metal in sanitary water and it is percentages and chemical material which was found in it and reaction which is happening between substances and it is need specialization persons to measure it, but present results give enough indications about pollution of water with bacteria only and in future may send samples to laboratories care with these measures and additional it to researches.

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References:

* International Healthy Organization - Second typing 2004 — first part-Advices of quality or efficacy of drinking water.

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