Improving the Maize Crops Productivity in Wakurde Village by Using Spent Wash

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Abstract

Analysis of soil quality from Shirala area of SangliDistrict. Black soil samples are collected from field for obtaining the information about soil quality, evaluation of fertilizer status, indigogenous soil fertility. To understand fertility of soil, it is necessary to carry out analysis. The spent wash is used to improve the fertility of soil. And effect of spent wash on the plant growth was studied. The present study revealed the comparison between the absence of spent wash and presence of spent wash. It shows that there is improvement of plant quality and productivity the comparative study should be carried out. At the same time PH, Electrical Conductivity, like study was done in both plots. (15,16,17,18,19,20)

KEYWORDS: Soil, fertility, Chemical properties.

Introduction

The disposal of waste water from industrial source is becoming a serious problem throughout the world. One of the most important environmental problems faced by the world is management of waste water. Different industries creating a variety of waste. Water pollutants which difficult and costly to treat. The use of industrial waste water as soil In ShiralaThasil Maize Soyabean Sugarcane Rice these crops is one of the most important crops for routine life therefore by using spent wash performance of maize crop in Wakurde village ofShiralaTahsil was observed changes in soil properties and their effects on maize productivity as well as growth. Soil salinity has been measuredusing electrical conductivity. The plant grows best pH between pH 7 & pH 9 was studied into this paper.. (15,16,17,18,19,20)

METHODS OF ANALYSIS:

1) **Collection of the Sample:** Sample is collected as per theRecommended procedure. [1, 2, 3]

2) **Required Chemicals**: All of the chemicals are prepared as per theRecommendedprocedure.

All of the chemicals are used AR grade. [10]

3) **Instruments**:[9]

a) PH meters- Model EQ-610
b) Conductivity Meter- Model EG-660
c) Simple meter scale

ANALYZED RESULTS:

The samples are collected as per the recommended procedure andoriginal sample taken from analysis the results are found these results areas given below – [3, 5, 8, 12, 13,14]

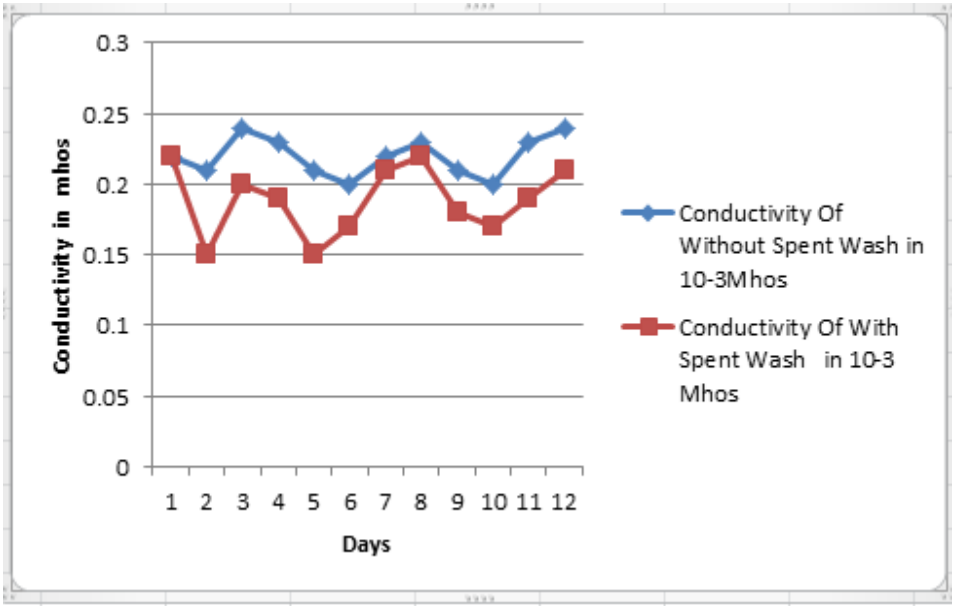
Observation Table No. –1

Determination of Electrical conductivity can be done per week-after plantation.

Sr.No.	Conductivity Of Without Spent Wash in10^{-3}Mhos	Conductivity Of With Spent Wash in 10^{-3} Mhos
1	0.22	0.22
2	0.21	0.15
3	0.24	0.20
4	0.23	0.19
5	0.21	0.15
6	0.20	0.17
7	0.22	0.21
8	0.23	0.22
9	0.21	0.18
10	0.20	0.17
11	0.23	0.19
12	0.24	0.21

Fig. No.1

GRAPH:

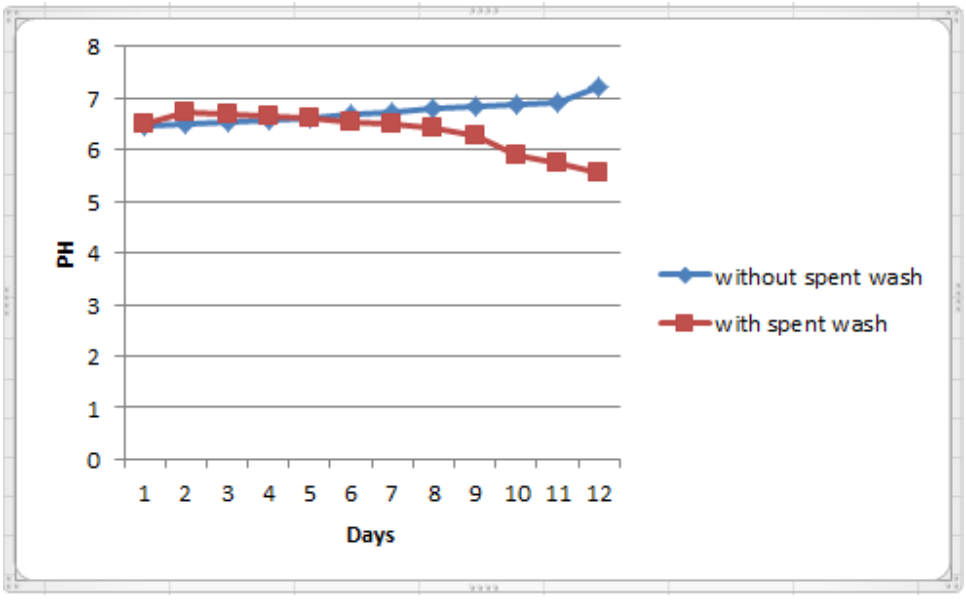


Observation Table No. –2:

Determination of pH was done per week after plantation.

Sr. No	without spent wash	with spent wash
1	6.47	6.5
2	6.51	6.74
3	6.53	6.69
4	6.58	6.65
5	6.63	6.6
6	6.69	6.54
7	6.74	6.5
8	6.79	6.43
9	6.84	6.26
10	6.89	5.89
11	6.91	5.73
12	7.2	5.57

Fig. No. 2



Length of Plant

Procedure is used for the measurement of the Maize Crop

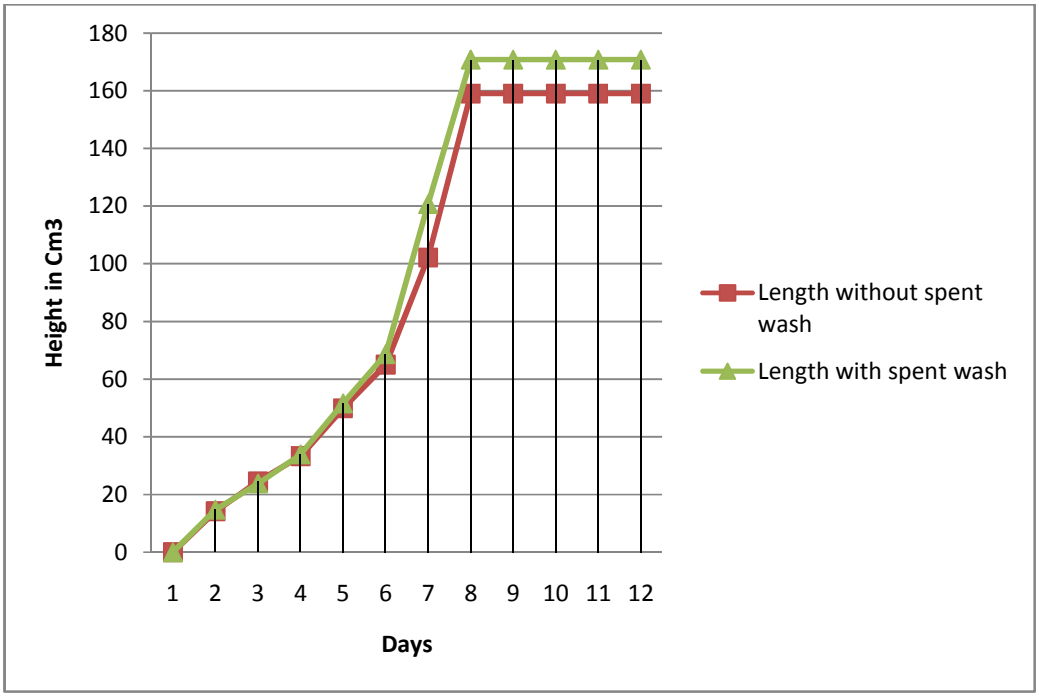
After plantation the maize crop height is measured per week by using the scale and all of these data has mentioned in the observation table

Observation Table No. –3

Days	Length in cm With Spent Wash	Length in Cm without spent wash
1	0	0
2	1.7	1.4
3	9.4	8.5
4	15.5	13.6
5	22.6	19.6
6	30.6	27.5
7	51.5	36.7
8	63.4	47.6
9	75.4	58.9
10	89.1	84.5
11	102.3	140.1
12	148.4	140.1

Fig. No.3

Graph



Productivity:-

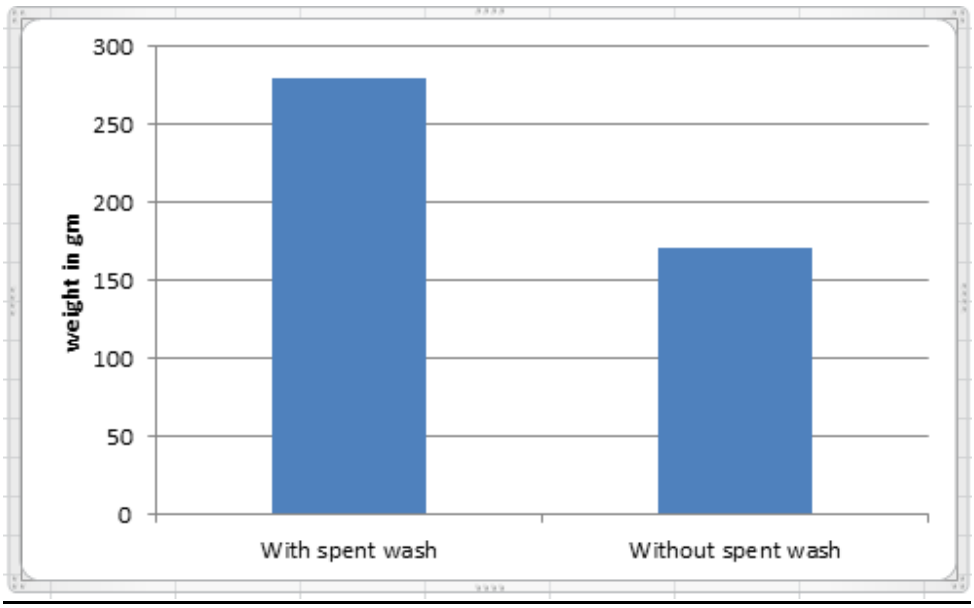
After the three months crops have matured then It harvested and to select in each plot 4 maize crops and it weighed to observe that the difference between the productivity. This data has been mentioned in observation table.

Observation Table No. –4

Sample	**Maize** **Wt**. in gm
With spent wash	280.360
Without spent wash	170.512

Fig. No.4

GRAPH



Conclusion:

In this paper Table No.1 Electrical conductivity observation mentioned it seen that

with- out spent wash Ec was $0.220x10^{-3}$ to $0.240x10^{-3}$ after giving spent wash electrical conductivity slightly decreases ($0.030x10^{-3}$) after decreasing ECgrowth of plant was well observed difference between EC in both plotswas represented with help of graph conductivity Vs days this graph show variation of EC in both plots. It shows that after giving the spent wash positive result was obtained.(18,19,20)

In seconds observation table pH values was mentioned these pH values was compeered to with and without spent wash plots it seen without spent wash plot pH values have some time acidicas well as near neutral but in spent wash plot values have slightly diverted to acidic range this range better effect was on plant growth difference

between these two values studied by plotting graph pH Vs days positive results was found.(15,16,17)

In third tables length of plants was measured and difference between these two plots plant length was mentioned the larger difference was found in the plant growth this difference was well known explained by the plotting the graph length in cm Vs days .

In tables no 4 productivity data was given by both the plots and these data was explained by using box diagram. After using this spent wash productivity increases means positive result was found it.

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