Research Paper

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"Maintaining The pH and Electrical Conductivity by Using Spent Wash in Biur Village"

Science

KEYWORDS : Soil, electrical conductivity.

Dr. A.B. Patil Assistant Professors, D.A.B.N. Naik College, Chikhali, Sangli.

A.D. Patil Assistant Professors, D.A.B.N. Naik College, Chikhali, Sangli.

ABSTRACT

Analysis of soil quality from Shirala area of Sangli District. Black soil samples are collected from field for obtaining the information about soil quality, evaluation of fertilizer status, indigogenous soil fertility. To understand chemical characteristics of soil, it is necessary to carry out analysis. In this study effect of electrical conductivity on plant growth was study in this study after giving the spent wash electrical conductivity decreases. It observed that positive effect on plant growth as well as on the productivity .The present study revealed the comparison of variation of pH andelectricalconductivity 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. (15, 16, 17,18,19,20)

Introduction :

Soil acidity and electrical conductivity is major growth limiting factor for plants in many parts of the world. Several factors related to soil fertility limit agricultural production such as soil type. Farmer practices mineral fertilizers and management affects on crop productivity. By maintain all these factors to increase theproductivity as well as to maintain pH and electrical conductivity to change soil properties by using the disposal of waste water from alcohol industries such as spent wash.

Soil salinity has been measured using electrical conductivity for more than 100 years. In 1940 the accepted method for determining soil salinity. The plant grows best pH between pH 7 & pH 9 but in acidic condition condition well growth observed in to the crop. In this experiment, you studied the effects on plant growth of solution varying degree of alkaline. In this research article electrical conductivity increases but it gives positive effect on plant growth

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 therecommended procedure. 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

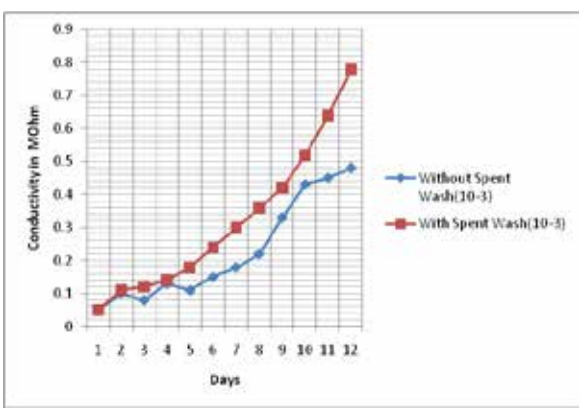
ANALYZED RESULTS:

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

Sr.No.	Conductivity Of Without Spent Wash in10^{-3}MOhm	Conductivity Of WithSpent Wash in 10^{-3}Mohm
1	0.05	0.05
2	0.1	0.11
3	0.08	0.12
4	0.13	0.14
5	0.11	0.18
6	0.15	0.24
7	0.18	0.30
8	0.22	0.36
9	0.33	0.42
10	0.43	0.52
11	0.45	0.64
12	0.48	0.78

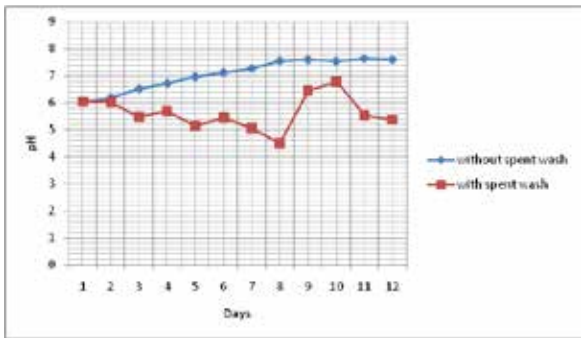
Fig. No.-1
Graph:-



Observation Table No.-2

Days	pH of without spent wash	pH of with spent wash
1	6.04	6.04
2	6.20	6.02
3	6.54	5.48
4	6.74	5.69
5	6.98	5.15
6	7.14	5.45
7	7.29	5.05
8	7.57	4.51
9	7.61	6.44
10	7.55	6.78
11	7.65	5.55
12	7.61	5.37

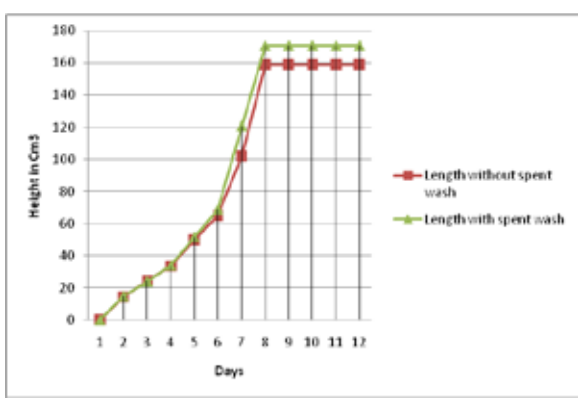
Fig. No.-2
Graph:-



Observation Table No.-3

Days	Length without spent wash	Length with spent wash
1	0	0
2	14.2	14.75
3	24.5	23.8
4	33.3	33.9
5	49.9	51.6
6	65	68.7
7	102.2	120.7
8	159	170.8
9	159	170.8
10	159	170.8
11	159	170.8
12	159	170.8

Fig. No.-3
Graph:-

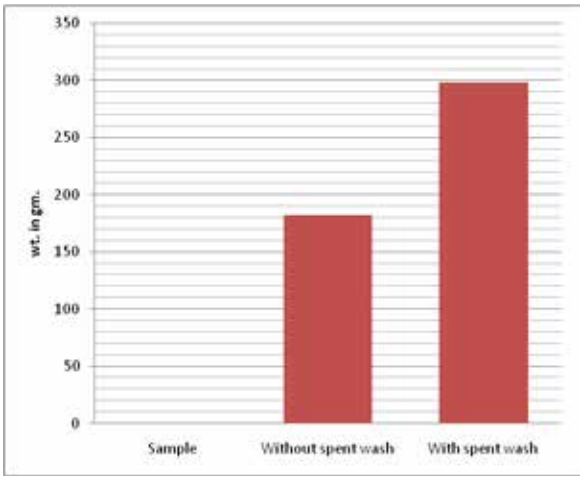


Productivity:-
After the three months crops have matured then it harvested and to select in each plot four maize crops and it weighed to observed that the difference between the productivity . This data has been mentioned in observation table.

Observation Table No.-4
Maize Wt. in gm

Sample	Maize Wt.
Without spent wash	182.500
With spent wash	298.36

Fig. No.-4
Graph:-



RESULT &DISCUSSION
n the table no.1 the electrical conductivity of soil variation comparative data spent wash and without spent wash is given by using the same data days against the conductivity graph is plotted. In these graphs variation should be observed & spent wash plots conductivity increases(0.30x10-3) as compare to the without spent wash plot. But the positive effect should be observed on plant growth as well as productivity.(15,16,17)As per the observation pH value is mentioned in observation table no.2 &graph is plotted. pH against days graph no. variation should be occurs in pH .In without spent plot slightly acdic and in nutral but after giving spent wash pHvalue decreases and to forms acidic effect this should be observed on plant growth. The comparative data in observation table as well as in graph should be done.(18,19,20

In every week height of maize crop measured & these heights of spent wash & without spent wash is measured large amount of diff. should be observed in the height. With the help of meter scale this datamentioned in to obs.Table& graph.

Then the productivity comparison should be done both plotsspent wash & without spent washFour maize crops in each plot have taken separately & harvested it & weighed max. amount of diff. should observed the spent wash plot weight is higher than that of without spent wash plot. These data have mentioned in table & fig.

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