Table . Elemental Analysis of Soil Sample After Flood

No	Elements	Symbols	Amount (%)
1	Silicon	Si	67.029
2	Aluminium	Al	20.451
3	Iron	Fe	6.247
4	Potassium	K	2.803
5	Calcium	Ca	1.834
6	Titanium	Ti	0.806
7	Manganese	Mn	0.133
8	Zirconium	Zr	0.045
9	Chromium	Cr	0.037
10	Strontium	Sr	0.027
11	Copper	Cu	0.013
12	Zinc	Zn	0.013
13	Nickel	Ni	0.012
14	Rubidium	Rb	0.007
15	Yttrium	Y	0.006

According to EDXRF report, the element found from the soil samples were Si, Al, Fe, K, Ca, Ti, Mn, Zr, Cr, Sr, Cu, Zn, Ni, Rb and Y in significant amount. Among them, the amount of silicon was 67.029% and it was the highest one in this selected sample.

Comparison of Elemental Analysis of Soil Sample Before and After Flood

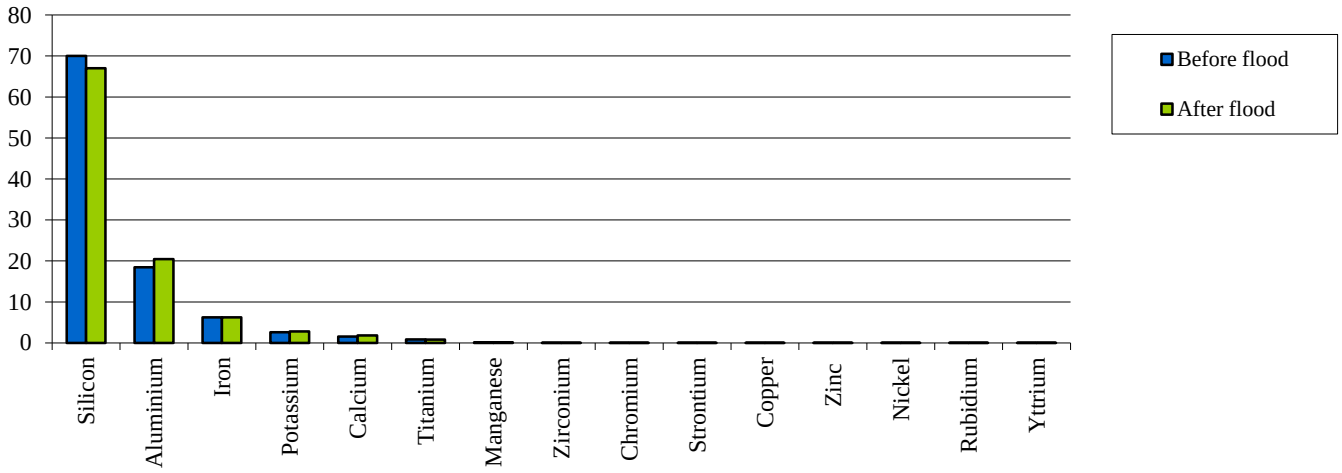

Figure. Comparison of Elemental Analysis of Soil Sample

According to EDXRF report, the elemental constituents of the collected soil sample could be determined by studying the quantitative results that indicate the highest amount of SiO_2 present in the soil sample where as the moderate amount of Al_2O_3, Fe_2O_3 and K_2O. Moreover, the content of potassium displayed that the collected soil sample is suitable for cultivation of crops such as onion, corn, chilly, potatoes and groundnut. The study area of the research work is one kind of farm yard as well as it is confirmed by the contents of Al_2O_3 and K_2O. Potassium is one kind of important nutrients in the soil for the plant growth.

Table . Results of Moisture Contents of Soil Samples

Soil sample	Moisture (%) before flood	Moisture (%) after flood
Sample 1	10.3	10.5
Sample 2	11.7	11.9
Sample 3	10.7	10.11
Sample 4	10.9	10.12
Sample 5	10.4	10.9

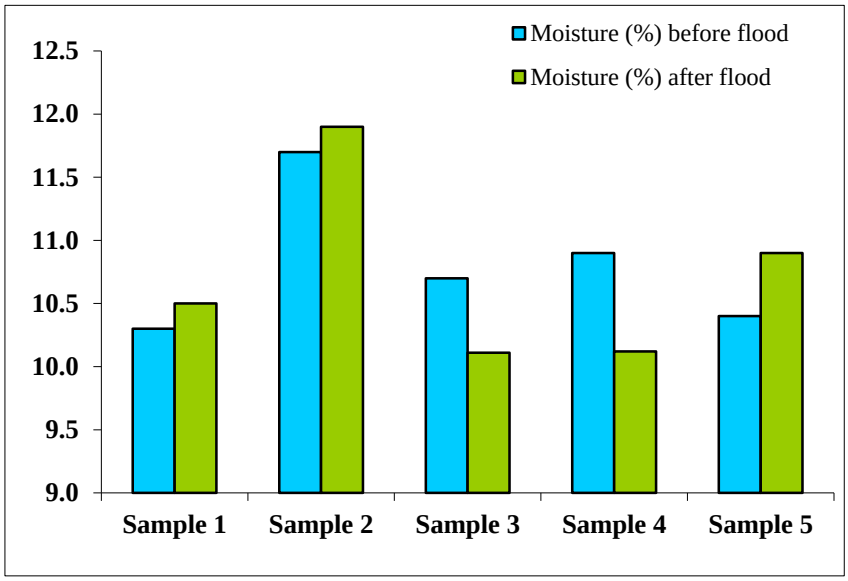

Figure. Moisture Contents of Soil Samples

From the observation of above table, the moisture content of the soil sample after flood is higher than that of the value of before flood.

Table . Results of pH Values of Soil Samples

Soil sample	pH before flood	pH after flood
Sample 1	8.15	8.16
Sample 2	8.15	8.16
Sample 3	8.15	8.16
Sample 4	8.15	8.16
Sample 5	8.15	8.16

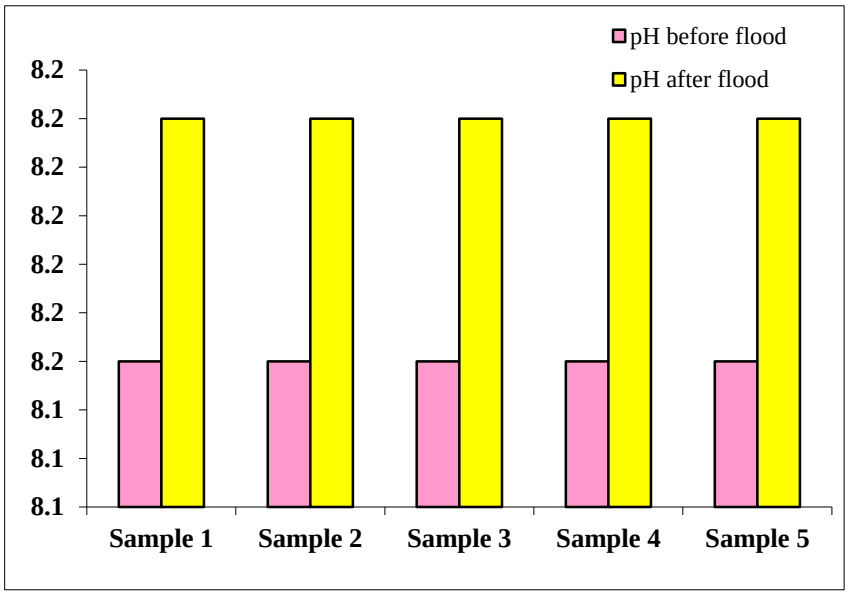

Figure. pH Values of Soil Samples

Table. Results of Nutrient Contents of Soil Samples Before and After Flood

Condition	Organic Carbon (%)	Humus (%)	Total N (%)	Available P (ppm)	Available K_2O (mg/100g)
Before Flood	0.514	0.886	0.14	8.39	4.69
After Flood	0.624	0.752	0.13	8.39	4.86

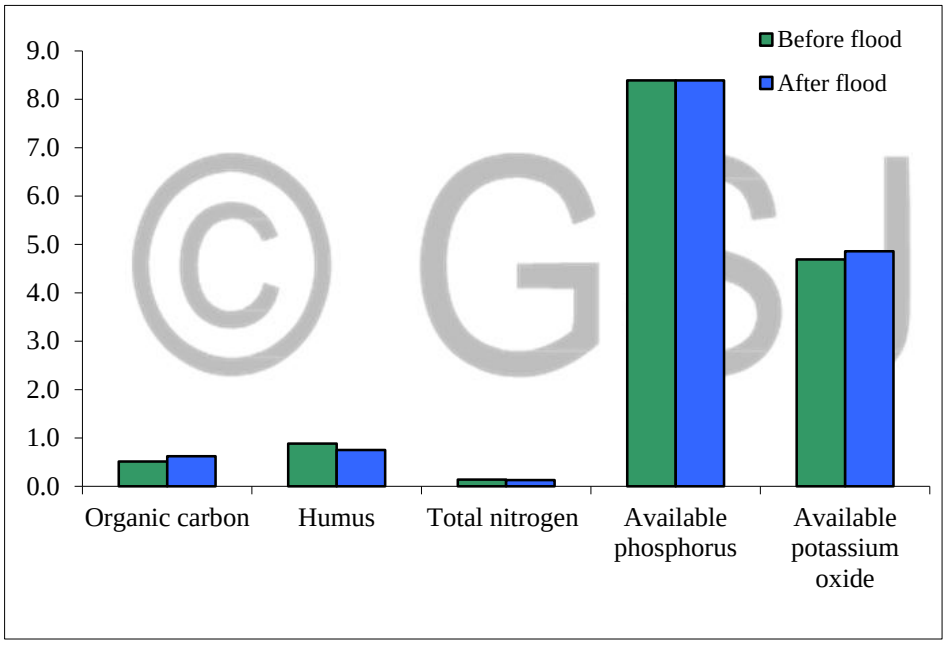

Figure. Nutrient Contents of Soil Samples Before and After Flood

According to the comparative values of the soil samples, the contents of organic carbon, humus, total nitrogen, available phosphorus and available potassium oxide of the sample after flood are higher than that of the values of before flood.

Table. Cultural and Microscopic Morphology of Isolated Bacteria

Colony Morphology						Microscopic Morphology	
No	Sample Name	Size (mm)	Color	Elevation	Shape	Gram' reaction	Shape
1	S_1	1.5	White (opaque)	Raised	Irregular	+	Rod (spore)
2	S_2	2	White (opaque)	flat	Irregular	+	Rod (spore)
3	S_3	3	White (opaque)	flat	Irregular	+	Rod
4	S_4	1-1.5	White (opaque)	flat	Irregular	+	Small Rod

CONCLUSION

In this research work, soil samples were from the farm of Yenangyaung Township, Magwy Region. The physical and chemical parameters of the soil samples before and after flood were investigated whereas pH values of the soils were 8.15 and 8.16 and that is why these soils should be added a small amount of gypsum for crops. Moreover, the moisture content of the selected soil sample was determined by the use of oven at 100^{o}C that informs a suitable moisture content of 28 % and it is a suitable data for farming. The elemental composition of this sample was analyzed by EDXRF method which displays the highest amount of Si (70.029 %), the medium amount of Al (18.451 %), a reasonable amount of K (2.603 %) and small amount of Ca as well as a less amount of others such as Ti, Mn, Zr,Cr, Sr, Cu, Zn, Ni, Rb and Y.

Moreover, the organic carbon (OC) content of collected soil samples were found to be 0.514 % and 0.624 % as well as the amount of humus contents were 0.886 % and 0.752 % that indicate the amount of OC contents were low in the samples. Furthermore, the available phosphorus contents were 8.39 ppm and 8.39 ppm that informs the medium amount of phosphorus present in these soils whereas the available potassium oxide values were 4.69 mg per 100 g and 4.86 mg per 100 g that displays

these soils need more K_2O for root crops. There were two types of bacteria, *Bacillus* and *Streptomyces* found in these soil samples. Both of two bacteria are symbiotic bacteria that can affect the productivity of the soil and can help the plant growth.

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