

Complete a using the scientific method - lab report example

[Science](#), [Biology](#)



Complete a using the scientific method

Variability in Maize Yields and Properties of soil in Arable and non arable soils. Introduction. Soil variability can be defined as the observed variability on a considerable distance between units that are distinctly different like land facets and parent materials. Considering the previously done research, there has been very little attention that has been given towards the component micro variability that pertains the recurrent and local variations on a single field (Ogunkunle, 2006). Prior research has reported that the influence of soil variability and the crop performance is extremely pronounced in regions of the tropical (Moorman, 2005). In this case, the understanding the microvariability degree of the soil in an area, together with factors that lead to variability is extremely vital for experimental and practical agriculture (Kang, 2008). In order to gain knowledge on soil microvariability, this paper explores the variation degree in some soil and the maize yield. In this paper, we hypothesize that there would be more yield in an arable land than in nonarable land. The null hypothesis of the study will be that there would be a higher maize yield in arable land than in non arable land.

Procedure.

The impact of mineral nitrogen fertilizer was observed on the yield of maize crop. This yield was measured in milligrams of dry mass harvested in 100 acres for a period of a year. The process was done for both arable and non arable land in the sites close to Germany, and Malle. The maize yield was observed from 1990 to 1988. The climate variation on both types of land were also recorded.

<https://assignbuster.com/complete-a-using-the-scientific-method-lab-report-example/>

Results

The collected results were recorded in table 1 and 2.

Table 1: Maize Yield From Arable Soil.

Amount of Mineral Nitrogen Fertilization (kg per 100 acres)

Yield of Maize (mg of dry mass per 100 acres per year) in Arable Soil

0. 12

10. 7 mg. yields of Maize

Table 2: Maize Yield From Nonarable Sandy Loam Soil

Amount of Mineral Nitrogen Fertilization (kg per 100 acres)

Yield of Maize (mg of dry mass per 100 acres per year) in Nonarable Sandy Loam Soil

0. 12

17. 0

Discussion.

From the results, it is evidenced that in a percentage nitrogen concentration of 0. 12, there was more maize yield in nonarable land than in arable land.

This shows that there were differences in the management practices involved in the arable, and in nonarable land (Moss, 2007). It can also be argued out that the amelioration, and fertilizer addition in the different soils were responsible for the different yield of maize (Murphy, 2006). In this respect, the study rejects the null hypothesis thus adopting the alternative hypothesis of the experiment. In this respect, the alternative hypothesis includes; a lower yield in an arable land than in nonarable land.

References.

Moorman, J. (2005). Soil management problems and possible solutions. North

Carolina: State University press.

Kang, T. (2008). Microvariability of soils in the tropics and its agronomic implications with special reference to West Africa: In diversity of soils in the tropics. ASA Special Publ. 34: 29-43.

Moss, P. (2007). Report on the classification of soils found over the sedimentary rocks in Western Nigeria. New York: Oxford University Press.

Murphy, Y. (2006). A modified single solution method for the determination of phosphate in natural waters. Anal. Chim. Acta 27: 31-36.

Ogunkunle, A. (2006). Spatial variability of some chemical properties in two Ultisol mapping units in Southern Nigeria. Soil Survey and Land Evaluation 6: 26-32.