A Big Earth Data Platform for Three Poles

**Soil properties data set of different land use types along the Qinghai-Tibet Highway (2019)**

1、Description

From July to August 2019, 147 soil samples of different land use types were collected every 20km，in sections from Xining City to Golmud of Qinghai Province, from Golmud of Qinghai Province to Lhasa of Tibet Autonomous Region, and from Golmud to Xining, far away from human disturbance. Totally, 147 soil samples were collected, including 83 grassland, 48 sandy land, 14 agricultural land and 3 forest land. The data set includes serial number, geographical location of sampling points, land use type, longitude and latitude coordinates, altitude, soil total nitrogen, total phosphorus, total potassium content and soil pH. The data format is Excel table. This data set is obtained by the combination of field sampling and indoor experiments. Soil samples in 0-15 cm layer was collected with a soil drill (8 cm in diameter) in each square by random sampling method, and the soil separated from the root system was screened by using a coarse screen. The total nitrogen, total phosphorus and total potassium was measured from the whole sample, and the 0.15 mm soil sample was used, in which the total nitrogen was measured by semi-automatic Kjeldahl nitrogen determinator, the total phosphorus was measured by spectrophotometer, and the total potassium was measured by flame photometer. The measurement of soil PH value was as: weighed 10g of air dried soil sample screened by 1mm into a 50ml beaker, added carbon dioxide free distilled water to maintain the water-soil ratio of 2.5:1, and measured it in PHSJ-4F laboratory. This data can provide data support and scientific basis for alpine ecosystem restoration.

2、Keywords

Theme：Soil,Soil physical and chemical indexes,Soil elements composition
Discipline：Terrestrial Surface
Places：Qinghai-Tibet PlateauTibet,
Time：2019

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.05MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：37.0 | - |
| west：90.0 | - | east：101.0 |
| - | south：30.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHAO Guangju. Soil properties data set of different land use types along the Qinghai-Tibet Highway (2019). A Big Earth Data Platform for Three Poles, doi:10.11888/Soil.tpdc.2717362021

References to articles:

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

name: ZHAO Guangju
unit: Institute of soil and water conservation, Ministry of water resources, Chinese Academy of Sciences.
email: Guangjuzhao@163.com