A STUDY ON THE FEASIBILITY OF REGULATING WATER RETENTION CAPACITY OF SANDY REGOSOLS

BY

JEYARANEE PAUL

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Approved by

.....	..... 28/8/87
Supervisor	Head/Dept.of Agronomy
Mr.S.Sivapalan	Dr.S.Raveendranath
Dept.of Agronomy	Dept.of Agronomy
Faculty of Agriculture	Faculty of Agriculture
Eastern University, Sri Lanka	Eastern University, Sri Lan
Chenkalady.	Chenkalady.

ABSTRACT

A field experiment on a bare soil was conducted in the Eastern Region at the Eastern University, Sri Lanka, Chenkalady to study the feasibility of regulating water retention capacity of sandy regosols during the dry season of 1987 (July-october).

Four different types of organic matter ammendments , namely, burned paddy husk, cowdung, tank silt and ipil-ipil leaves at 3 levels of application were tested in plots arranged in Randomized complete block design.

Results indicate that the addition of paddy husk and tank silt at higher level of application(at the rate of 1.5 and 30 tons/ac respectively) has significantly increased the water retention capacity of sandy regosols. Means of each treatment show that addition of paddy husk was superior to other treatments.

Soil temperature measured at a depth of 10 cm indicates that the temperature rise of treated plots was slightly lower than that of control plots.

The addition of different types of organic matters at higher levels has significantly increased the total organic matter contnet of regosols. However, among these treatments the highest organic matter content was recorded for cowdung.

Treatment of sandy regosols with different kinds of organic matters at higher levels of application reduces the bulk density of the soil which inturn increases the porosity.

Treatment means were compared and found that cowdung and Ipil-ipil leaves treatments were superior to other treatments.in increasing total porosity of the soil.

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