بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

SOIL SURVEY AND SOIL CLASSIFICATION OF SOME VALLEYS IN SINAI USING AERIAL PHOTOGRAPHY

By

Mahmoud Khairy Mohamed Mahmoud

B.Sc. Agric.Sci., (Soils), Cairo University., 1970

THESIS

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1. INTRODUCTION

The desert soils environment is characterized by dry climatic conditions, high temperature, wide diurnal variations and active winds. These soils are the products of the geological and geomorphological formations,i.e., those are developed on old alluvial deposits, sloping lands, plateau, depressions, aeolian deposits, alluvial fans and coastal plains.

Most land of Sinai was considered desert soils, henceforth, land reclamation was given top priority to overcome the critical situation of the rapid increase in population. Following to achieve this purpose, the soil survey is becoming more important to gather data and generate information covering soil genesis, properties, distribution, behavior and potential uses.

Data in soil survey could be gathered from four main sources, i.e., remote sensing data, field observations, laboratory analyses and expert opinions and experimentation results.

The area of Wadi Sudr and Wadi Wardan which is located in south western part of Sinai Peninsula was selected for conducting this work, due to its promising soils and water resources.

The present study has been undertaken to identify the different physiographic units of the studied area using aerospace landsat image, and consequently provide more information about soil morphological, chemical, physical and mineralogical properties which used as guidelines for soil classification and hence land suitability for irrigated agriculture. This would be helpful for selection of new areas to be included in the extension lands for agricultural purposes.

2. REVIEW OF LITERATURE

2.1. Physiographic features of the studied area:

2.1.1 Location:

The area of Wadi Sudr and Wadi Wardan occupies about 756 Km^2 of the south western part of Sinai Peninsula. It extends along the eastern side of the Gulf of Suez, from Ras Misalla in the north to wards Ras Matarma in the south. It is situated between latitudes 29° 25′ and 29° 42′ North and longitudes 32° 40′ and 32° 58′ East (Fig.1). This area is roughly oriented in an east west direction and connected with El Tur town in the south and Suez town in the north by main asphalted road.

2.1.2 Climate :

Some meteorological data obtained from Ras Sudr station during the period 1978-1988 are given in Table (1). Discussion of the main meteorological elements is presented as follows.

2.1.2.1. Temperature:

The climatic data given in Table (1) show that the minimum temperature values were recorded during the period from December to March, with a lowest value of 8. 42C° recorded in January. Whereas, the maximum temperature values were obtained from May to October, the highest value of 34.85C° was recorded in August.