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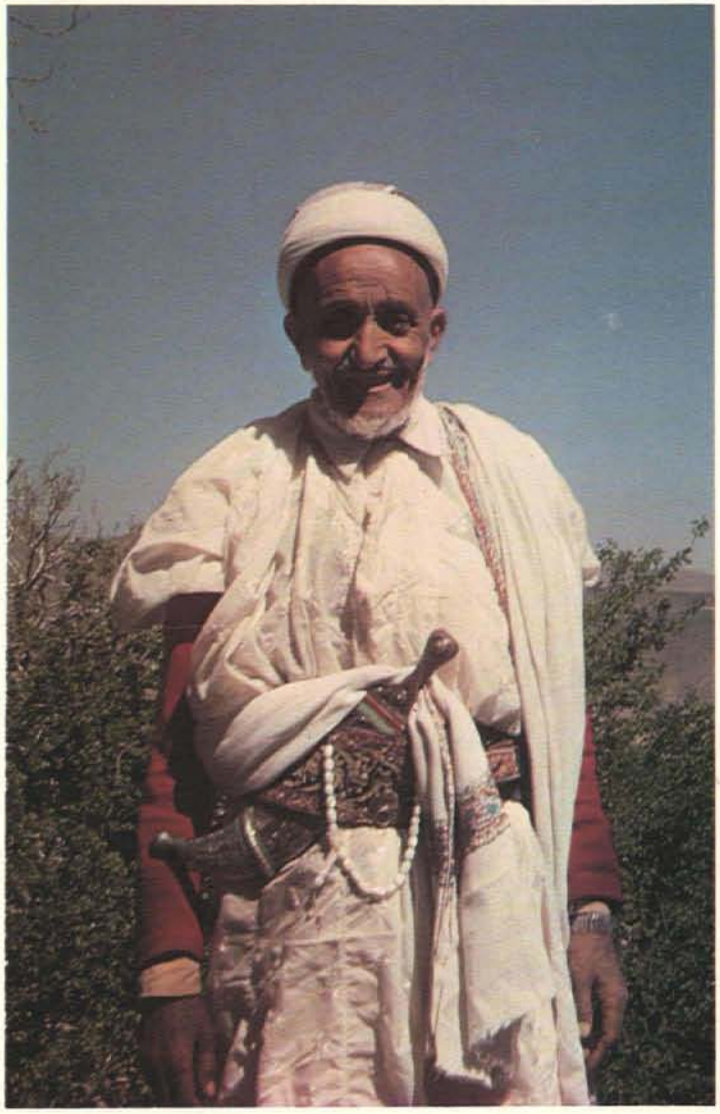

THE TUSKEGEE — YEMEN HORTICULTURAL PROJECT
1977-1981

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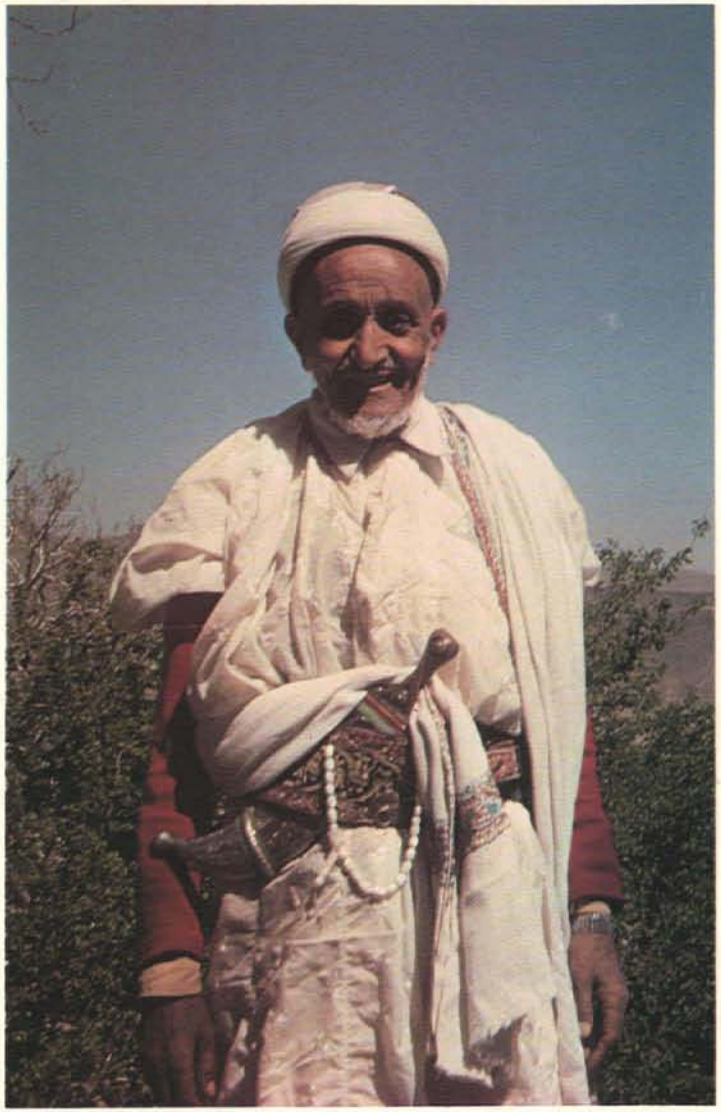

THE TUSKEGEE — YEMEN HORTICULTURAL PROJECT
1977-1981

Final Report
Part I
Tropical and Subtropical Fruit Improvement Project

Yemen Arab Republic

Contract Number 279-0024

September 30, 1981

Tuskegee Institute
The Carver Research Foundation
Office of International Programs
Tuskegee Institute, Alabama 36088

Benjamin F. Payton
President
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ACKNOWLEDGMENT

This document is designed as a supplement to the final narrative report for the Tropical and Subtropical Fruit Improvement Project. It is presented mainly in photographs. The writer is indebted to a large number of persons who provided slides for this document and in some cases participated in its development. Among those to whom special thanks go are: Dr. Fouad Basiouny, Dr. C. D. Covey, Dr. Jami Issa and Mr. Don Merkley.

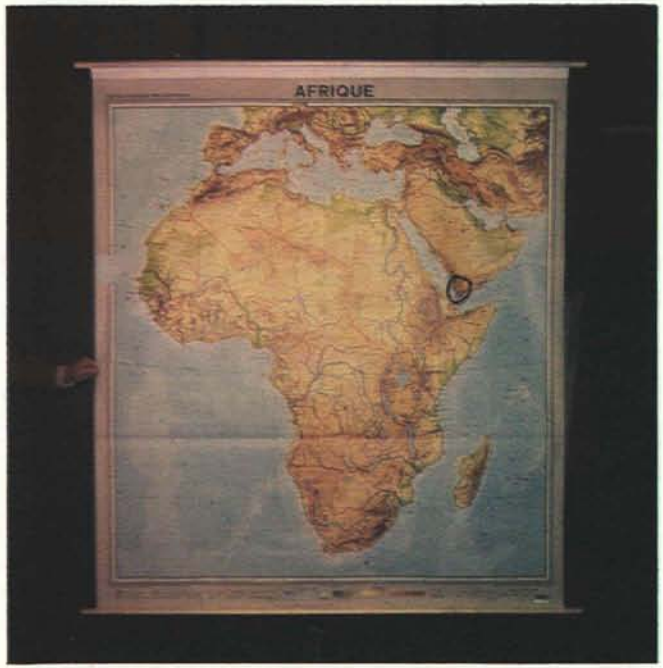
B. D. Mayberry
Project Director

I. THE YEMEN ARAB REPUBLIC

The Yemen Arab Republic is located on the southern edge of the Arabian Peninsula. It is bordered in the north by Saudi Arabia; in the south and southwest by People's Democratic Republic of Southern Yemen; in the west by the Red Sea; and in the east by the Great Arabian Desert.

The country is divided in four relatively distinct ecological regions, including (1) the coastal low lands of the Tihamas; (2) the southern highlands around Taiz; (3) the central highlands; and (4) the eastern region. The climatic conditions of the Yemen Arab Republic varies according to the four regions such that this diversity provides a very wide adaptation of tropical, subtropical and temperate crops.

Map of Yemen



Map of Africa and the Middle East with the Yemen Arab Republic encircled

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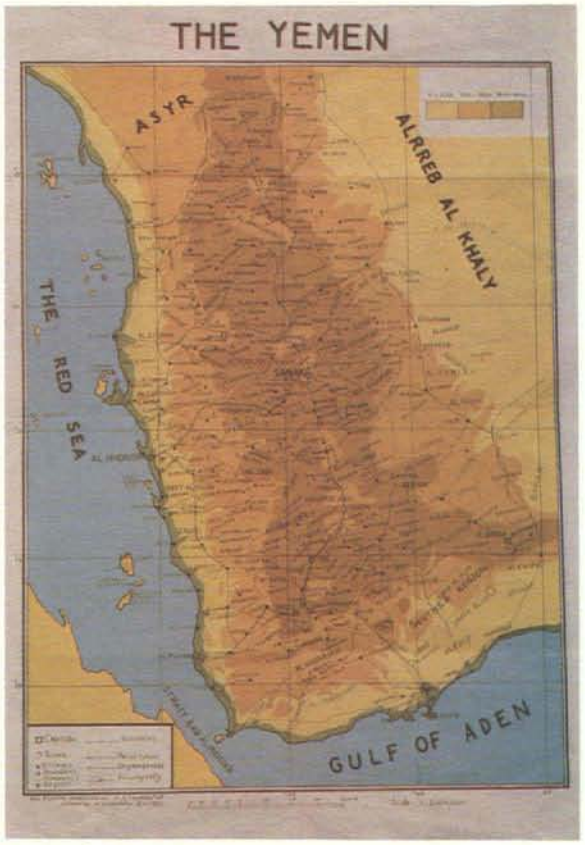

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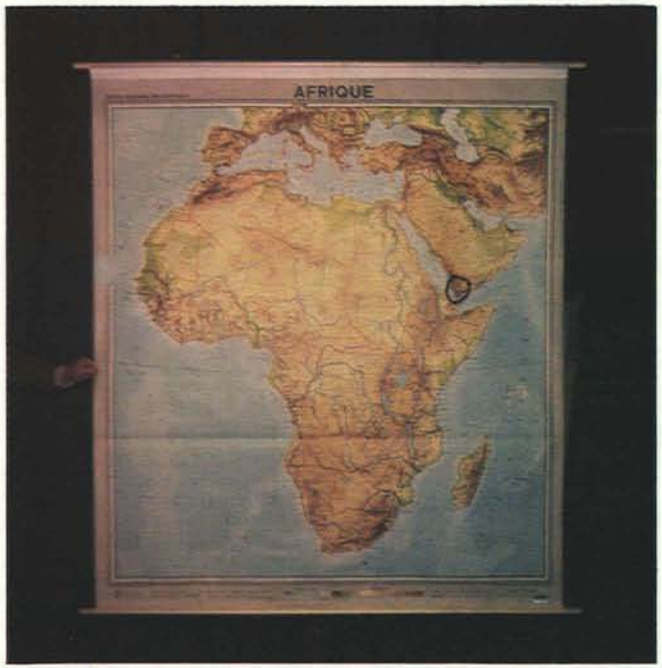

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II. TUSKEGEE INSTITUTE

Tuskegee Institute — a multidiscipline, co-education, predominantly black university — offers a unique, marvelous and exciting educational experience in the Deep South. From its humble beginning in 1881, as an arts and crafts teacher training trade school, there has evolved a major collegiate and graduate center of excellence that is fully accredited by the Southern Association of Colleges and Schools. Professional programs in hospital dietetics, nursing, engineering, chemistry and veterinary medicine are also accredited by national accrediting agencies. Equally impressive programs are conducted in agriculture, architecture, arts and sciences, food sciences and technology, human nutrition, industrial technology, teacher education and human resources development.

Tuskegee Institute's commitment to and involvement in international development began before the turn of the century when, in response to an invitation by the colonial committee of Germany, a task force was sent to West Africa to provide technical assistance in cotton production. International development continued to be a major focus of the Tuskegee program.

Tuskegee Institute

Benjamin F. Payton, Ph.D.
President
Tuskegee Institute

III. THE YEMEN HORTICULTURAL PROJECT

Tuskegee Institute contracted with the United States Agency for International Development (AID) to undertake an adaptive research and development program for selected horticultural crops in the Yemen Arab Republic.

The USAID Mission in Sanaa, Yemen Arab Republic, provided in-country management and support for the Tuskegee Horticultural Improvement Project. In addition, it provided liaison between Tuskegee and the Yemen Ministry of Agriculture. This relationship with USAID was invaluable in the implementation of the Tuskegee Project. The services were designed to be provided over the five year period (1976-1981) under the project management of the USAID Food and Agriculture Officer. Tuskegee Institute contracted to achieve the following objectives:

1. Screen high producing varieties of tree fruit, vine and nut crops and select material of potential importance for Yemen.
2. Study common horticulture production practices and identify improved practices of potential benefit to increase yield for the selected crops.
3. Plan and manage adaptive research of varieties and cultural practices at government research stations and on farmers plots.
4. Undertake selected economic sociological research related to horticultural production and use.
5. Assist in the planning of institutional improvements and staff training for the horticulture program of the Yemen Arab Republic Government.
6. Assist in dissemination of proven high producing varieties and cultural practices identified in the project.
7. Train counterpart Yemeni staff to undertake the program features above.
8. Assist in preparation of list and specifications of plant materials, production supplies and other commodities necessary to implement the project.
9. Provide professional and technical cooperation for the staff horticulturalist to be provided for the project under a separate contract.

In an effort to achieve the objectives as originally planned Tuskegee's early action included a trip to Yemen to make a preliminary study designed to facilitate the development of a detailed plan of work. In this first trip, we looked broadly at the socio-economic, cultural, environmental and agricultural factors that could affect the implementation of the project. The sections which follow will show briefly what we found, and some of the the accomplishments.

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IV. THE MINISTRY OF AGRICULTURE

The Ministry of Agriculture represented the Yemen Arab Republic Government (YARG) in the executive of the Horticulture Project. Tuskegee Institute is most grateful for the support and cooperation provided by the Ministry of Agriculture.

Representative of the Ministry of Agriculture and Tuskegee Institute; ahya El Shugha, Kamel Mansour, B. D. Mayberry, and Mahammed Jagman

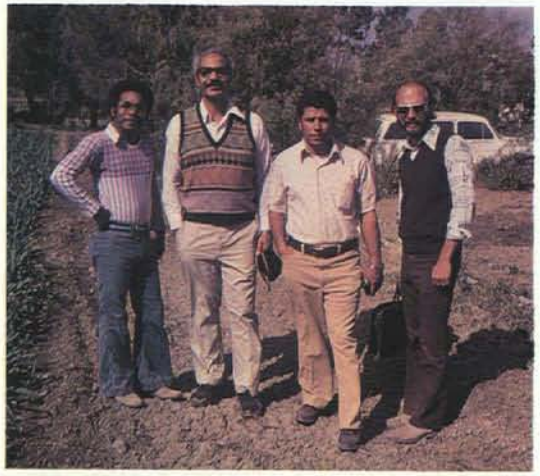
Mohammed Sharaf Addin, Ministry Officer for the Horticulture Project

V. PROJECT PERSONNEL

Personnel for the Tuskegee Horticulture Project consisted of two broad categories, including (1) short-term technical and professional persons who served in the initial stages to review the situation in Yemen and develop the program of work, and (2) long-term technical and professional persons who served mainly to implement the program. Some of the individuals involved are shown here.

Dr. Hesham A. Gawad, left, and Dr. Fouad Basiouny, third from left, with Yemeni workers

Dr. C. D. Covey with Yemeni children



Left to right: Mr. Jeffrey R. Lee, Dr. Mohamed A. Ismail, Dr. Sayed A. Badr, and Mr. Charles Uphaus.

Full time staff at the end of the project. Left to Right:
Abdulaziz M. Mutwali, Jarouba Field Technician;
Mayser A. Ahmad, Bir Al Shaif Field Technician;
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VI. THE PEOPLE OF YEMEN

The people of Yemen are the country's greatest asset. They are congenial, self-reliant and cooperative when made a part of the decision making process.

A Yemeni in typical regalia

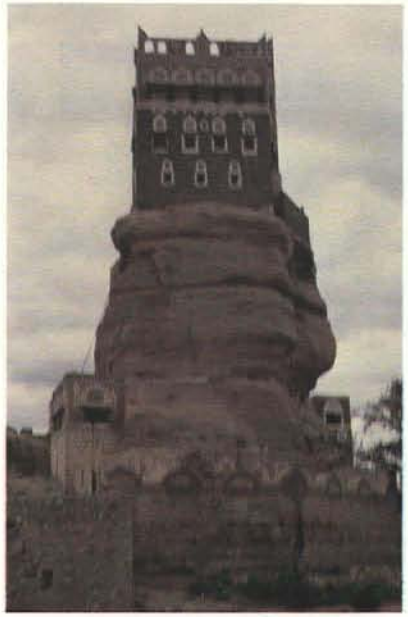
VII. TYPICAL YEMENI HOUSING

Yemeni housing varies in accordance with its environments. The elevation extends from sea level in the Tihamas to 12,000 feet in the highlands. This is accompanied by weather conditions that range from temperate in the highlands to tropical in the lowlands.

A village in Jarouba

Native stone craftsmen

An example of house made from native stone.



Presidential Palace

The Ministry of Justice in Sanaa

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VIII. MODES OF TRANSPORTATION

A very broad spectrum of modes of transportation is present in the Yemen Arab Republic.

Motorcycle taxi stand

Automobiles, taxis and private cars

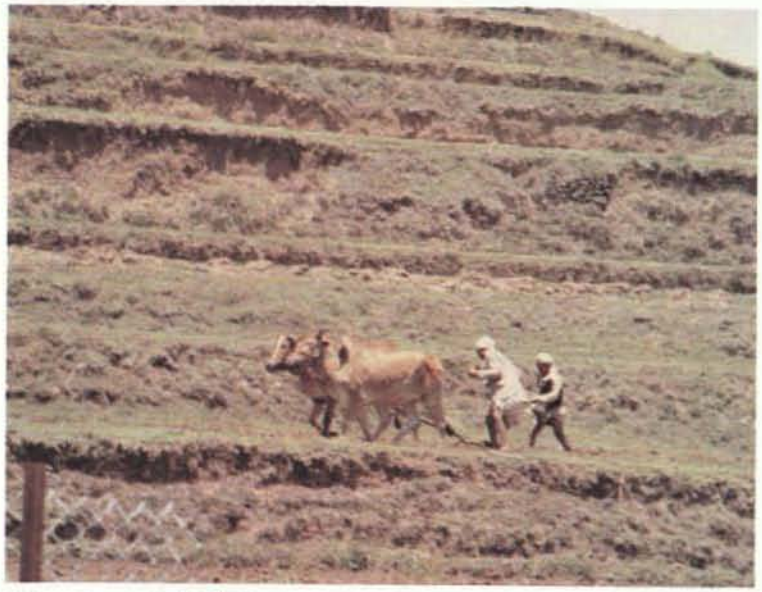
Camel back

Donkey carts

Trucks

IX. FARM POWER

The Yemeni people are quite adaptive. In the mountains where terracing is prevalent and plots are of necessity small, hand tools and plows drawn by men are used. Otherwise, bullocks and/or tractors are used.



Plow drawn by bullocks

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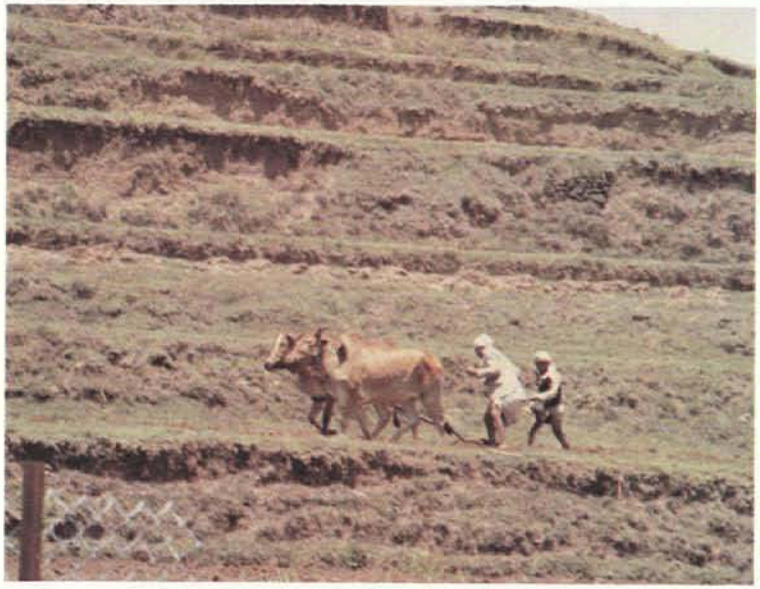

Plow drawn by bullocks

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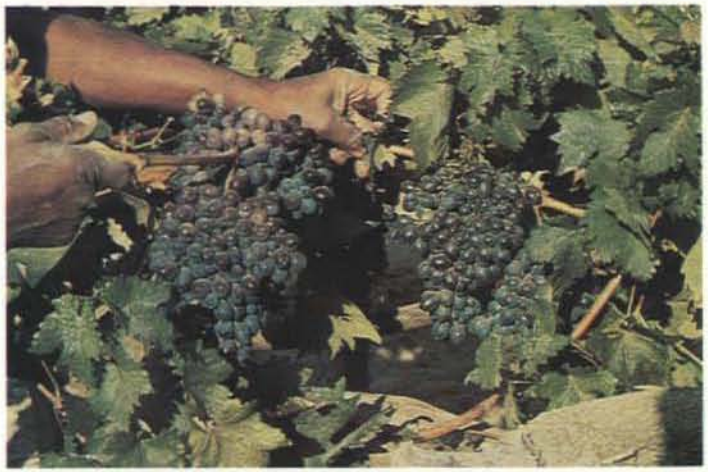
X. YEMEN AGRICULTURE

The Yemen Arab Republic is fortunate in having the essential natural resources to support a thriving and most comprehensive agricultural industry. With adequate technological input, the potential for tropical as well as subtropical agricultural production is practically unlimited.



Grapes, number one fruit crop in Yemen

Almonds

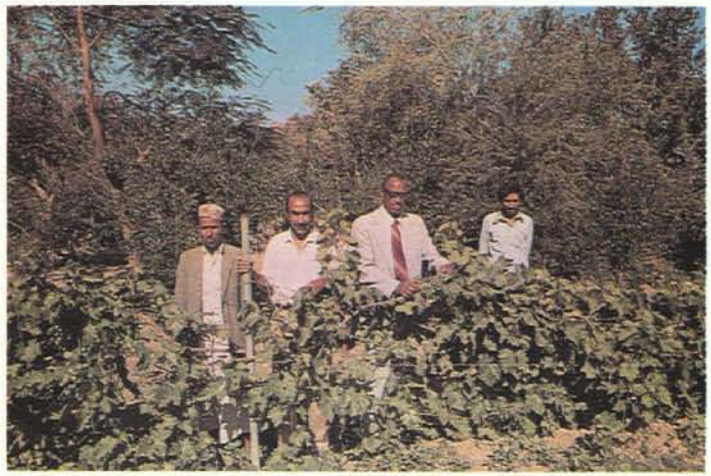
Grape trellis with post cut from native stone

Cotton in Yemen

XI. GOVERNMENT EXPERIMENT STATIONS

There are found in Yemen several experiment stations; at Sanaa, in the central highlands; at Taiz, in the southern highlands; and at Jarouba in the Tihamas. They are located such that they provide the potential for technology development for agriculture of the entire country.

Apricot — Sanaa



Grape — Taiz

Date Palm — Jarouba

Banana — Jarouba

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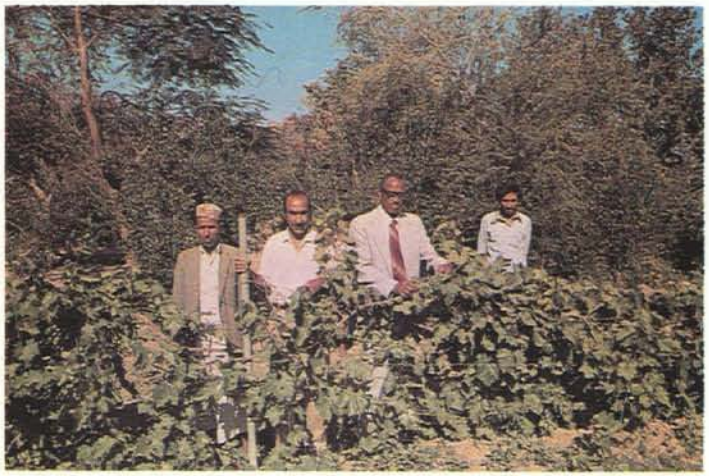


Grape — Taiz

Date Palm — Jarouba

Banana — Jarouba

XII. FOOD AND AGRICULTURAL MARKETS

The markets in Yemen will give an idea of the potential for consumption of agricultural products.

Imported produce market

Quat market

Local onion market

Fish market — Hodeidah

XIII. PROJECT DEVELOPMENTS

Efforts were made to fulfill the objectives of this project as outlined in Section I. A few pictures will illustrate some of the activities.

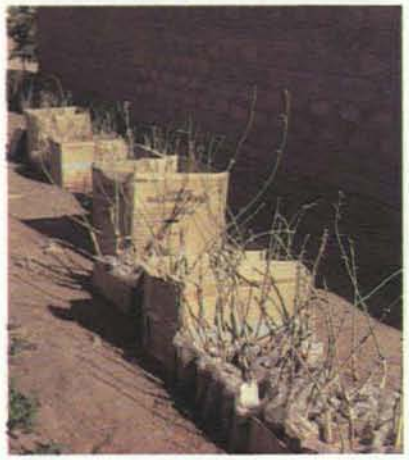
Jarouba

Irrigation pump

New well (second well)

Transportation of fruit trees

Shade house at Jarouba



Mango plants from U.S.

Citrus plants budded in Yemen by the Tuskegee staff

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Field plot design

Lime trees

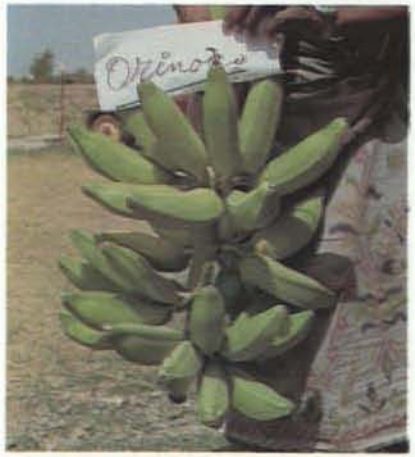
Citrus transplants

Citrus plantation

Watering facilities (method used to water transplants)

Fertilizing trees

Papaya plants



Banana — Jarouba

Guava at Taiz

Bir Al Shaif

Fig trees

Peach trees

Urban development through the Station

Papaya plants

Banana — Jarouba

Guava at Taiz

Bir Al Shaif

Fig trees

Peach trees

Urban development through the Station

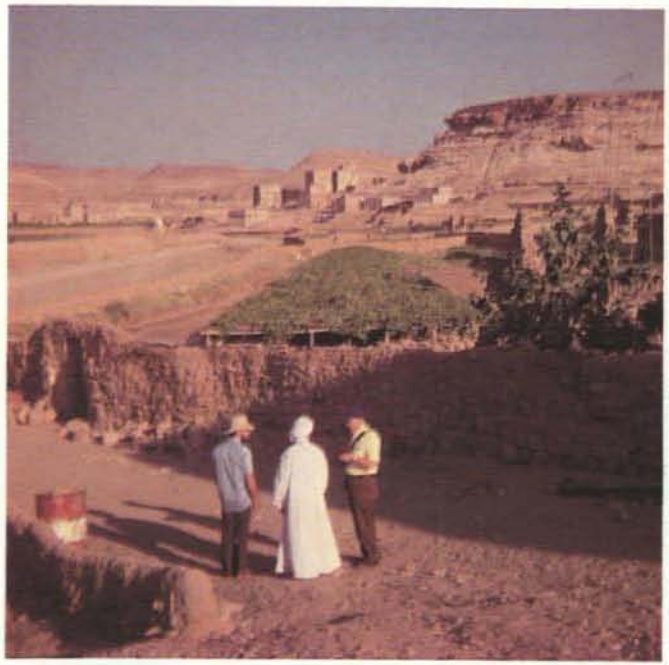
XIV. OFFICE SPACE

In the early stages of the project the staff was given office space in the AID Mission complex. Later, the Mission constructed an office building for the project. Near the close of the project the staff was moved to the Ministry of Agriculture.

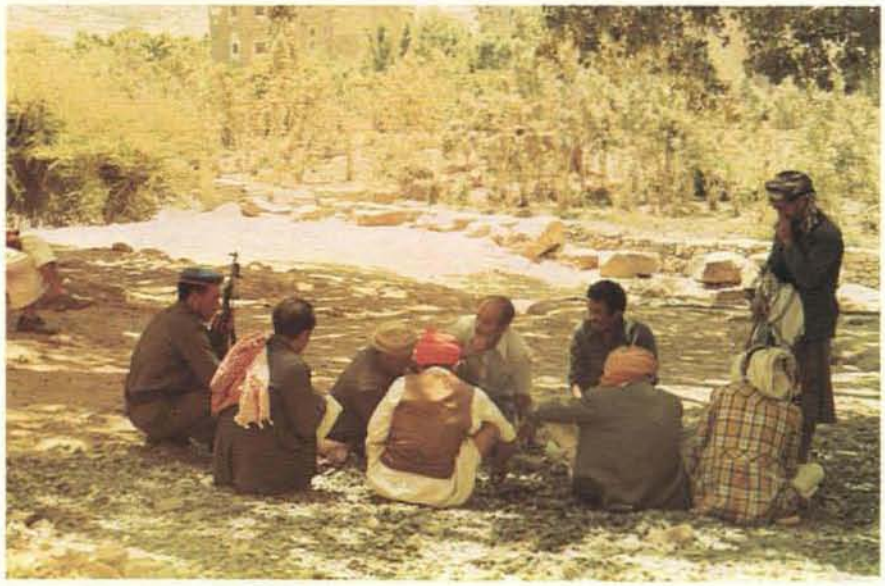
Project Office constructed by the Mission

XV. EXTENSION

One of the objectives of this project was concerned with the delivery of fruit trees and technical assistance to local Yemeni farmers. This objective was carried out in a very comprehensive manner.



Consultation relative to grape production



Extension meeting in Wadi Dhar

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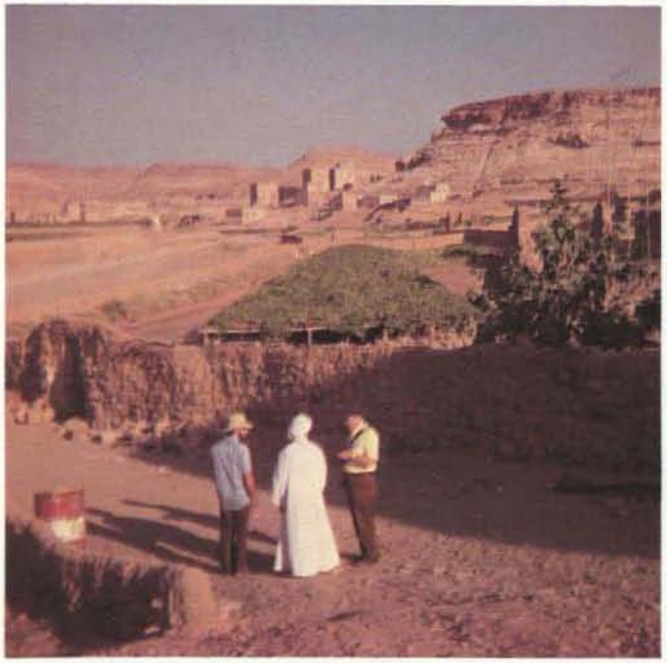

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XVI. UNITED STATES TRAINING FOR YEMENI NATIONALS

A very significant objective of the Tuskegee contract was to provide practical training for Yemeni horticultural counterparts in the United States. In June of 1978, Mr. Yahia Hussein Al-Habshi came to the States and spent two months in practical training at Tuskegee and in several states including Arkansas, California, and Florida. Upon completion of his training he was awarded a certificate by Tuskegee Institute.

Al-Habshi, right, Director of Horticultural Division receiving certificate of training from Dr. Sayed A. Badr, Chief of Party in Sanaa