

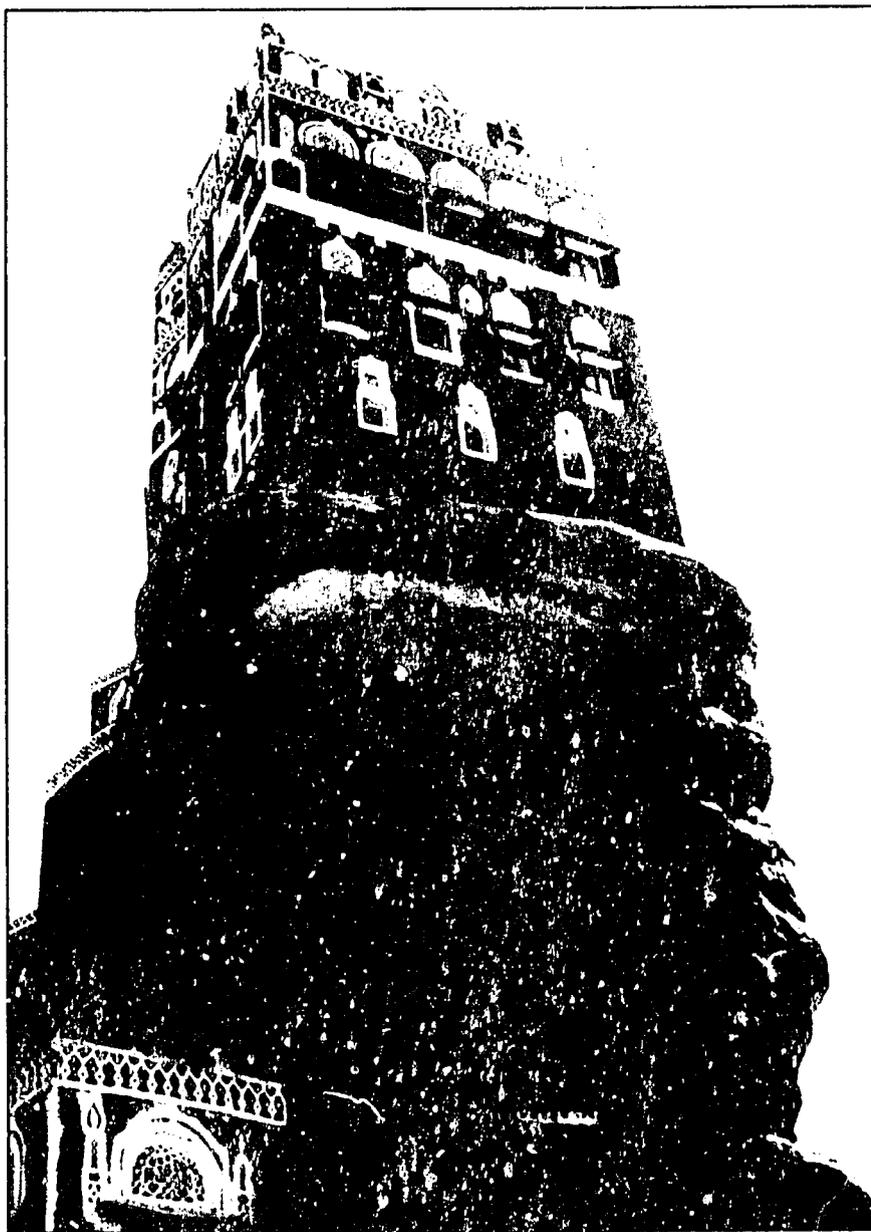
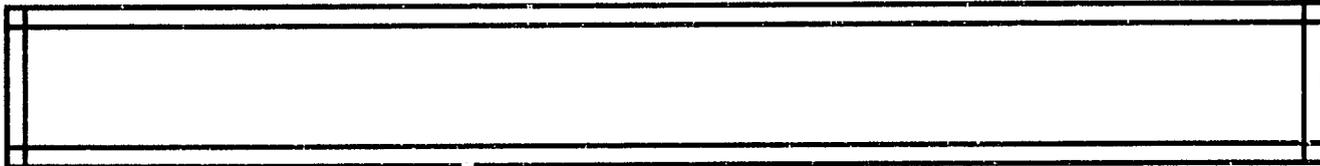


Yemen Arab
Republic

Poultry
Extension
and
Training
Sub-project

SUMMARY
REPORT





SUMMARY REPORT



Poultry baskets in the bazaar.

Yemen Arab Republic
Poultry Extension and Training Sub-project
A cooperative project between



Yemen
Arab
Republic (YAR)



U.S. Agency for
International
Development (USAID)



Consortium for
International
Development (CID)



Oregon
State
University (OSU)

Conducted by the Poultry Science Department,
Oregon State University, through the
Agricultural Development Support Program.
Under contract no. 1698-01-02
Title XII of the Foreign Assistance Act

April 1987

This report was funded by USAID and prepared and published by the Office of International Research and Development at OSU. Views and interpretations expressed in this report are those of the publisher and not necessarily those of USAID.

Front cover: taking delivery of poultry in the village.

Opposite: "Palace on the Rock." Wadi Dahr.

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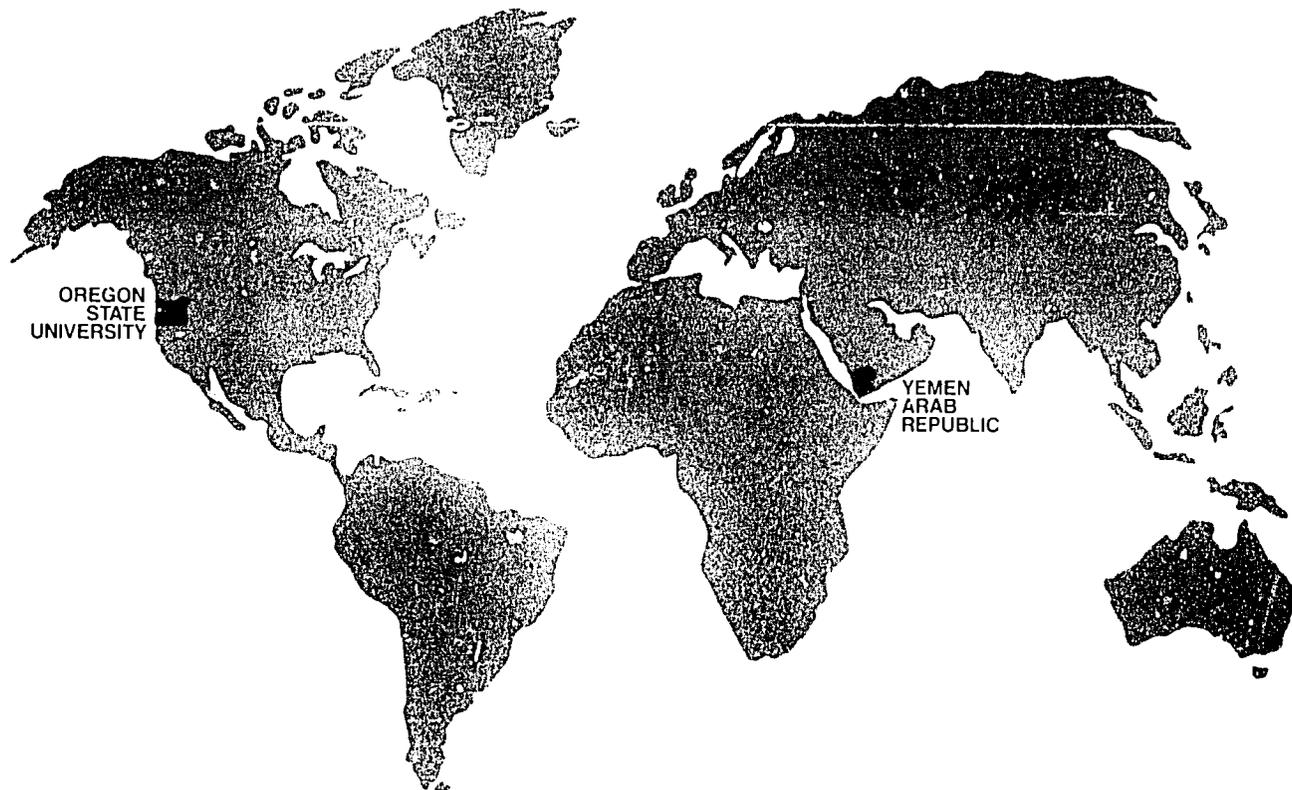
Newly constructed facilities at the Sana'a Poultry Training Center.

NOTE: Material for this Summary Report was taken from the Project Phase-Out Report prepared by the OSU Poultry Science Staff. Copies of that report are available at the Office of International Research and Development, or the Department of Poultry Science, OSU, Corvallis, OR 97331 / USA.

GOALS AND OBJECTIVES

The immediate goal of the Poultry Extension and Training program was to increase egg and broiler production in the traditional sector of Yemeni society and thereby realize two long-term goals of:

- increased farm income; and,
- improved dietary nutrition of Yemeni citizens.

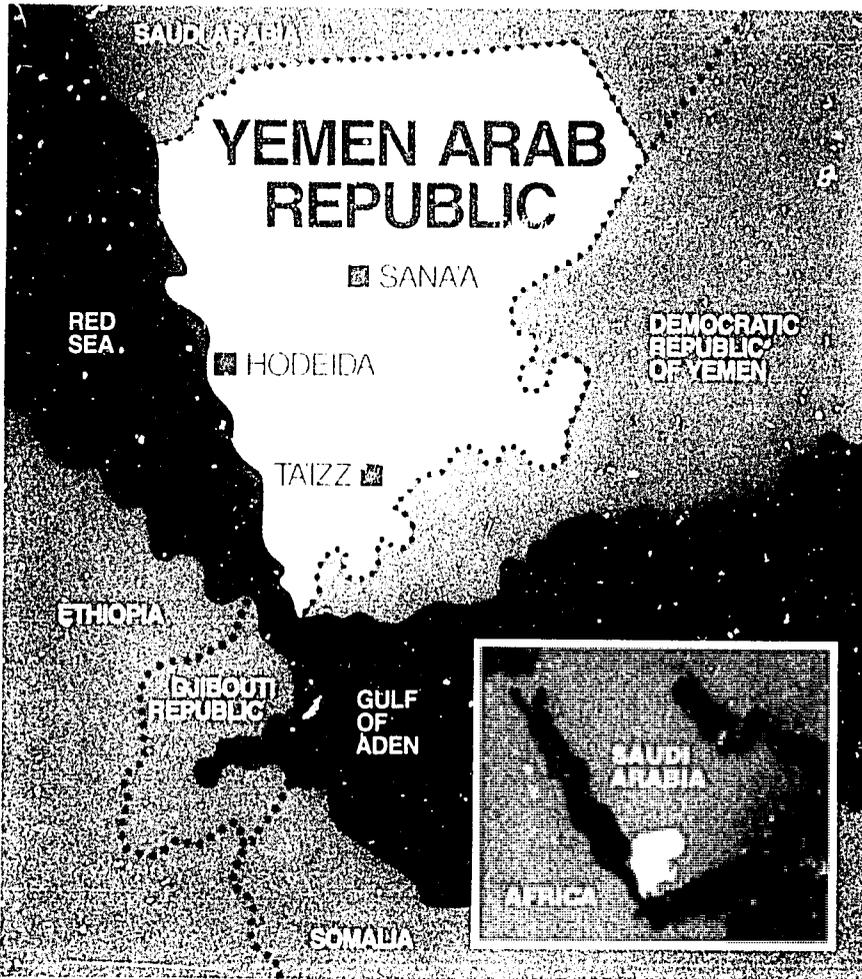


To work toward achieving these goals, the Consortium for International Development, with Oregon State University as lead institution, contracted to establish and nurture an extension and training program within the Animal Resources Directorate of the Yemen Ministry of Agriculture and Fisheries (MAF).

The Poultry Extension and Training Sub-project (PETS) was inaugurated to increase poultry production in household flocks and by small-scale commercial producers. Specifically, PETS' objectives were to:

1. Enhance egg and poultry meat production.
2. Reduce dependence on imported eggs and poultry products.
3. Improve the economic well-being of rural families.
4. Strengthen MAF so it effectively supports the long-term growth of the Yemeni poultry industry.

THE YEMEN ARAB REPUBLIC:



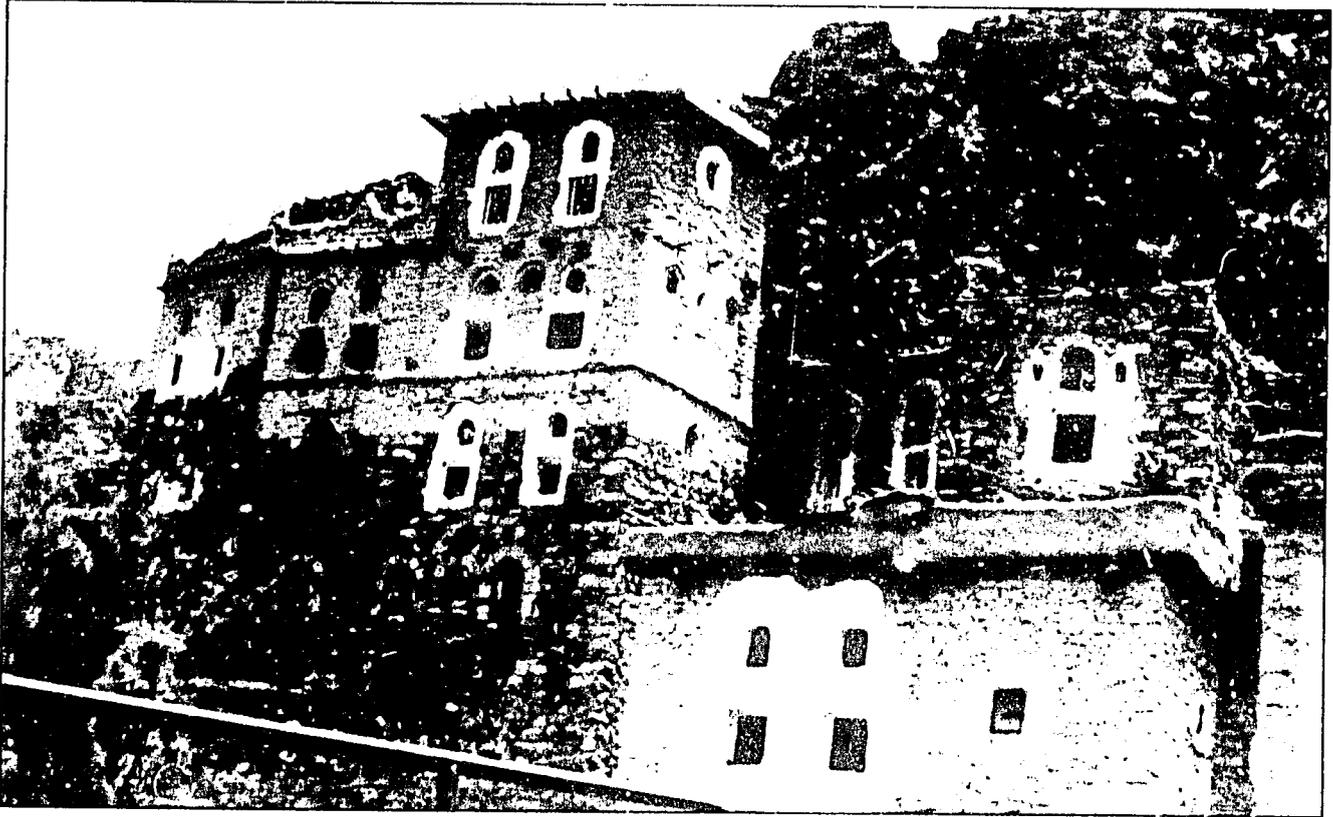
The Yemen Arab Republic is a dynamic, rapidly developing nation near the southern tip of the Arabian Peninsula. Known to have had some of the earliest civilizations, Yemen began its most recent phase of development in 1970. Since that time, technical progress and associated social and cultural changes have been dramatic. An isolated Islamic country had opened its doors to the electronic age.



Traditional street vendors at the market.



AN EMERGING NATION



Classical Yemeni architecture: multi-storied homes of cut stone and baked mud bricks, built into rugged hillsides.



Contrasts in current Yemeni transportation systems.

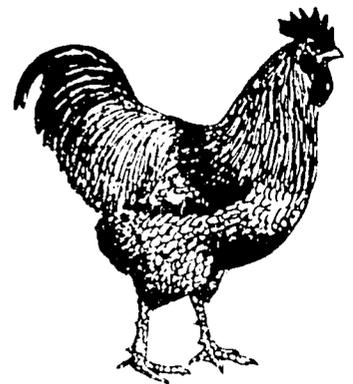
FARMING AND POULTRY PRODUCTION IN



Terraced fields on steeply sloping hillsides.

Agriculture in the Yemen Arab Republic is characterized by small, fragmented, family-owned farms frequently with access to several small terraced fields on the slopes of rugged mountains. Meager rainfall limits crop production in most of Yemen. Hence, its national production compares with other developing nations that have low agricultural outputs.

Another resource, human capital, is in short supply due to a shortage of educational opportunities in most areas plus the tendency of Yemeni men to engage in employment outside the country for several years during which they send financial remittances back to their families. The result is an environment in which trained agricultural labor is in short supply and is generally expensive.



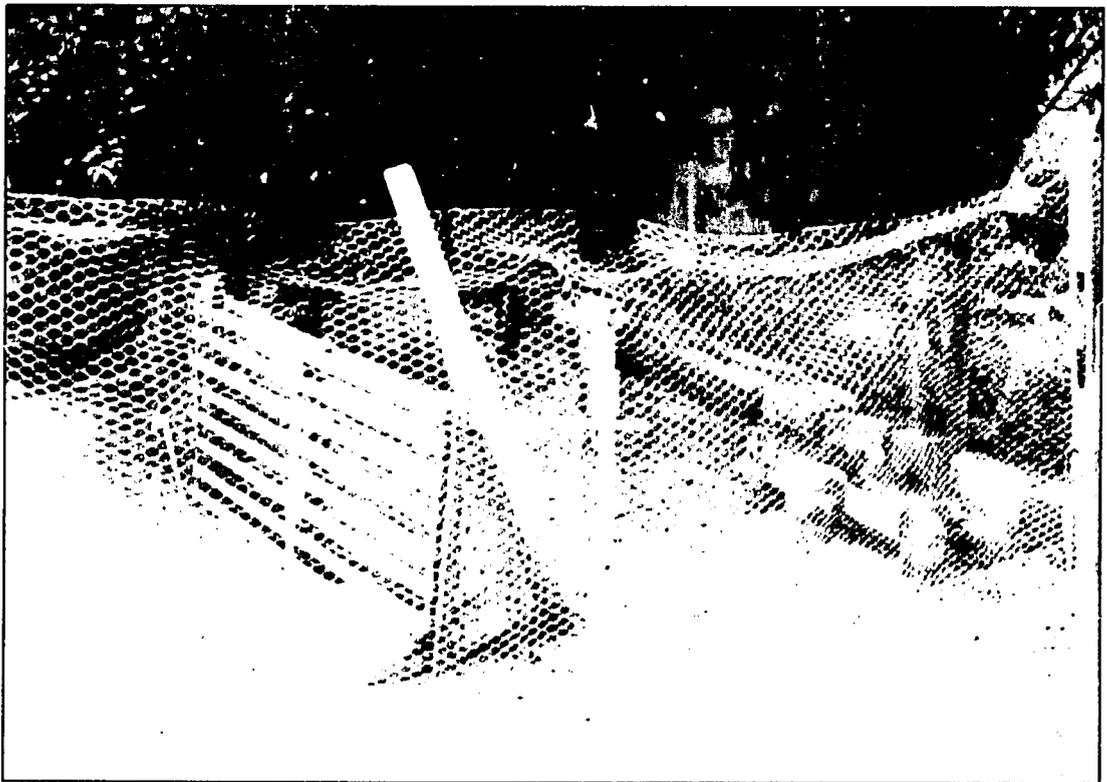
THE YEMEN ARAB REPUBLIC

Traditionally, poultry—meat and eggs—are an important part of the basic diet of Yemeni people.

Poultry production in Yemen ranges from a very large number of individually owned farm flocks to limited commercial production. Most off-farm production is managed by women, and is primarily for subsistence. Only about 15% of traditional flocks are commercialized, and these usually serve only the immediate rural community.

A major impediment to expansion and improvement of these flocks is lack of expertise in poultry husbandry. Therefore, training for both men and women is as important as production and distribution of birds.

To address these specific issues, the Ministry of Agriculture and Fisheries—in conjunction with the U.S. Agency for International Development—designed and implemented the Poultry Extension and Training Subproject as a major component of the Agricultural Development Support Program.



A rural,
small-scale
poultry farm.

A TEAM EFFORT



MAF officials met regularly with USAID staff and poultry sub-project personnel to monitor progress and develop long-range planning.

PETS was part of a bold experiment by USAID, through a collaborative relationship with CID, to facilitate an overall agricultural development program for Yemen.

In this experiment, the ten western U.S. land-grant universities comprising CID, the USAID Mission in Yemen, and the Yemeni Ministry of Agriculture and Fisheries became linked in an effort to make specific improvements in the agricultural sector.

Technical and administrative leadership was provided by Oregon State

University's Department of Poultry Science, supported by and through OSU's Office of International Research and Development.

The poultry program was conducted within, and for the benefit of, the Ministry of Agriculture and Fisheries. Like other development efforts, the accomplishments of the sub-project will be reflected by the extent to which the programs and training it provided take root and flourish.

Its impact also will be reflected in the future progress of an understaffed section of the Ministry whose members so diligently struggled alongside the sub-project staff to improve the well-being of rural Yemeni through enhanced poultry production.

MARKETING THE CONCEPT



Villagers inspect a poultry production display.

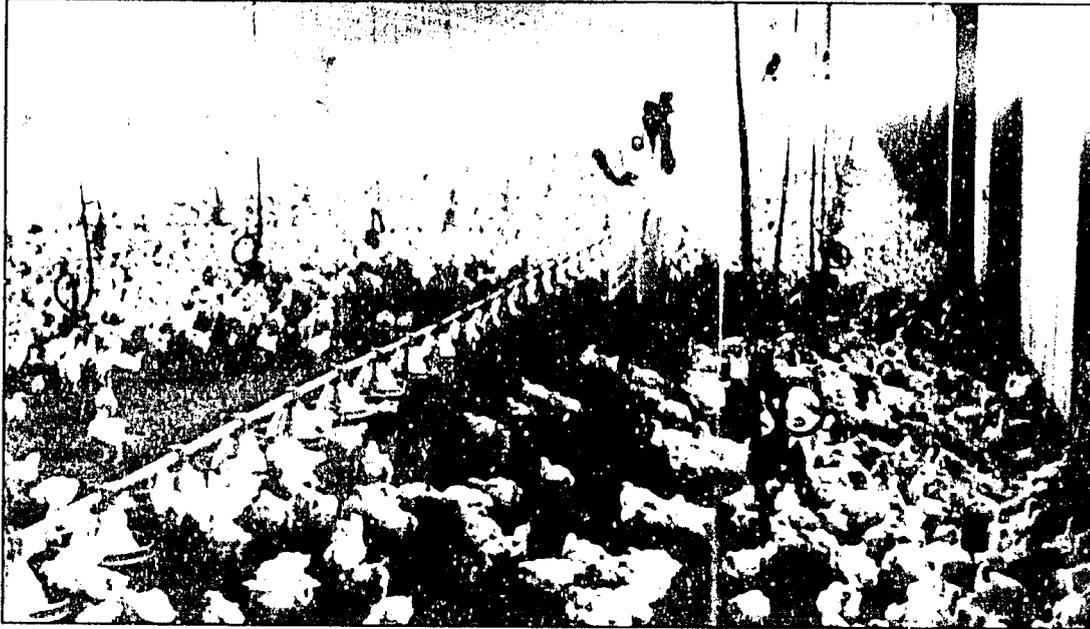
Early in 1981, a Poultry Demonstration Program was initiated to stimulate interest in poultry and egg production at the village level. Highly visible displays and demonstrations of the techniques and equipment available were provided at various locations.

As part of the demonstration initiative, 12 poultry houses were designed and erected on four demonstration farms in Sana'a and outlying areas. Each facility was capable of supporting approximately 650 laying hens

Inside one of the 12 demonstration poultry houses built by the sub-project.



PRODUCTION: ESTABLISHING FLOCKS



An interior view of one of the ministry's rearing houses.

One of the primary objectives of the sub-project was to provide a source of pullets with which to establish family and small-scale commercial flocks throughout Yemen. This was achieved through the construction of a pullet rearing facility capable of producing 100,000 started pullets annually.

A site at Bir Al Qhusain was selected, and Yemeni construction firms drilled wells, erected security fencing, and poured concrete foundations for the buildings. Four large poultry production buildings were fabricated in the United States by a firm in Alabama, and prepared for shipment by sea. Despite delays in shipping due to political unrest in the Red Sea area, the buildings were erected in December, 1984, and the first production cycle began in January, 1985. Since that time, the facility has produced more than 120,000 pullets and achieved a

remarkable survival rate of 92%.

Two smaller rearing facilities, also supervised by project personnel, have raised the total production figure to 190,000 birds.

Bringing feed to pullets in one of the smaller rearing facilities.



DISTRIBUTION: IN THE VILLAGES



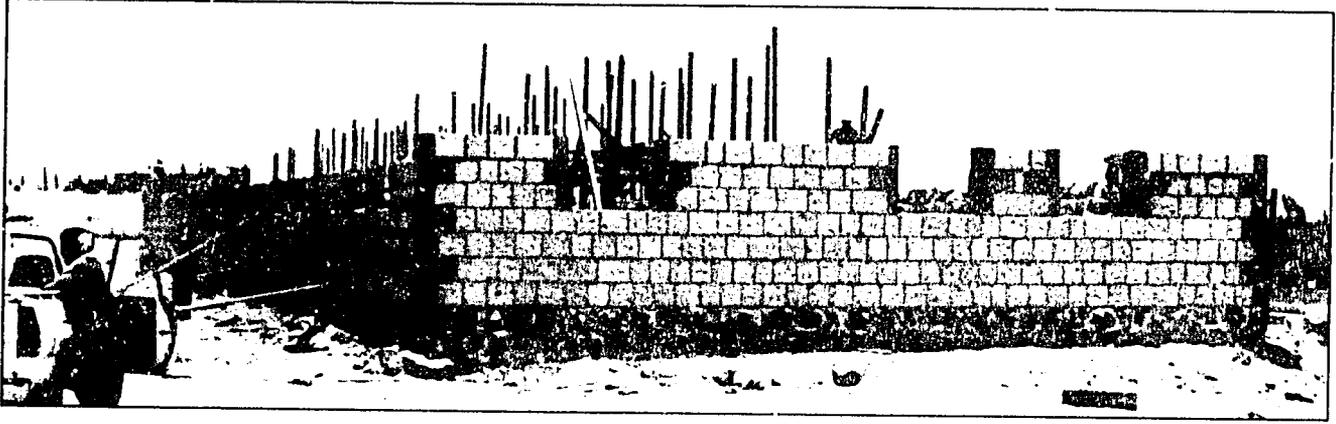
Pullets being delivered to waiting villagers.

Young Yemenis proudly show their new pullets.



When pullets are 16-weeks old they are distributed by truck to outlying villages. Project technicians, with the help of Ministry translators, provided instructional information on bird care and feeding with each delivery. Through this process, 6,675 family flocks of 3 to 25 birds have been established, as well as approximately 27 small-scale commercial flocks of 500 to 2,000 birds.

TRAINING: AN INVESTMENT IN HUMAN CAPITAL



The Poultry Training Center dormitory under construction.



An early graduating class at Al Hasabah.

The original sub-project plan called for in-country training of 69 poultry extension agents and facility managers. The PETS staff developed an 18-week program of classroom and field activity to be made available to selected Yemeni students.

The Ministry of Agriculture provided a dormitory and classroom space to accommodate classes of up to 20 students. The curriculum was based on a first-year U.S. college poultry science course, and adapted to the individualized needs of the Yemeni students.

To date, this training center has produced 92 graduates. The majority were from the Ministry's Extension Service, 26 as commercial poultry farm managers, and five as trained managers for satellite poultry farms operated by the Ministry. Two graduates were assigned to regulatory duties, they inspect shipments of baby chicks, biological materials, and feedstuffs arriving at the Sana'a International Airport.



Yemeni technicians are pursuing degrees in poultry science

A major focus of the project has been to identify capable employes of the Ministry in Yemen and bring them to the U.S. for university training. Upon completing their degree programs, they will become the core of scientifically trained personnel available in Yemen to mold the future of poultry production.

The decision to become a trainee is not one to be taken lightly. These students must first be employed by the Ministry, then be certified as proficient in English to the extent necessary to perform university level work. Further, they must leave behind the familiarity of their own culture and venture into the foreign western lifestyle.

At present, eight students are successfully pursuing B.S. degrees in

poultry science at OSU; another has completed his Masters degree and is currently undertaking a Doctorate.

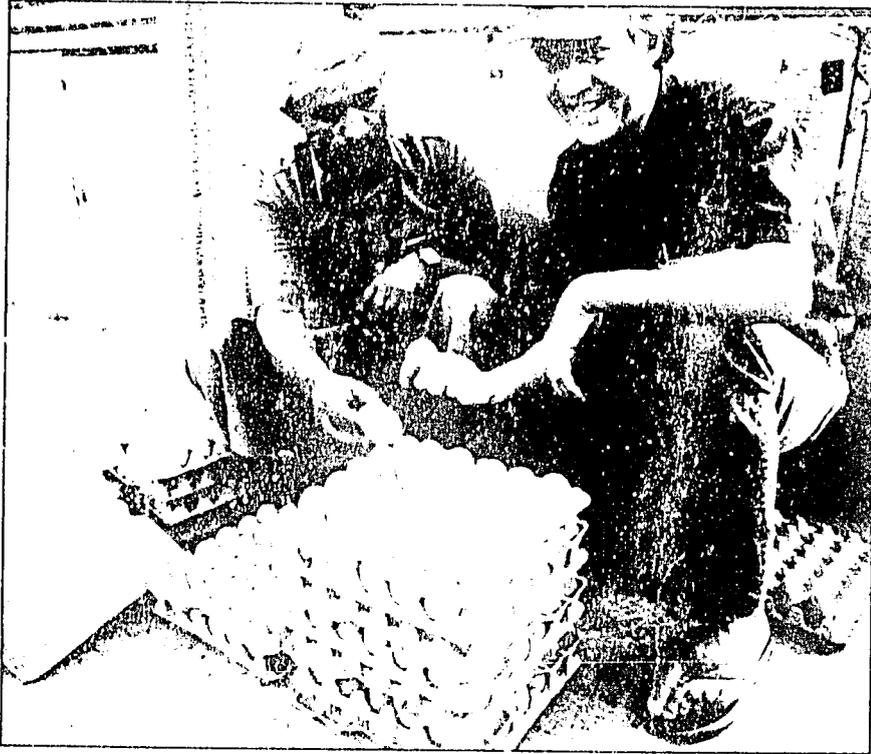
Education is a time consuming process. One concern of the technical assistance team is that, in response to budget constraints, technical assistance has been terminated 12 to 24 months prior to the return of the trainees to

Yemen. It is recommended that an expatriate poultry scientist be provided in the ADSP team to maintain the gains of this project until the U.S. educated Yemeni poultry scientists are in place.

..... at Oregon State University in the USA.



EXTENSION: HELPING PRODUCERS



PETS technician Paul Heidloff discusses egg quality and sanitation with one of the small commercial egg producers in Yemen.

Another important function of PETS was to provide technical assistance to the MAF in dealing with the needs of a rapidly expanding broiler industry and an egg production industry that was just getting started. Project personnel worked closely with MAF officials and counterparts in conducting training sessions for broiler producers, MAF personnel and extension students.

Numerous assistance visits were made to potential broiler and egg producers throughout the YAR, to help design poultry farms and do feasibility studies. Followup trips were made to these areas to check on progress and provide encouragement and technical assistance. In all, more than 400 Yemeni were involved in the PETS extension effort during the life of the project.

Management of layers is discussed with one of the commercial producers who received pullets from the rearing farm at Bir Al Qusain.



REACHING OUT TO WOMEN



Ms. Sallama Bu Haydar, a poultry technician, trained women in 40 villages



Most small flocks at the village level are cared for by women. Due to cultural constraints, it was not feasible to provide training at the dormitory and school in Sana'a for the village women. Further, it was not acceptable for either Yemeni or U.S. male technicians to provide instruction to female students in their villages.

The solution was to hire Sallama Bu Haydar, a poultry technician fluent in Arabic. Ms. Bu Haydar is a graduate of the American University of Beirut, Lebanon, with both BS and MS degrees in poultry science. She was very effective in presenting the needed training and information to Yemeni village women. She travelled extensively in the Sana'a area, and successfully trained 240 women of 40 villages in basic poultry husbandry.

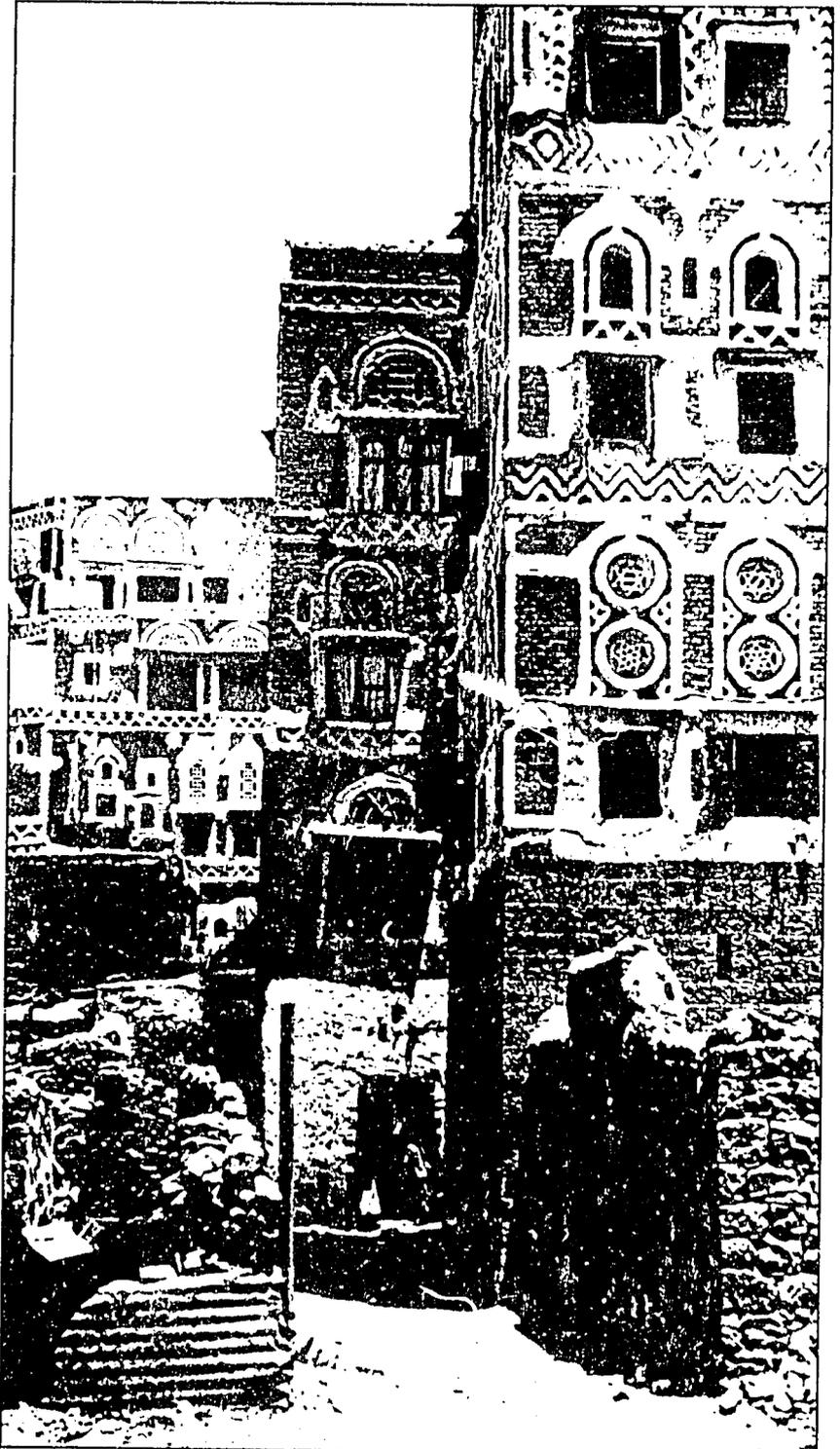
THE FUTURE

The Yemen poultry industry is now supporting most of the country's requirements for poultry meat and eggs. Since the demand is growing at approximately 10% per year, a continued increase in production capacity and associated technical expertise will be essential.

The PETS enterprise has built a solid foundation for providing this growth, but additional assistance will be required to maintain the forward momentum of the program.

The Yemeni trainees in U.S. degree programs who will become the cadre of poultry professionals will not begin returning to Yemen until 1988. In the interim, trained professional assistance is needed to work with the present small producers, operate educational programs, and conduct feasibility studies.

As the country moves toward production of its own hatching eggs, the need for trained supervision and advice will be particularly acute. This need can be met through the employment of a qualified extension professional for a long term (2-year) assignment, or by a series of short term visits by trained poultry specialists.



SUB-PROJECT CONTRIBUTORS

TECHNICAL ASSISTANCE

Dr. D.W. Francis
Team Leader

Mr. Paul Heidloff
Poultry Technician

Mr. Carson Coleman
Poultry Technician

Dr. K.A. Holleman
Team Leader

Dr. Jean Cramer
Acting Team Leader

Ms. Sallama Bu Haydar
Poultry Technician

Dr. J.R. McDowell
Poultry Extension Veterinarian

Mr. Marcus Day
Acting Technician

Mr. Milton Newport
TDY Technician

OSU/CID

Dr. D.H. Helfer
Project Director

Dr. G.H. Arscott, Head
OSU Dept. of Poultry Science

Dr. E.C. Price, Director
OSU Office of International
Research and Development

Mr. C.M. Fischer
Project Director

Dr. Douglas Jones
Deputy Executive Director, CID

YEMEN MAF OFFICIALS

Dr. Ahmed Al Hamdani
Minister of Agriculture
and Fisheries

Eng. Mohammed Al Kholani
Ministry Counterpart

Eng. Ahmed Al Mulsi
Ministry Counterpart

Dr. Hussain Abdullah Al Amri
Minister of Agriculture
and Fisheries

Abdul Karim Abu Talib
Ministry Counterpart

Eng. Abdulmalek Modhish
Ministry Counterpart

Eng. Abdullah Zabarah
Director General for
Animal Resources

Eng. Jami' Al Baadani
Ministry Counterpart

Eng. Mohammed Siddiqi
Ministry Counterpart

Eng. Abdul Rahman Nassar
Ministry Counterpart

PARTICIPANT TRAINEES

Mansour Allow

Fouad Ben Ahmed

Abd rabbou Thabit

Haseem Aman

Eng. Abdulmalek Modhish (Grad)

Sameer Zewar

Maher Atta

Amin Sedam

Abdulhakim Awn

Hanan Siddiq

USAID YEMEN

Charles Ward
Director, USAID Yemen

G. Tracy Atwood
Agricultural Dev. Officer

Mohammed Abu Backer
Agricultural Dev. Officer

Charles F. Weden
Director, USAID Yemen

John Rifembark
Project Officer

H. P. Peterson
Agricultural Dev. Officer

Frank Mertons
Project Officer

Back cover: pullets being distributed by a Ministry official to waiting villagers.