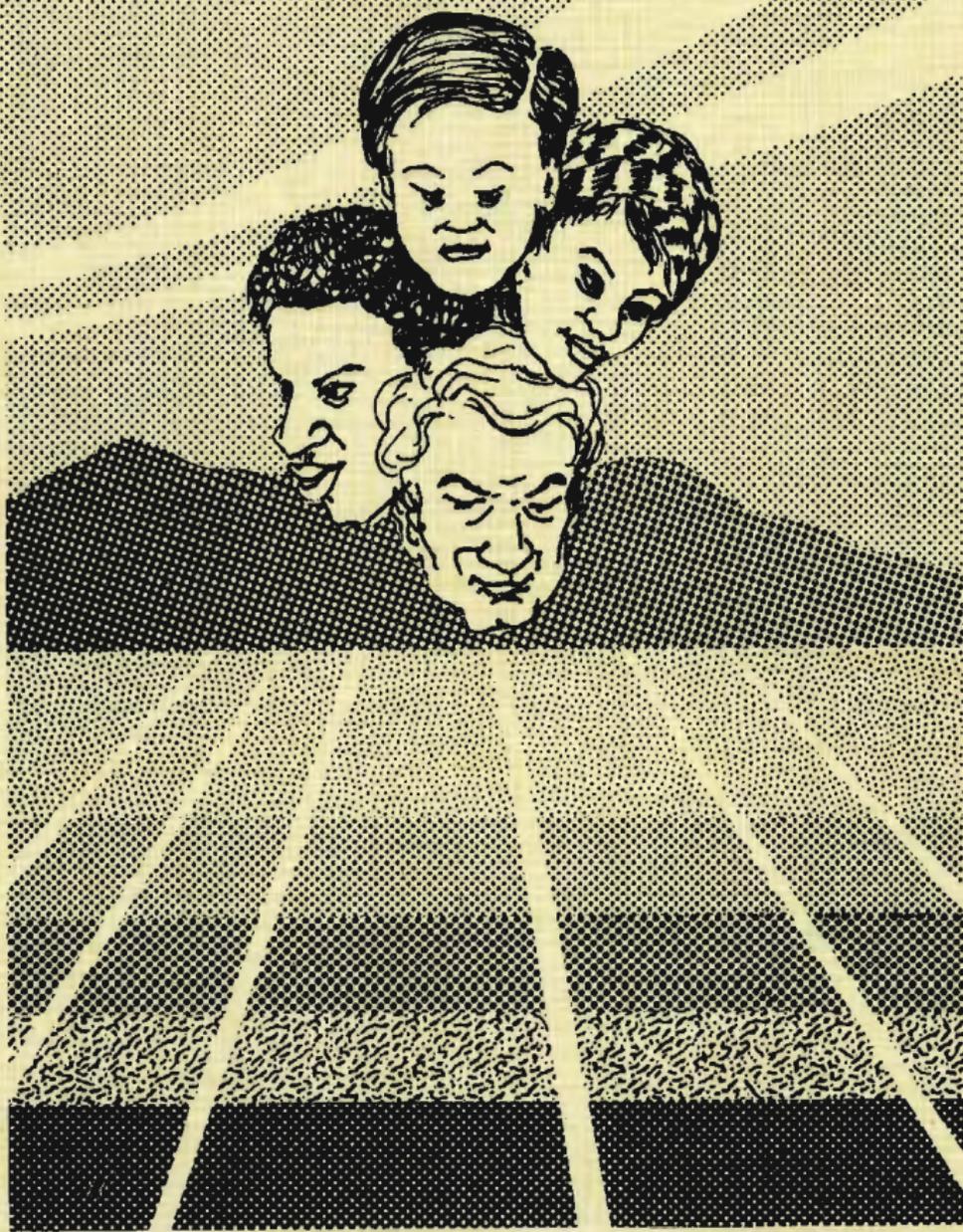


# the training program



*'for the improvement of  
vegetable quality and production  
in the tropics'*



*An overlook of the greenhouse facilities: AVRDC is one of a chain of international agricultural research centers dedicated to improving food crops in the tropics*

# **preface**

The Asian Vegetable Research and Development Center (AVRDC) is the only international agricultural research center with a mandated concern for vegetable production in the tropics. In an effort that is worldwide in scope, the Center is working to increase the yield potential and nutritional value of vegetable crops selected to make significant contributions to improving staple diets, increasing total food production per unit area, and improving soil conservation.

Established in 1971, AVRDC is principally supported by the Republic of China, Japan, Korea, the Philippines, Thailand, the United States and West Germany. The Center occupies 116 hectares of land and is 19 kilometers north of Tainan City in southern Taiwan.

The research effort focuses on five major vegetables: mungbean, soybean, tomato, Chinese cabbage and sweet potato. Plant breeders at the Center are working to develop superior plant types combining disease and pest resistance with high yields under tropical conditions. A multidisciplinary team of scientists researches cultural practices for the small farmer and monitors new breeding lines to ensure that they are nutritious, acceptable to consumers, and economic for farmers to grow.



*Training is a key activity at AVRDC, addressing the urgent need for knowledgeable and motivated research and extension personnel in the tropics*

## **the training program**

As a complement to AVRDC's research programs, there is a resident training program through which researchers, educators, farm managers and extension workers can acquire new knowledge and skills in advanced research techniques and modern methods of vegetable production for the humid tropics. The program is designed to allow participants to gain first-hand experience in the improvement of vegetable quality and production in tropical climates while working as a member of a research or production team under the guidance of senior AVRDC scientists.

### Research training

Through the Research Training Program, scientists from educational, commercial or research organizations concerned with in-

creasing vegetable production in the tropics are provided an opportunity to develop their research potential and capabilities. All members of the AVRDC scientific staff are involved in the program, and participants may work closely with specialists in any of the following disciplines:

- Agricultural chemistry
- Agricultural economics
- Crop management
- Entomology
- Plant breeding
- Plant pathology
- Plant physiology
- Soil science
- Seed production

The Research Training Program includes three types of participants:

- Research interns
- Research scholars
- Research fellows

*Research interns* have usually begun their careers in crop research and are currently involved with vegetable production



*The training program strives to enhance the skills and capabilities of its participants so that they in turn can contribute to the research and production capacities of their own countries*

in a research, commercial, extension or educational organization. Interns are expected to organize a research project relevant to the needs of vegetable producers in their home countries and, with the guidance and counsel of a senior AVRDC scientist, conduct the project through to a final analysis and presentation of a report. Interns are appointed for a period of five to six months.

*Research scholars* are candidates for masters or doctoral degrees (or equivalent degrees) from agricultural colleges or universities that permit students to do their thesis research at an international research center under the supervision of qualified scientists. The subject of the scholar's thesis is thus directly integrated with a research project conducted at the Center.

Because AVRDC is not located near nor affiliated with an agricultural university, scholars should complete their coursework and qualify as a degree candidate before arriving at AVRDC. The research project will be a cooperative effort between the scholar, the advisor and advisory committee of the scholar's home institution, and a senior scientist at AVRDC. Scholars are appointed for periods ranging from six to eighteen months depending on the nature of their thesis research.

*Research fellows* are usually researchers with recently conferred PhD degrees or experienced scientists with an MS or PhD degree (or equivalent degrees), who come to familiarize themselves with the most advanced research techniques and information regarding vegetable production and improvement. Fellows collaborate with senior AVRDC scientists in their field of specialization, undertake intensive research projects using facilities which may not be available in their own countries, acquaint themselves with new techniques that are currently being developed and adapted for vegetable production in the lowland tropics, and pursue other activities designed to advance their research potential and



*Training projects cover a wide variety of topics. This research intern from the Philippines conducts a project to evaluate tomato cultivar reactions to heavy rainfall and soil flooding*



*In addition to learning applied vegetable production techniques, production trainees familiarize themselves with the basic sciences involved in crop production, including soil science*

capabilities. Fellows are usually appointed for one to two years, although shorter periods may be considered.

### Production training

The AVRDC Vegetable Production Training Program is centered on a five-month course designed to train vegetable production specialists and increase their skills and knowledge as extension agents, agricultural instructors, farm managers or researchers. Production trainees spend considerable time in the classroom learning the science of vegetable production, the concepts and techniques of applied research, the fundamentals of communication as well as economic considerations related to tropical vegetable production. The emphasis, however, is on in-the-field experience where trainees have the opportunity to apply their knowledge, acquire new skills and familiarize themselves with the crops, techniques and systems studied.

### Summer student training

The AVRDC Summer Student Training Program offers the unique opportunity for undergraduate students of agricultural colleges or universities to gain practical research experience under the supervision of members of AVRDC's scientific staff. Summer student trainees have usually completed their third year of studies and are appointed for a two-month term before their final year of study.

### Special purpose training

AVRDC maintains a flexible program for training individuals or groups with special interests or requirements. These programs may be research or extension oriented, and may last from a few weeks to a year. Each special program will be carefully considered in reference to AVRDC's objectives as well as to the future role the participant will have in agricultural development.

## Qualifications

To be considered for admission to one of AVRDC's training programs (except the summer student training program), candidates must usually meet the following requirements:

- be a staff member of a research, commercial or educational institution concerned with vegetables;
- have a BS degree or its equivalent. To qualify as a research fellow, an MS degree or its equivalent is required;
- be assured of both a leave-of-absence from their employment during the period of training, and a position upon returning;
- be in excellent physical and mental health; and
- be able to communicate in English.



*Training program participants come from all over the world. This research scholar is conducting her thesis research as part of her degree studies at a university in the Netherlands*



*Students learn how to evaluate new production techniques which may have applications in their own countries*

## **admission procedures**

Candidates for one of AVRDC's training programs are usually nominated by their employing institution or organization. To nominate a candidate, write directly to the Training Officer at AVRDC.

Once a candidate is nominated, a member of the AVRDC staff or another qualified person acting on the Center's behalf will arrange an interview in the candidate's home country.

Candidates who appear to meet the entrance requirements are asked to complete an application form. Applications will be considered by the Training Office staff and the scientist who will work with the candidate. Scholastic records, experience and letters of recommendation will be reviewed during the selection process. Research

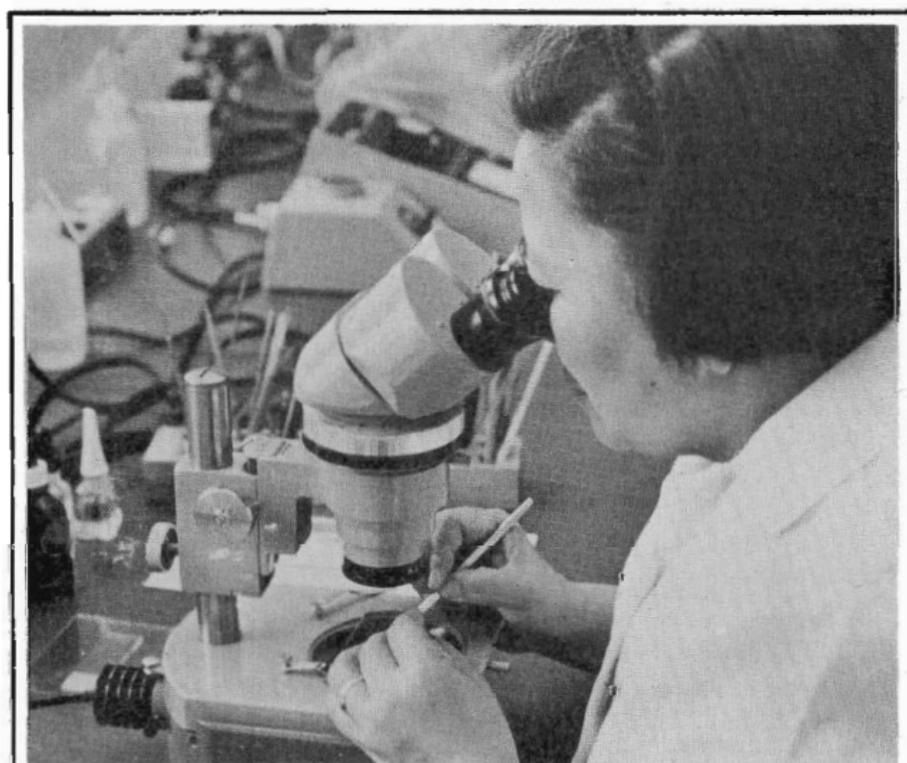
scholar candidates should submit transcripts of previous academic work along with the application form.

Each candidate must undergo a physical examination. A medical examination report form will be provided, to be completed and returned to AVRDC by an examining physician. The Center pays for the examination.

Each candidate will also receive an Assurance of Position Form to be completed by the head of the institution to which the candidate will return. This agreement grants the candidate a leave-of-absence and assures a position upon completion of the training program.

#### Letter of appointment

Letters of appointment will be sent to those candidates selected for the training program. These letters will contain instructions for travel, procedures for obtaining visas, and a summary of the basic conditions of the appointment.

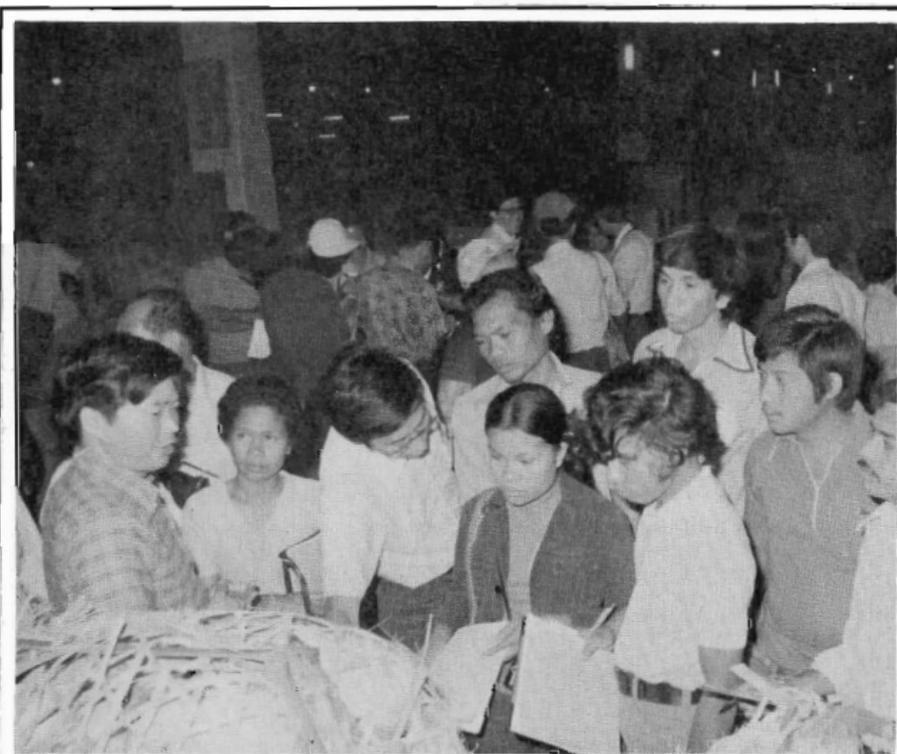


*Research fellows are provided the opportunity to expand their research capacities and capabilities through projects conducted at the Center*

# program of study

When candidates have accepted an appointment to the training program, they agree to devote their full time to meeting the objectives of their program of study. This program will be planned jointly by the candidates, the institution or organization where they work, and the AVRDC scientists acting as their advisors. Candidates will be encouraged to work on an applied research problem directly related to vegetable production in their home countries.

Ordinarily, individual programs are terminated only after successful completion. If, however, for any reason the trainee does not maintain the standards of excellence and behavior expected by the Center, or if his personal conduct is considered unbecoming to a scholar, the Center may terminate a program at any time. Under such circumstances, AVRDC will make arrangements for return travel to the appointee's home.

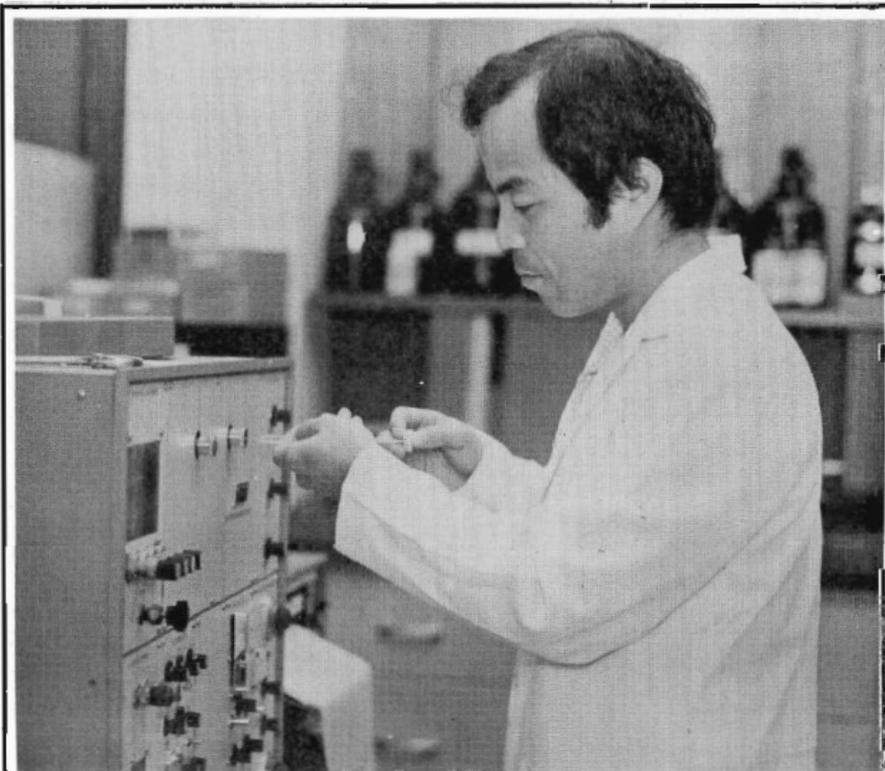


*Travel away from the Center provides training participants with a first-hand view of agriculture in Taiwan, from the research laboratory to the farmer's field and the wholesale vegetable market*

# staff and facilities

A distinguished group of scientists from ten countries serves on the Center's professional staff. These scientists are specialists of diverse training and backgrounds who share the conviction that increasing the quantity and quality of vegetable crops can help alleviate the plight of the world's poor and malnourished.

Together with visiting scientists from various regions of the world, AVRDC's staff offers participants in the training program an exceptional opportunity to expand their technical knowledge and research skills, and to broaden their experiences and perspectives.



*The Center's research laboratories provide excellent opportunities to become familiar with modern research techniques and equipment*

The Center's research and training facilities include:

- Research laboratories, which are located in a modern airconditioned building. Research programs have office and laboratory space available for both staff and trainees. The laboratories provide excellent opportunities for the trainee to become familiar with modern research techniques and instruments.
- Controlled environment facilities. These include six greenhouses, a headhouse, photoperiod and growth chambers, and a screenhouse for insect and plant disease studies. These facilities make it possible to study plant growth under a variety of controlled conditions.
- Experimental farm. A 102-hectare research area with sprinkler and furrow irrigation, surface drainage and road system permits experimentation throughout the year. A large array of equipment is available for crop and land management.
- Service building. Facilities made available for research and training activities enable trainees to pursue projects in seed handling and storage, and crop management research.
- Library, which maintains a comprehensive collection of the world's most recent literature on vegetable crops and the related plant sciences.
- Administration building. This three-story airconditioned building houses the executive offices, the offices of Training, Information Services and Agricultural Economics, a 120-seat auditorium and several classrooms.
- Cafeteria and dormitory facilities can accommodate approximately 45 trainees, and include a lounge and television room. Recreation facilities include tennis, basketball and volleyball courts; a swimming pool; and table tennis and billiards equipment.



*In addition to the laboratories, the Center maintains extensive controlled environment facilities for experiments under a variety of controlled conditions*



*A comprehensive collection of the world's vegetable literature is available to the training participant in the Center library*

# financial arrangements

Governmental and international agencies, private organizations and interested individuals are encouraged to provide funds to cover the costs of training vegetable specialists. Funds may be deposited with AVRDC to increase the limited number of scholarships and fellowships already available, or funds may be furnished to meet all or part of the costs of training a particular individual or group.

Training costs for trainees include stipend, room, meals, laundry services, health insurance and partial medical care, travel within Taiwan and training materials. Travel to and from the trainee's country is not included, but may be easily determined by the sponsor.

The Center pays each participant a monthly stipend in local currency, beginning on the day of arrival at AVRDC as specified in the letter of appointment. The stipend is intended to cover the individual's incidental expenses, since living accommodation and meals are provided.

Married trainees may, with the approval of AVRDC, invite their families to join them after successfully completing an initial six-month training period. Married couples without children may occupy a double room if space permits and take their meals in the cafeteria. Facilities to accommodate children, however, are not available. Families with children must make their own arrangements to rent an apartment in nearby Shan-hua or Tainan. Bus service to AVRDC is available from both cities.



*Throughout the course of the training program, the participants themselves are resources for the exchange of ideas, information and experiences*

For more information, write

TRAINING OFFICER  
AVRDC, P.O. BOX 42  
SHANHUA, TAINAN 741  
TAIWAN



Published by the Office of Information Services,  
Asian Vegetable Research and Development Center,  
P.O. Box 42, Shanhua, Tainan 741, Taiwan

# staff

## Administration

G. W. Selleck, PhD, *director*  
Paul M. H. Sun, PhD, *associate director*  
Michael Chin, BS, *executive officer*  
David I. K. Chi, BA, C.P.A., *comptroller*  
C. C. Wang, BS, *superintendent, building and maintenance*

## Legume Program

S. Shanmugasundaram, PhD, *program leader and associate plant breeder*  
Chang-Soon Ahn, PhD, *associate plant breeder*  
Arnold T. Tschanz, PhD, *associate plant pathologist*  
George C. Kuo, PhD, *associate plant physiologist*

## Horticultural Crops Program

Romeo T. Opeña, PhD, *program leader and plant breeder*  
Steve S. M. Lin, PhD, *research associate in plant breeding*  
Sylvia K. Green, PhD, *associate plant pathologist*  
N. S. Talekar, PhD, *associate entomologist*

## Nutrition, Environment and Management Program

Samson C. S. Tsou, Dr, *program leader and biochemist*  
Jack Gershon, PhD, *consulting nutritionist*  
Creighton Peet, PhD, *social anthropologist*  
Adisak Sajjapongse, PhD, *associate crop management specialist*  
Ichiro Tanabe, PhD, *soil scientist*

## Training, Communication and Research Services

Diosdado V. Castro, MS, *training specialist*  
E. W. Sulzberger, MA, *associate information specialist*  
Teng-hui Hwang, BA, *librarian*  
Leonard Y. L. Ho, MS, *seed technologist*

## Outreach

Alfredo Palo, PhD, *affiliate horticulturalist, Philippines Outreach Program*  
Soon Bum Hong, PhD, *affiliate horticulturalist, Korean Outreach Program*  
Charles Y. Yang, PhD, *director, Thailand Outreach Program*

