



POSTHARVEST INSTITUTE FOR PERISHABLES

Solar Dryer Project:
One Year Later

Leyte, Philippines

by

Marilyn A. Swanson



University of Idaho

in cooperation with
**United States Agency for
International Development**

Solar Dryer Project at Visayas
ate College of Agriculture (VISCA), Leyte,
Philippines and Rural Villages on Leyte;
One Year Later

by

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October 1984

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BACKGROUND

During the period of July and August 1983, a short course entitled "Solar Drying and Food Processing of Tropical Crops", was presented by the Postharvest Institute for Perishables, in collaboration with Visayas State College of Agriculture (VISCA), Root Crop Research and Training Center, and in cooperation with the United States Agency for International Development (AID/DSAN-CA-0265).

The training team members, Mr. Kenneth D. Hoyt, Appropriate Technology Specialist and Ms. Marilyn A. Swanson, Food and Nutrition Specialist, University of Idaho, College of Agriculture, presented the program with three major objectives: (1) construction and operation of a solar dryer with supplemental heat sources, (2) selection, preparation, drying, packaging and storage of dried foods and, (3) extension training in diffusion and dissemination of information in rural outreach programs.

Upon completion of the training program, a review of the desired learning outcomes reflected a total success for the program.

Since follow-up evaluation is a key component of any educational program, Ms. Swanson returned during July and August 1984, to the Visayas State College of Agriculture, Bay Bay, Leyte, Philippines, to conduct an in-depth evaluation of that training course.

RESULTS OF THE TRAINING PROGRAM EVALUATION

Ms. Swanson, through the use of questionnaires, faculty seminars, group discussions and on-site visitations, evaluated the aforementioned major objectives.

Observations:

Eight of the original fifteen participants from VISCA attended a faculty seminar, completed questionnaires, and were involved in round table discussions about the solar dryer and food preservation project. The participants indicated they were well pleased with the training previously

received. Although there were differences in the responses to questions, the mean of all the questions was above average. Of the eight respondents, six had been involved in additional drying activities since the training project. Seven of the eight indicated a desire for additional training and one participant, not located at VISCA, had conducted an intensive training course modeled after the University of Idaho training session with great success.

Each of the three original villages (barangays) (Bubon, Kabalasan and San Isidro) that were part of the extension outreach component were visited at least four times. The captain of each barangay and the participating residents were recontacted. Through observation and questionnaires, it was quite evident that continued success of the program was in progress. The residents had continued drying tropical foods and they indicated their like for the preservation method of solar drying for the family as well as for packaging and eventual sales.

The three solar dryers constructed in 1983 had withstood tropical weather conditions well. In San Isidro the dryer was in perfect working condition. In Kabalasan there was a small tear in the acetate sheet covering the collector. This was mended. In Bubon, the acetate sheet had been burned due to the use of high heat coconut shell charcoal as the supplemental heat source instead of the recommended coconut husk and shell charcoal mix. The burned acetate was replaced by extra acetate that had been left during the previous training session.

Program Impact:

Based upon the findings obtained from the observations, surveys, and discussions, it is quite evident that continued success will be realized over a period of time. There appears to be no strong evidence that a more varied diet has been adopted. The people are reticent to change. Small cottage industries for the manufacture of snack foods both for the family as well as for sale in the open market are beginning to surface. The reduction in loss of perishable crops appears to be in evidence. However, before continued growth can be accomplished additional emphasis must be placed on the need for additional charcoal or other supplies of supplemental heat.

Recommendations:

This evaluation of the training program "Solar Dryer Construction and Food Preservation of Tropical Crops" has identified several needed requirements. Some of these are: Provide training in the production of charcoal so continued use of the food dryer will be accomplished; provide equipment and assistance in planning additional research projects at VISCA to better utilize dried foods; teach barangay residents additional ways to utilize solar dried foods to their nutritional and economic advantage, and; assist in recipe development and utilization of solar dried cassava flour.

CONCLUSION

It is the conclusion of the evaluator that the design and use of the solar food dryer is technology that is appropriate for developing countries. With continued emphasis, loss reduction of perishable crops will continue and improved health will be manifested through nutritional self-sufficiency. The design and implementation of the program at VISCA has led after one year to increased use of dried foods as well as other appropriate technology, e.g. improved charcoal production. Linkages between VISCA, Ministry of Agriculture and the residents of the barangays has increased and this has led to a continued dietary improvement and use of solar dried foods.