Executive Summary

Teaching Pesticide Health and Safety:

Final Report and Guidebook

by

The Work Group on Pesticide Health and Safet

TEACHING PESTICIDE HEALTH AND SAFETY

FINAL REPORT AND GUIDEBOOK

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Background and Goals

In 1985, the Work Group on Pesticide Health and Safety (Work Group) developed the Teaching Pesticide Health and Safety (TPHS) Program to train individuals associated with agriculture to educate others about safe pesticide use. Formal Program goals were:

* Teach members of the agricultural community about pesticide health and safety.

* Help them educate the farmworkers, farmers and families with whom they normally come into contact.

* Encourage all segments of the agricultural community to work cooperatively on this effort.

The Program provided material and information on pesticide health and safety, trained people to educate others, promoted and monitored use and evaluated the effectiveness of these efforts. The overall objective was to establish a pattern of local participation in pesticide health and safety education which would be self-supporting and of long range benefit to the communities in which it was undertaken. The Program was to be designed for easy replication in areas throughout the country and a Guidebook was to be prepared to help those embarking on similar training efforts.

The three components of the Program were: training workshops, program participant follow-up (to encourage educational activity) and evaluation of all aspects of the Program. At the completion of TPHS in 1989, activity had been conducted in seven states: Arizona, Idaho, New York, Oregon, Pennsylvania, South Carolina and Washington.

Train-The-Trainer Workshops

TPHS workshops revolved around the "Pesticide Safety Program" produced by the Environmental Protection Agency (EPA). This tool was chosen because it is an excellent learning aide, is bilingual (English/Spanish) and copies could be obtained free of cost. It is also a self-contained educational unit including a visual tool (videotape or slide/tape) teaching aides, leader's guides and scripts. Additional handout materials from the EPA and other sources were also given to participants.

The workshops included both pesticide health and safety instruction and training on how to teach others. A combination of lecture, participant discussion and actual use of the EPA Pesticide Program was included. Copies of this kit were given to participants for their later use.

Extensive planning was undertaken prior to initiation of workshops in each state. This included: meeting with key people in the agricultural community to get their ideas on the best time and place for workshops,

mailing up to 1000 leaflets announcing the workshops, following-up with those invited to assure workshop attendance and securing state applicator licensing credit for the course.

The use of volunteer assistance was a major part of each workshop. This included donated instructor time, sufficient materials for all participants, free workshop sites and other local help.

Workshops were taught by TPHS staff, and an expert on pesticide health and safety. This expert was either a state pesticide coordinator or state health department pesticide consultant. The Extension Service Pesticide Coordinator from the state in which the workshops were held participated as a local expert. Information was also provided by state officials on related local laws and regulations. In most workshops county extension agents also assisted.

All workshops were free to participants who agreed to use the knowledge they gained to teach others about pesticide health and safety. At least two were conducted in each state. In both Oregon and Washington, five workshops were held.

Workshop Findings

Thirty different types of organizations, agencies and businesses were represented at the workshops. The largest number were from migrant education (13%), agricultural employers (13%), extension service offices (10%), health clinics -- particularly migrant and community health centers (8%) and state employment service offices (8%). As the workshops extended over time, the participation of growers and staff from their associations increased.

Overall pre-post test results indicated participants learned the pesticide health and safety information which was presented. Fourteen percent had five or more errors in the pre-test, while this was only true of four percent on the post-test. The number of participants with no test errors more than doubled (13% to 28%) from pre to post test.

In four states, matched pre-post test results showed slightly over 50% with a personal decrease in number of errors. (An additional third showed no personal change.) An error score applied to the participants' self-assessed pesticide health and safety knowledge level prior to the workshop found a direct correlation between their assessment of their personal knowledge and the number of errors they made on pre-post tests. (The greater the knowledge, the fewer the errors).

Participants were very satisfied by the workshops they attended. Almost all indicated they gained knowledge, felt the information presented was clear and useful, thought the workshop speakers were interesting and well informed and rated the tools they were given as "effective" or "very effective." Close to 90% felt confident to teach pesticide health and safety at the conclusion of the workshop.

Post Workshop Follow-Up Activities

All participants received some contact from TPHS staff after the workshop. This began with the sending of a list of workshop attendees and was usually followed by additional informational material sent throughout the Program period. Staff also responded to telephone and mail questions from participants. In two states, a press release alerted the public to the availability of Program participants to teach pesticide health and safety.

In two locations, additional follow-up was used to encourage participants to undertake pesticide education activities. In Washington State, an 18 month follow-up period consisted of periodic telephone and mail contact to assist with problems faced by participants, try to facilitate networking among them and encourage their educational activities. In Medford, Oregon, local/personal follow-up was conducted for six months by an on-site Community Assistant. This hands-on follow-up had the same purposes as Washington State activities. TPHS participants in Arizona, who received no direct follow-up, were contacted nine months after workshop attendance to assess their pesticide education-related activities.

In Washington and Medford, Program involvement was expanded to non-workshop participants. These were local representatives interested in pesticide health and safety education but unable to attend the TPHS workshops. They were given materials and teaching tools and instructed in their use. These individuals were also considered TPHS participants and were involved in follow-up activities.

Follow-Up Findings

Three diffeent types of follow-up methods were tested through the TPHS Program: telephone/mail in Washington, local/personal in Medford, and no direct follow-up in Arizona. The following conclusions were drawn from quantitative and qualitative data analysis:

* Arizona participants, who received no follow-up, undertook the least amount of educational activity.

* More Medford participants, who received local/personal follow-up, undertook educational activities than Washington participants, who received telephone and mail follow-up.

* Although the number of individuals reached with pesticide health and safety information by Washington participants far exceeded the number contacted by Medford participants, this is probably attributable to the longer evaluation time period (18 months versus 6 months) and greater number of participants (155 versus 53) in Washington than to follow-up methods.

* Those involved in TPHS training workshops undertook more pesticide education activities than non-workshop program participants.

Overall Program Conclusions

The TPHS Program was able to accomplish its program goals:

* Pesticide health and safety information was taught in 22 workshops in 7 states to approximately 650 individuals who represented 30 different types of agencies, organizations and businesses. Participants rated these workshops very highly in content, quality of instruction and overall presentation. They showed a marked improvement from pre to post test scores.

* Almost all workshop participants felt confident to teach others about pesticide health and safety after the workshop they attended. They felt the tools they were given were effective for this job.

  Participants involved in follow-up activities in Washington, Arizona, Medford and other parts of Oregon (for which statistics are available), contacted nearly 30,000 individuals with pesticide education-related information. The number of people reached by TPHS participants in New York, Pennsylvania, South Carolina, Idaho and those not contacted in Oregon and Arizona is unknown.

  Participants said the educational tools and material given to them helped in their teaching activities. Growers attending the workshops indicated these sessions served to prepare them to fulfill their legal requirements to educate agricultural workers about pesticides.

* Program participants worked with each other in learning about pesticide health and safety and in conducting pesticide education activities. Many rated this aspect of the program as the most important benefit.

In addition to accomplishing overall goals, the TPHS Program demonstrated a pattern of local participation in pesticide health and safety education. Instructors, TPHS participants and many others volunteered their assistance and time to the Program. TPHS participants are also continuing their involvement in these educational activities. Several major spin-off projects have occured as a result of local staff participation in TPHS.

The TPHS Program concept appears to lend itself to replication throughout the country, as evidenced by successful workshops held in the northwest, southwest, east coast and southern parts of the United States. A "script" and format description were developed and successfully used to provide new workshop instructors with the information they needed to teach the course.

Follow-up was found to be an important factor in encouraging participants to undertake educational activities. Local/personal follow-up was judged to be the best technique.

Staff felt further work in this area should include the following:

* Efforts similar to the TPHS Program are needed throughout the country. People are now requesting additional training workshops from the Work Group which is unable to supply such assistance. With new EPA "Farmworker Protection Standards" proposed, the need for pesticide education and train-the-trainer workshops will increase.

* Having bilingual pesticide health and safety tools and material makes a difference in the ability of local community agents to provide pesticide education. These resources should be continually produced and widely distributed. Offering them free of cost is an important encouragement toward their use.

* People want help in knowing how to best teach. Growers and others with the role of educating farmworkers about pesticide safety are not teachers. With assistance, they can be made to feel comfortable as educators. This type of help should be made available to those in need.

* Direct follow-up should be supplied to assist those trained in providing pesticide information.

* Other organizations, in addition to grower associations and growers themselves, can be very useful in teaching those in agricutural communities about safe pesticide use. These community resources should be urged to participate in pesticide education activities.

* Farmworkers and farmers can work together in providing this information. They should be encouraged and assisted in undertaking cooperative efforts.

* Those who are educating others about pesticides have a continuing need for updated information and better tools.