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TRAINING PLAN FOR PESTICIDE USE IN ORD PROJECTS

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INTEGRATED PEST MANAGEMENT
AND
ENVIRONMENTAL PROTECTION
PROJECT

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Two major areas were identified as requiring substantial training efforts. They are: a) Integrated Pest Management as it relates to crops that use pesticides intensively and b) Pesticide Agromedicine in general and for high pesticide use crops in particular. In addition, some training in pesticide registration, residue analysis, formulation, regulation, monitoring, environmental toxicology and safe handling and disposal of pesticide and containers was found to be of use.

IPM training was found to be necessary in four areas: research, demonstration, extension and implementation. Target audiences are USAID/G project officers, ICTA researchers, DIGESA extension directors, DTSV personnel, DIGESA extensionists, para-extensionist (or "representantes agropecuarios") Public health and social security officials, the farmers themselves, and others shown in Table 1.

The major subject areas with appropriate specific topics are given in Table 1 which also indicates which agency should be involved with the specific topic. Table 2 presents a matrix of recommendations including the training activities, and the time sequence in which they should take place, as reference. It was the intent of the EA team to propose a logical time sequence for scheduling training of the involved personnel, beginning with short-term training necessary to bring key participants up to a common level of understanding at the very beginning of the project. Both periodic short-term and long long term training were brought into the sequence at appropriate times thereafter, commensurate with the progress of project objectives and training needs of participants at that particular time. The times indicated for the training activity given in the appropriate recommendations in Table 2 encompass greater time periods than those required to perform the activities. This was intended to provide some flexibility in when the training could take place but at the same time the date by which it should be completed, with certain activities or training, serving as bases for subsequent more advanced training.

Precise training-course content would be developed by the IPM specialist in conjunction with appropriate advisors. However, the EA team proposes general areas in each topic in which designated participants should receive training.

1. In the area of agromedicine/pesticide safety from specific types of training are indicated:
 - a) Basic pesticide use and safety: This training would involve a two-day session early in the life of the project for officials in the involved agencies (see Table 2). Information presented to these officials would include the very basics of

pesticides and their use. For example, information on types of pesticides available, hazards involved, how they are used, consequences of their use, etc., would be covered.

- b) A one-to two-week agromedicine pesticide workshop would be held for the more technical personnel in DTSV and public health institutions. This training would go into greater depth on all aspects of pesticide effects on human health and the environment. Both the acute and chronic effects of pesticides could be covered in the training.
- c) Academic training leading to the M.S. and Ph.D. degrees in the areas of toxicology and public health should be supported for deserving personnel in DTSV and public health institutions. This would of necessity be long-term training commitments and coordination with scholarships and educational programs.
- d) Pesticide workshops of a one-day duration would be held periodically in areas with intensive pesticide use. All involved agencies could participate in and benefit from these training sessions but they would be directed more toward the actual users, the farmers and the local extensionists to provide the information and on-site demonstration to permit safe use of pesticides.

II. Training in integrated pest management would be essential for personnel in all participating agencies/institutions.

- a) Initially, officers from these agencies should participate in a week-long session on the principles of Integrated Pest Management (IPM). Participants are indicated in Table 1 and the time for this training, early in the projects life is indicated in Table 1.
- b) Once the project is under way and finally operational, on-the-job-training should be initiated by the extensionists to continually update appropriate people on the latest developments in IPM technology. Additionally, the training would involve demonstrations in the various regions and on different crops to actually train the farmers to use IPM technology.

- c) A third sector of training that the EA team considers important is specific-subject workshops where particular problems arise or are of considerable interest. This would involve in-depth, possibly week-long, training sessions in topics such as entomology, weed science, plant pathology, action thresholds, correct (and safe) pesticide use and sampling. Training courses such as these have been conducted in Central America by the core IPM team from CATIE, in Turrialba, Costa Rica, and/or from the Zamorano Agricultural School.
- d) And finally, the EA team recommends advanced training in IPM and the crop protection disciplines for students from Guatemalan universities who wish to study for advanced degrees. This training should be made available early in the life of the project and continued for its duration.

TABLE 1: TRAINING PLAN SUMMARY

SUBJECTS	ORD OFFICERS	AIFLD	FUNDACEN	DTSV	PUBLIC HEALTH	DIGESA	BANDESA	ICTA	FEDECOAG	FECOAR	FARMERS/ AG. REPS.	UNIVERSITIES
I. <u>Agromedicine/ Pesticide safety</u>												
a. basic pesticide use & safety (short term 2 days)	*	*	*			*	*		*	*		
b. pesticide agromedicine (1-2 wks)				*	*							
c. Agromedicine (M.S., Ph.D.)				*	*							*
d. Pesticide workshop	*	*	*	*	*	*	*	*	*	*	*	
II. <u>Integrated Pest Management</u>												
a. Principles IPM (1 wk)	*	*	*	*		*	*	*	*	*		*
b. On-the job training with demonstration program		*	*	*		*	*		*	*	*	*
c. Specific IPM subjects: insects, weeds; pathogens; thresholds, pesticide use; field sampling				*		*		*				*
d. Advanced IPM: Entomology; plant pathology; used science; pesticide economics (M.S.; Ph.D.)				*		*		*				*

