the other two sections of the course because:

* many of the basic communications skills that a Weeds Officer will need in his work will also be needed if he is going to study successfully. Thus by involving the student with these skills at appropriate times during the course he will be helped in both his formal study and his work. That is, he will develop communications skills as he is learning technical content.
* the course work will be kept relevant to job skills so that knowledge imparted will be appropriate to action required by practising Weeds Officers. For example, a systematic method for information recording and retrieval will be discussed and students required to compile records on, say, identification, areas of incidence and controls for noxious weeds as both a skills-developing and learning device.

Those Weeds Officers who complete the course will be adequately equipped through formal training and experience to perform a public relations role, a law enforcement role and, at the same time, demonstrate constantly all of the communication skills this study sets out to develop.

WEED CONTROL WORKSHOPS IN WESTERN AUSTRALIA - AN EVALUATION

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How does an extension officer decide whether it is profitable to spray a crop for weed control when presented with a specific situation by a farmer?

Lack of data to answer this question has been listed as the main deficiency in weed research information, by officers of the Western Australian Department of Agriculture who have attended weed control workshops over the past 3 years. Approximately 60 officers have attended six workshops, of whom about 23 were graduate extension officers, 18 field technical staff under the supervision of extension officers, and the

remainder were field staff of the Agricultural Protection Board dealing with noxious weed control. The workshops were run informally with a broad structure that allowed spontaneous discussion and at the end officers were asked to rate each segment on technical value and to list deficiencies in information presented and ways of improving the program.

EVALUATION OF THE WORKSHOPS

Test questions given before and after the workshop showed that over the 2-day period there was a net gain of 14-22% in the officers' technical knowledge, and all segments of the workshops were generally rated as very helpful in technical value.

A list of deficiencies in the workshops is of particular interest not only for future courses in weed control but for research administrators and research officers. Out of 41 officers who were given the questionnaire, 21 suggested deficiencies.

The main deficiencies all relate to the fact that extension workers need basic information on assessing the benefits of weed control in specific situations, at a time when the weeds are still susceptible to control measures.

These workshops, and the conclusions in the proceedings of many Australian weed and plant production conferences and meetings, highlight the basic need for information on crop losses. Australian research on crop loss assessment due to weeds has been confined to a few isolated preliminary studies. Canadian research has progressed from regional surveys estimating crop production losses due to weeds, to proposed indices of competition between a single weed and crop species (D.A. Dew 1972). F.A.O. has produced a manual of crop loss assessment methods and there is worldwide interest in this type of research.

The other deficiencies listed mainly deal with technical information on herbicides and solutions to them are more likely to be on an individual basis and through specific technical notes.