

A Study on Training Needs and Competency Assessment for Agricultural Technical Teams in the Hualien and Yilan Area¹

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Abstract

To mitigate agricultural labor shortages in the Hualien and Yilan areas and enhance the training effectiveness of agricultural technical teams, this study adopted competency-based behavioral indicators for farm workers to design a structured questionnaire. A survey on current competency levels and training needs was administered to 63 agricultural technicians from the Yilan and Fuli teams, in order to evaluate training effectiveness. The five major competency dimensions included: (1) confirming tasks and goals assigned by farm owners, (2) field cultivation management, (3) safe use of agricultural machinery, (4) harvesting and shipping, and (5) handling and reporting abnormalities.

The results showed that respondents generally rated their current competencies as adequate; however, there remained significant training needs in core skills such as diagnosing and handling machinery failures, professional crop management, and fertilizer and water management. Difference analysis revealed that team affiliation, educational level, years of service in the team, and examination level all had significant effects on perceived competencies and training needs in certain dimensions. Overall, the Fuli team members scored higher in both competency and training needs than those from the Yilan team. Overall satisfaction reached 4.33 on a five-point scale, with higher satisfaction reported among female respondents and those planning to continue working in agriculture.

Based on the findings, this study offers the following recommendations:

- (1) Strengthen advanced courses on agricultural machinery maintenance, crop quality assessment, and pest and disease management;
- (2) Design customized training and guidance according to regional differences;
- (3) Encourage exchanges among agricultural technicians to enhance team cohesion;
- (4) Establish career counseling mechanisms to support long-term retention and professional development of agricultural technicians, thereby improving both the quality and quantity of agricultural manpower.

Keywords: occupational competency standard, agricultural manpower, training needs, competency assessment, career counseling