livestock mechanization, agricultural economics, and horticultural crops have precedence in research priorities. The exclusion of vegetables in production, nutritional, and equity terms was a shared error. The Asian Vegetable Research and Development Center (AVRDC) supported research on a very limited scale, both monetarily and as to the number of vegetable crops, during the life of the AID project. This, however, was no reason to exclude such an important field.

The goal of making grains more responsive to higher fertilizer usage is a curious one given the oil crisis of 1973, the increase in petroleum imports, and the higher prices of fertilizer. Thought should be given to increasing production with less fertilizer, rather than creating an ever-expanding demand for imported petroleum.

It has proven impossible to establish a clear and direct link between the research carried out under the project and improved yields. There was no breakthrough. No doubt the project assisted the research effort and indirectly contributed to improved strains and probably will continue to do so as the trainees return or become more effective. The overall judgment that must be made, however, at least at this time prior to the end of the decade of planned growth in 1984, is that the agricultural research project was a beneficial but not a critical component of the well-established Korean research system.

C. Guidance: The Link between Research and the Farm

The developmental success of agricultural research is dependent upon the effectiveness of the spread of appropriate research results to the farmer. The Korean example links the research system both at the center and the periphery to an ubiquitous extension service known in Korean as a guidance system. 7/

Both research and guidance fall within the purview of the Director General of the Office of Rural Development. Thus, there is coordination at the administrative center at the top of the bureaucratic structure. This coordination also extends to the rural areas. Each province and gun (county) has a branch office of rural development and guidance workers are located in the lowest administrative unit, the myon, which forms a subdivision of a county. In 1981, there are a total of 7,980 guidance workers in Korea, of whom 7,648 are deployed at the gun and myon levels, 226 at the provincial level, and only 106 at headquarters.

Each guidance officer (the vast majority is male) is responsible for monitoring the production and cultivation techniques of from 6 to 12 villages depending on the terrain and population. He is in constant contact with the villagers, sometimes, according to a few farmers, too often. In some areas during critical periods such as transplanting or during emergencies such as drought, his visits may be daily, advising

7/ For a more detailed discussion, see Appendix G, "Research and Extension: The Integration of Inquiry and Guidance," by David I. Steinberg.