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WATER HARVESTING AND AQUACULTURE  
FOR RURAL DEVELOPMENT

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# FEEDING YOUR FISH

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## INTRODUCTION

Fish grow fast and stay healthy if they have enough nutritious food to eat. Living organisms are natural fish foods and are produced in the water where the fish live. Phytoplankton (microscopic plants), zooplankton (microscopic animals), insects and certain other plants are all examples of natural foods (Figure 1). Fertilization increases their abundance.

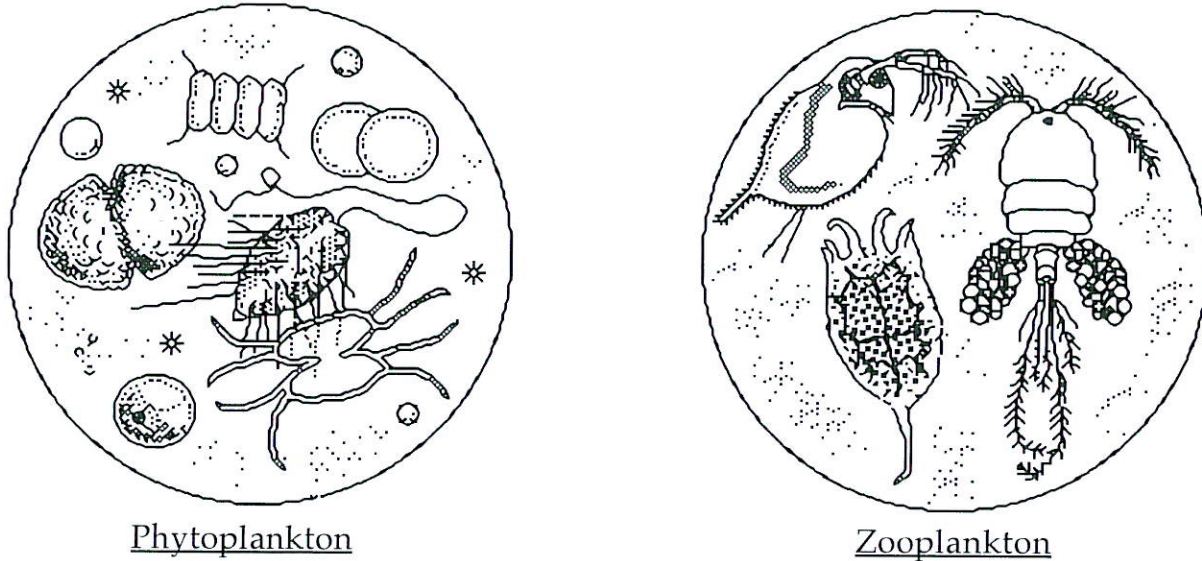


Figure 1: Natural fish foods can supply the complete nutritional requirements for fish.

When natural foods are not available in sufficient quantity to provide adequate nutrition for fish growth, feeds that are manufactured or grown outside of the fish pond may be fed at regular intervals (daily, weekly, etc.). These feeds supplement natural foods. They are not nutritionally complete, and will not adequately support fish growth in the absence of natural foods. Natural food organisms in the water will provide essential nutrients. Some examples of supplementary fish feeds are commercially produced rations for chickens and pigs, rice bran, manioc leaves, kitchen refuse, oil seed cakes, or other agricultural products and by-products.

In the absence of natural foods, nutritionally complete manufactured feeds that contain all essential nutrients and vitamins must be fed to fish. These feeds are used in high technology, intensive culture systems that are normally inappropriate for rural development applications and will not be discussed here.

## PREPARATION OF SUPPLEMENTARY FEEDS FOR FISH

Manufactured supplementary fish feeds may be available in some developing countries. The local economy determines if it is profitable to use them. Other less costly feeds may be used by farmers. Table 1 provides a list of supplementary feed ingredients that can be used alone or in combination. Several guidelines for using items listed in Table 1 should be followed (Figure 2).