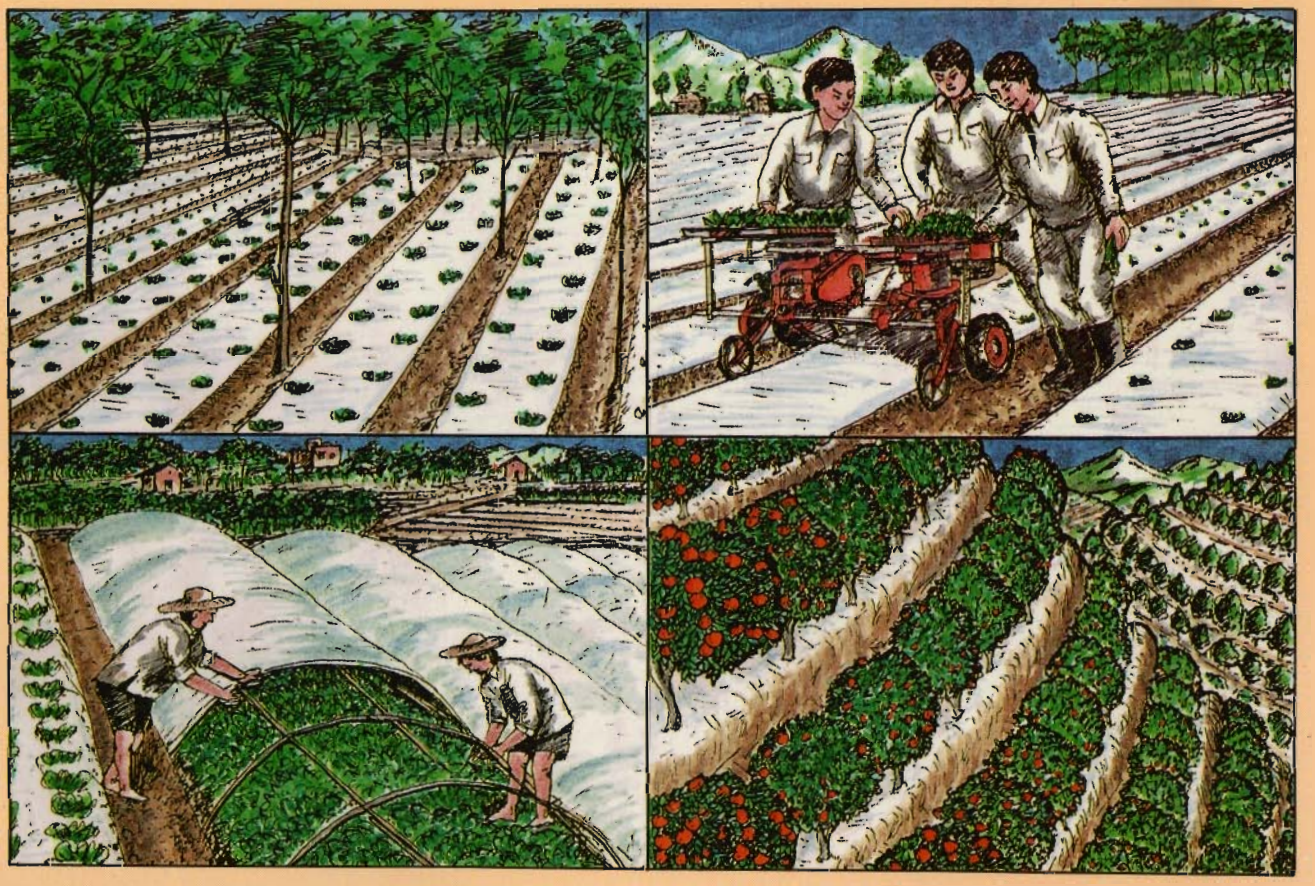
ICIMOD

International Centre for
Integrated Mountain Development

THE APPLICATION OF PLASTIC FILM TECHNOLOGY IN CHINA



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THE APPLICATION OF PLASTIC FILM TECHNOLOGY (PFT) IN CHINA

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FOREWORD

The International Centre for Integrated Mountain Development (ICIMOD) was established in 1983 to promote an ecologically sound development process in the Hindu Kush-Himalayan Region. An important mandate of the Centre is identification, documentation, and information exchange on promising technologies for sustainable mountain development.

Traditionally mulches of straw, leaves, ashes, and other agricultural residues have been used throughout mankind's agricultural history to modify the growing environment of food crops and other agricultural and horticultural crops. In more recent times, greenhouses have enabled farmers to advance and shorten the growing season of many crops.

The relatively new plastics' and polythene industry has made a modern version of a traditional technology possible. The 1950s saw the introduction of the use of plastic film into agriculture. It was soon found that use of this new material helped to increase temperatures, retain moisture, and promote seed germination and growth of young seedlings. It was also found to accelerate not only the growth and development of roots, but also of the whole plant; achieving high yields and good crop qualities. In short, a synthetic material was provided that was able to improve the results achieved with traditional mulches. Polythene film also reduces the need for large amounts of organic material for mulching.

In 1978, plastic film technology was first introduced into China and, at present, the technology is used in 29 municipalities, provinces, and autonomous regions, indicating its application in a wide range of climatic and soil/terrain conditions.

A technology that can modify the microclimatic growing conditions of food and other crops is highly relevant to the farming systems of the Hindu Kush-Himalayan Region where extreme weather conditions put severe limitations on producing adequate supplies of food. It is hoped that the present document will be a stimulus and incentive for agricultural research scientists and development workers in the other Regional Member Countries of ICIMOD to test and demonstrate the replicability of this technology.

Professor Lu Rongsen has gathered together Chinese experiences in the application of plastic film technology. It is a commendable piece of work and I gratefully acknowledge the commitment and technical analysis that has made this information available to a readership outside China.

Egbert Pelinck
Director General

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Lu Rongsen

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