

Sweetpotato Post-Harvest Research and Development in China

Over the last 25 years sweetpotato has undergone a fundamental transformation in China. Sweetpotato has changed from being a major staple food to becoming a major source of animal feed and raw material for food processing industries. While direct food use of sweetpotato in China has declined dramatically, production has actually grown, as the new uses have generated more demand for the crop. In this way sweetpotato continues to serve China's farmers well, and China continues to be by far the world's largest sweetpotato producer, accounting for about 85% of global production. To help farmers adapt to these new outlets for sweetpotato, Chinese agricultural research institutions in collaboration with the International Potato Center (CIP) have worked to develop better ways of utilization sweetpotato. This volume reviews recent progress in research and development for improved utilization of sweetpotato in China. Its 11 chapters cover economics and policy analyses, breeding aspects, animal feed utilization and agro-industrial food processing.

Some selected findings include:

- About 41 percent of China's sweetpotato production is used as animal feed, 33 percent for starch and starch products, and 14 percent directly as food
- Breeding and biotechnology have important roles to play in increasing dry matter yield and starch digestibility
- Policy distortions reduce the competitiveness of sweetpotato as animal feed when compared with maize
- More than 80 percent of pig production in China is by small-scale "backyard" producers. Sweetpotato tops make up a significant proportion of total feed among for these producers, but they generally achieve lower levels of feed-to-meat conversion compared with larger-scale producers.
- In Sichuan, pig nutrition on small farms is generally poor, with serious deficiencies in protein, lysine, and other nutrients.
- By ensilaging sweetpotato roots and foliage, sweetpotato can be stored as high quality feed for as long as six months and significant improvements in feed-to-meat conversion are possible.
- Tropical root crops (sweetpotato and cassava) supply about half of all starch consumed in Asia and demand for starch by industry is increasing rapidly.
- The sweetpotato processing industry in Sichuan is undergoing structural changes, with large-scale modern food manufacturing companies playing a larger role in sweetpotato processing.
- Starch quality of small-scale processors is variable and affected by processing and handling methods.
- Improvements in small-scale starch processing is possible through adoption of standard processing and handling procedures.
- New product develop offers potential for expanding the sweetpotato food industry in China.