Researchers and farmers working together in the dry zone of Sri Lanka have developed a cropping system that produces two, or even three harvests in a year, where before they obtained only one.

The dry zone is the poorest region of this island nation, yet it was once the heart of the country—site of two capital cities, and home of powerful kings. It was also a fruitful land that produced rice enough for all its people, and plenty for export.

The key to the dry zone's past prosperity was a remarkable network of irrigation systems, begun more than 2000 years ago, that made use of every drop of water. But with the end of the great kingdoms the systems fell into disrepair. Colonial rulers promoted the cultivation of export crops—such as rubber, spices, coconuts, and tea—on plantations in the humid zone.

For centuries the dry zone and its people were all but forgotten, and Sri Lanka became an importer of food.

Many villages built beside the ancient irrigation tanks, however, continued to practice the traditional agriculture. But when the rains were poor, as they often are, the tanks dried up early, there was no rice, and the farmers could barely scrape a living from dryland crops.

Walagumbahuwa is one such village, and it was here that Sri Lankan researchers came several years ago to persuade the
farmers to try a new way. Their secret weapon were new high-yielding rice varieties, developed at IRRI (the International Rice Research Centre), that mature in only three months at any time of the year — so long as they have water. The project was supported by both IRRI and IDRC.

With this rice the farmers can plant at the start of the rains in October and save the rainwater in their tank to irrigate a second crop planted in March, after the first has been harvested. In a good year, a third crop of legumes and vegetables can be planted in July. But first farmers had to be convinced that change was necessary, and that the experiment would work.

To help the villagers overcome their natural caution, the researchers invited them to become partners in research — and moved into their village to work alongside them.

IDRC filmmaker Neil McKee visited Walagumbahauwa several times, at different seasons, to capture this unusual partnership on camera. The result is a new IDRC film, Harnessing the monsoons, that provides a rare insight into the practical application of agricultural research right on the farm.

It is research designed to help farmers develop new production methods that are within the resources available to them, that will improve their quality of life without upsetting the best traditions of 2000 years.

Harnessing the monsoons: Improved cropping systems in Asia, 16 mm, colour, 27 min.