



# Genuinely Lao



The story of the project that  
revolutionized rice production in Laos



**IRRI**  
INTERNATIONAL RICE RESEARCH INSTITUTE

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Prepared by IRRI's International Programs Management Office  
Cover photo: Peter Fredenburg

**I**n 1990, Laos needed more food. The rice industry in particular and agriculture in general was ready for change. It had been a long time since the country had produced enough rice — from which the average Lao person receives around two-thirds of his or her calories — to feed everybody. Something needed to happen, and soon.

Change did arrive that year, along with the Swiss Agency for Development and Cooperation (SDC) and the International Rice Research Institute (IRRI). The Lao-IRRI Rice Research and Training Project aimed to completely revitalize the Lao rice industry. The next 15 years would see an enormous surge in Laos's research and training capacity and would begin the long, hard journey to self-sufficiency in rice.

John Schiller, the IRRI scientist who led the project from its start until 2001, recalls the early days.

“When the project began,” he explains, “there was almost no research aimed at developing technologies for improving rice production, almost no commercial fertilizer use, and limited rice research expertise.”

IRRI agronomist Bruce Linquist, who arrived in Laos in 1997 and has led the project since 2004, adds that the country's problems were compounded by a dearth of international aid before the project began: “We were the only ones doing rice research and we basically started from scratch,” he says.

Why did the Lao-IRRI Project succeed in the face of such adverse conditions?

For a start, the timing was good and, as the project began, several key factors converged.

“The government introduced favorable agricultural policies,” explains Dr Ty Phommasack, the current Vice Minister for



AT A FIELD DAY in northern Laos, farmers taste candidate rice varieties before voting their preferences for eating quality. Another farmer (top) takes notes.

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Agriculture and Forestry. “At the same time, IRRI arrived with technologies and know-how and SDC came in with long-term financial support. The government's support has been a big factor from the very start, and the impact the project has had on the Lao rice industry really is unprecedented.”

Dr Schiller adds that the Minister for Agriculture and Forestry, Dr Siene Saphangthong, who spent time at IRRI as a research scholar, strongly supported the project in its early stages, when he was Vice Minister. “As a result,” he says, “the project's implementation was relatively smooth.”

It would be impossible to point to a single measure of success in a project as broad as Lao-IRRI. Statistics, such as the amount of land planted to Lao modern rice varieties — high-yielding varieties whose development was supported by



LAO FARMERS show IRRI agronomist Bruce Linquist how they dry their indigo crop.

the project — tell part of the story (see *Growing impact*, right).

“At the field level one of the most obvious impacts has been the release of the improved Lao rice varieties,” says Dr Schiller. “In the Mekong River Valley in 1990, only 5% of the lowland rice area was under improved varieties. By 2004, many provinces had up to 80% of their lowland area planted to improved varieties.”

The impact of these modern varieties has been profound, playing a huge part in Laos increasing rice production from 1.5 million tons in 1990 to 2.5 million tons in 2004. According to Sengpaseuth Rasabandith, Head of the Food Crops Department at the National Agricultural Research Center: “Without the Lao-IRRI Project, there would not have been national modern varieties to release. The project has created a ‘rice revolution’ in the country.”

Some of the biggest impacts, however, are harder to see by numbers alone. Higher yields, for example, mean more than just extra rice. When yields are low, farmers need to work harder, often relying on marginal returns from forest products and fishing. When new varieties are successful, farmers can think about selling rice as well as diversifying their work and increasing their income.

Even more than higher yields, though, Drs Schiller and Linquist agree the most significant success has been the growth of Laos’s agricultural research capacity.

“You can’t go anywhere in Laos and not bump into somebody who’s benefited from Lao-IRRI,” says Dr Linquist. “If you’re in the agricultural sector, there have just been hundreds of people who have been trained through Lao-IRRI. Training has been huge.

“Sometimes that’s worked against us — restructuring has moved a lot of people from our

## Growing impact

### Farm impact

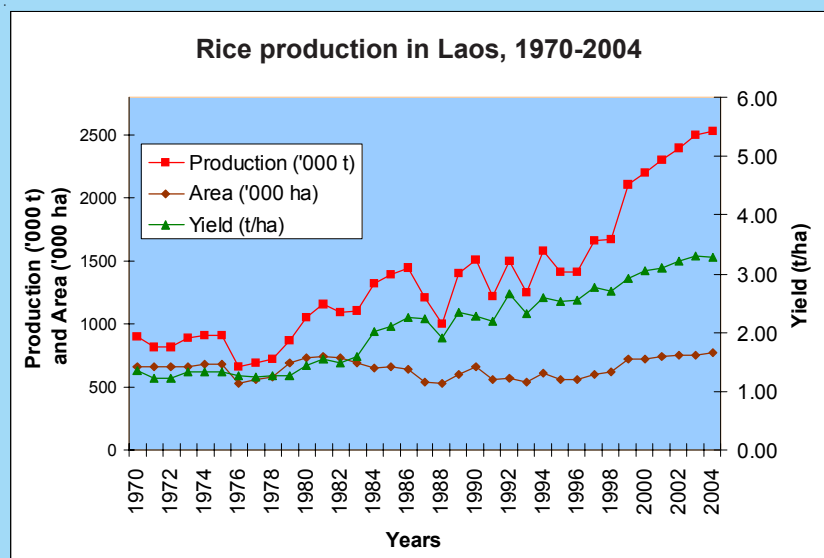
- Almost three-quarters of households adopting Lao modern varieties had surplus or were self-sufficient in rice (almost two-thirds of farmers who grew traditional varieties were rice-deficient).
- Households adopting Lao modern varieties had more than triple the cash income of households growing traditional varieties.
- Total rice area planted to modern varieties increased from less than 5% in 1990 to more than 80% in 2001.

### National impact

- Between 1990 and 2004, rice production increased from 1.5 million tons to 2.5 million tons — an average annual growth rate of more than 5%.
- The increase in production attributed to adoption of Lao modern varieties is valued between \$8 million and \$19 million per year.
- The project investment has a net present value of \$25-\$92 million — a return of between 11% and 22% per year.

### Institutional impact

- More than 4000 training courses, seminars and workshops have extensively boosted Laos’s rice research and training capacity.
- Lao-IRRI has established a rice research network covering the entire country.
- More than 100 papers, mostly co-authored by Lao scientists, have been presented in professional meetings or published in professional journals.
- The project has improved and established research and training infrastructure across Laos.



Rice production, area and yield in Laos, 1970-2004.

program to higher positions because they’ve been well-trained. In the long term, though, that’s beneficial because as well as having trainees in the rice area, it filters through to all areas of government.”

Samjhana Shrestha, a consultant agricultural economist at IRRI, recalls a vivid illustration of Lao-IRRI’s impact.

“I visited Naoukhou village in 2002,” says Shrestha, “and I remember the villagers talking in



LAO-IRRI PROJECT

Lao. I couldn't understand, but I kept hearing this name — 'Sulaphon' — over and over again. It turns out that he's a Laos-IRRI-trained agronomist. When he first visited Naoukhou in the late 90s, it was a very poor village. Now, largely thanks to his efforts, they are rice-sufficient."

As it was, the rise of Naoukhou happened almost by accident, but stands as an example of the project's many unanticipated benefits.

"Naoukhou wasn't a target village," explains Dr. Linquist. "We chose the area because it had gall midge problems and it was good for screening. But Sulaphon got to know the farmers, who looked at these trials and saw some good stuff. They asked for seed, Sulaphon gave it to them and 'boom!' — it just spread."

Dr Schiller is adamant that one of the factors in Lao-IRRI's success was nurturing a sense of Lao ownership.

"I didn't want it seen as just an 'IRRI Project in Laos,'" he says. "I often played on the 'IRRI' component of the project name. Expressed in the Lao language with the right tones, 'IRRI' means 'genuine'. You can appreciate the opportunity we had to emphasize that the project was genuinely Lao."

This ownership can be seen in the way farmers themselves

take part in the research, and aren't merely told what to do by foreign researchers. According to Dr Linquist, this practice extensively boosted the adoption of new farming technologies.

"We worked very closely with the farmers," he explains. "Involving farmers in all the steps of research, from analyzing their problems through to finding new technologies, has really been beneficial and has allowed us to get technologies into farmers' fields."

Lao-IRRI's emphasis on capacity building means that, as well as working closely with farmers themselves, project staff have taught Lao agricultural officers to work better with the farmers.

known years from now. But the impact so far has been impressive, with much of the country now self-sufficient in rice. Work remains to be done, though, with the less favorable areas of eastern Laos still suffering rice-deficit.

But the building blocks are well and truly in place. According to Monthathip Chanpengsay, Deputy Director of the National Agricultural and Forestry Research Institute, the country now has the ability to continue improving on its own. There is, she says, a confidence that simply didn't exist 15 years ago.

"The National Rice Program is now sustainable," says Dr Chanpengsay. "Even if IRRI went home tomorrow, the rice industry



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A WOMAN votes her preference for different rice varieties by piling Job's tears next to varietal names. Aka women (top left) from the Lao Sung group of northern Lao enjoy a traditional New Year celebration.

"Traditionally, district advisers and extension agents have generally just told farmers what to do," says Dr Linquist. "After training district officers, we asked them what sort of benefits they found in working with farmers this way compared with past methods. They told us, 'We used to have to look for farmers. Now farmers are coming to us and asking to work with us.'"

The true success of the Lao-IRRI Project — which is set to end in early 2006 — will only be

would be OK. But having IRRI involved has many benefits — it helps us network with neighboring countries and international agencies, and it gives us a broad overview that keeps things moving smoothly."

Dr Linquist agrees. "The capacity is there for the future," he says. "There are strong links established between IRRI and the Lao national partners. The big issue now is thinking of innovative ways to continue the research. But the capacity is there." ■