

## Commercialization of food fortification technology

Nutritional deficiencies undermine health and life expectancy around the world. Each year, for example, iron-deficiency anemia leads to more than 60,000 maternal deaths, and lack of vitamin A leads to 1 million deaths, mainly among young children.



PATH/Satvir Malhotra

To improve nutrition in low- and middle-income countries, PATH has advanced technology for fortifying rice. Through Ultra Rice® technology, a pasta-making company manufactures rice-like grains containing selected micronutrients (such as iron, folic acid, vitamin A, and zinc), and a miller then

blends these grains with local rice. The technology works better than other fortification methods, like rice coating, in which nutrients more easily degrade during storage, rinsing, and cooking.

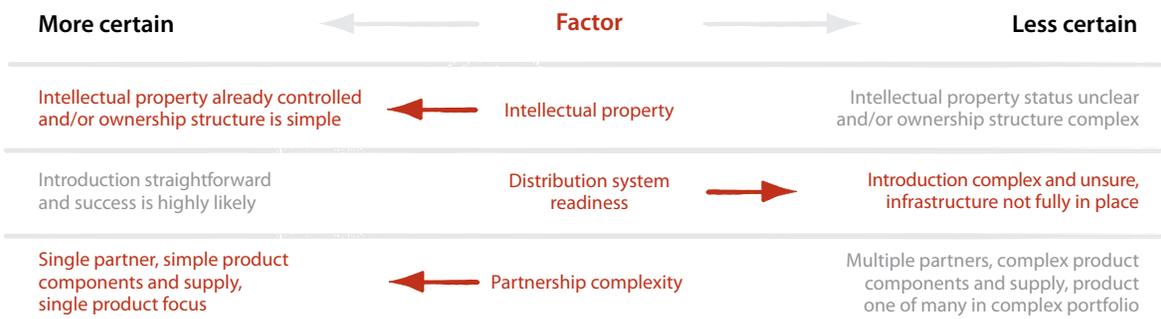
The technology was invented in the late 1980s by Bon Dente International, a US company. In 1997, the firm donated the technology to PATH, which has since received support from the Bill & Melinda Gates Foundation to transfer it to commercial partners in selected low- and middle-income countries and to build models for successful introduction.

### Collaboration between PATH and Swagat Food Products

PATH has partnered with several pasta manufacturers and rice millers in Asia and Latin America for commercialization and market development. In India, for example, PATH has transferred the technology to Swagat Food Products, which makes pasta eaten in India, Bangladesh, Bhutan, and Nepal. PATH's role in the partnership includes facilitating pilot introduction, identifying potential purchasers of fortified rice, and creating a favorable policy environment in collaboration with national stakeholders. The Indian manufacturer ensures product affordability for public-sector programs through pricing based on cost plus a small margin (not to exceed ten percent). It also agrees to meet public-sector demand.

#### Unique drivers of partnership diversity

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Swagat Food Products began production of Ultra Rice grains in late 2008. PATH plans to eventually switch its strategy from licensing the technology directly to manufacturers to establishing a regional technology transfer center that will subsequently establish licensing agreements with producers and provide technical support to rice millers.



### Drivers of a unique partnership

- **Intellectual property:** PATH owns the intellectual property that allows the manufacturer to enter a new and potentially profitable market, and this ownership gives PATH significant influence.
- **Distribution system readiness:** Given the complexity of the food distribution system, product introduction is complex. Distribution is especially challenging in markets where pasta makers that manufacture Ultra Rice must deal with many small, decentralized rice millers.
- **Partnership complexity:** In the long run, PATH will rely on regional technology transfer centers to negotiate terms that ensure availability, accessibility, and affordability—rather than negotiate directly with producers.



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