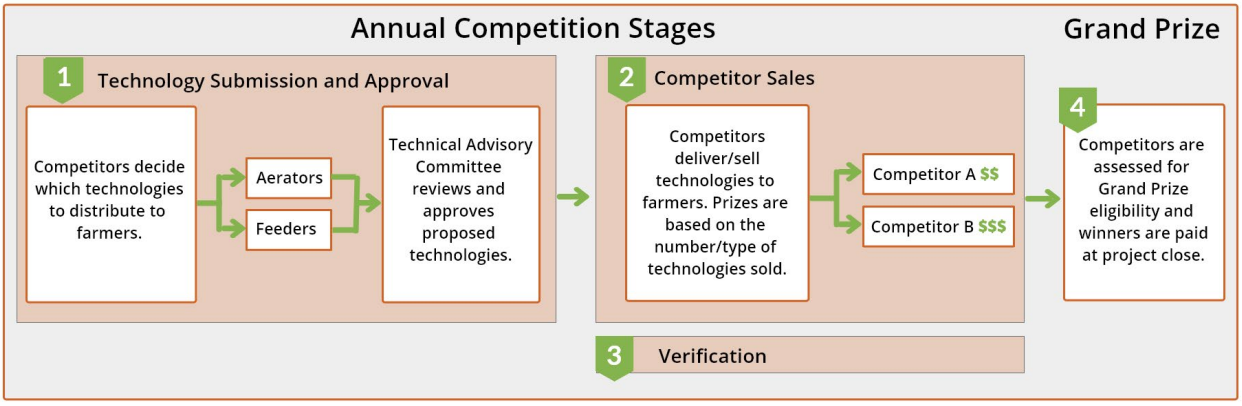
Overview: Indonesia Aquaculture Challenge Project

Background and Project Goals

Smallholder aquaculture farmers in Indonesia face challenges related to feed efficiency, water quality, and fish stock quality that constrain productivity and profitability. The AgResults Indonesia Aquaculture Challenge Project (2021–2026) used a Pay-for-Results prize competition to incentivize private sector actors to engage smallholder farmers and improve access to productivity-enhancing technologies such as aerators and feeders. In Year 3, the project added a technical assistance (TA) prize that encouraged private sector actors to teach aquaculture best practices, water quality monitoring, and disease testing through TA subscription packages. Through these incentives, the project improved farmers' food security and financial standing while strengthening the sector's productivity and sustainability.

Prize Competition Structure

Technology Competition



For the technology competition, competitors received per-unit prizes for sales or rentals of aerators and feeders after meeting a minimum threshold of 50 units sold or rented. Improved technologies earned higher prizes than traditional technologies, while rentals counted as one-third of the sales prize and required a minimum six-month rental period. All technologies were vetted for use by smallholders on traditional or extensive farms. Competitors that sold more than 2,500 units over the project became eligible for a Year 5 grand prize awarded to the three top performers.

Technical Assistance (TA) Competition

For the technical assistance (TA) prize, competitors had to engage smallholder farmers in paid "subscription" services that lasted for a minimum of one production cycle. Per-unit prizes were given based on the commodity and length of the subscription. These prizes were paid quarterly after services were verified.

Project Results

The project expanded access to improved aquaculture technologies and TA, encouraged private sector innovation, and supported more productive and resilient aquaculture systems.

17 competitors participated

4,693 smallholder aquaculture farmers received technologies or TA

14,068 technologies were rented or sold

$1,419,926 awarded in prizes

Lessons Learned

1. **Integrated Solutions vs. Standalone Products.** Technology adoption was strongest when competitors offered integrated solutions with equipment, inputs, technical guidance, and farm management support. Future prize designs should encourage partnerships and bundled service models that reflect how farmers make production decisions and help them use new technologies effectively.

2. **The Role of Trust.** Competitors performed best when they had strong market knowledge, trusted farmer relationships, and reliable customer support—not just promising technologies. Future PfR programs should assess competitors' market access, capacity to provide after-sales support, and farmer engagement strategies as part of selection and implementation.

3. **Adaptability in a Volatile Market.** Competitors succeeded when they quickly adapted to market shocks, shifting from shrimp toward fish commodities and adjusting sales and marketing strategies to match demand. Future PfR programs should build in flexibility so eligibility rules, sales models, outreach approaches, and technical requirements can evolve with changing market conditions.

4. **Making the Case for TA.** Paid technical assistance added value when it was practical, tied to clear production benefits, and bundled with technologies or inputs farmers already valued. Future PfR programs should continue to package TA with products, protocols, or buyer relationships.

5. **Government Engagement**. Government engagement extended the project's reach by connecting competitors with farmer groups, supporting roadshows, and validating technologies under real farming conditions. Future PfR programs should engage government partners early and consistently to strengthen outreach, align with local priorities, and create pathways for continued adoption.

For more information, check out the project webpage.

About AgResults

AgResults is a $152 million program between the governments of Australia, Canada, the United Kingdom, and the United States, as well as the Gates Foundation and World Bank that funds agricultural Pay-for-Results prize competitions. Since 2013, AgResults has designed and implemented competitions to incentivize the private sector to overcome market barriers and solve food security challenges for people living in poverty. AgResults competitions fall into one of two categories: 1) prizes that incentivize the Research and Development (R&D) of a new solution to address a market failure; and 2) prizes that encourage the development of innovative delivery models and encourage smallholder farmers to adopt an existing product or service at scale.

AgResults is a partnership between:

Australian Government · Canada · UKaid from the British people · Gates Foundation · WORLD BANK GROUP