SmartRice®: a rice product grown using more sustainable methods to reduce the use of agricultural resources and provide more rice to meet the growing worldwide appetite

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Our rice breeding journey started about 30 years ago.
We focused breeding to increase root biomass

unimproved hybrid rice

improved hybrid rice adapted to direct seeding and water-saving management practices
We bred disease resistance traits and high grain yield
We bred hybrids with lower environmental footprint

Traditional way to grow rice

1 kg = 2,500-5,000 liters

Source: IRRI

Methane emission from a rice field

Source: Eric C. Brevik

1 kg = 2,500-5,000 liters

Source: IRRI

Improved hybrids + Improved irrigation management = AWD (Alternate Wetting and Drying), Furrow irrigation, Direct seeding

AWD can reduce methane emissions in rice cultivation by an average of 48% over continuous flooding

Source: IRRI

AWD reduces global warming potential by 43%

Sanchis et al. 2012

Improved rice hybrids emit 29% fewer greenhouse gases per unit of output

Nalley et al. 2014
• The first sustainable rice with strong environmental claims
  o >50% water use reduction
  o >50% GHG reduction
  o 20% more people potential to feed per land unit
  o Third-party verification (SCS)
• Whole farm approach to conservation
  o Wildlife-bird-pollinator refuges; water quality, soil health
• Complete transparency and traceability
  o Consumers can follow from field to store
Smart Farmer - Convenience and higher profitability

Profitability
Higher Productivity & Cost Reduction

Convenience
Reduce Labor Dependence

Sustainable
Reduction Water, Fuel Usage & GHG
Significant incremental value over Transplanted (TPR) and Direct Seeded Rice (DSR)

Benefits of FullPage™ Technology

- Incremental Value
  1. Saving from transplanting cost
  2. Effective weed management
  3. Save irrigation cost
  4. Yield gain

- Intangible Benefits: Peace of Mind
  1. Reduce labour dependency
  2. Wear and tear of machinery
  3. Convenience
  4. Time saving

TPR

Higher methane and CO₂ emission

SmartRice® + FullPage® Technology

Reduce ~35% emission, may lead to carbon credit opportunities
We are a medium-size, privately own, rice breeding company

- We reinvest about 15% of revenue on research, development, innovation, and genetic improvement of rice and we rely 100% on our earnings to continue innovating. **SOCIAL RESPONSIBILITY**

- Our investors, plant breeders, and product developers must have the opportunity to earn competitive returns on the investments in new seed products which benefit our planet, our health, and our food. **FAIRNESS**

- Strong IP policies makes this possible. **ENABLING ENVIRONMENT**

- Currently, there are attempts to weaken UPOV 91 Act by weakening the fundamental EDV concept, that if successful will deeply affect the ability of companies like us to continue bringing innovations to market.