

# IP IN AGRICULTURE INNOVATION SERIES

Intellectual property is the cornerstone of innovation. As global population grows, developing new technologies that can feed our world becomes more challenging. Intellectual property ensures that innovators can invest the resources necessary to create the next generation of farm technologies.



## SORGHUM

Sorghum is one of the most versatile and resilient staple crops in the world. Its ability to thrive in temperate and tropical zones has made it a key source of calories and nutrients in developing regions. In Africa alone, nearly **300 MILLION** people rely on the crop. In developed regions, sorghum is becoming an increasingly important biofuel and feed crop.

### Sorghum Statistics

Global production of Sorghum<sup>1</sup>:

REGION	Production (Tonnes)
Africa	23,314,557 (41%)
Latin America & Caribbean	14,897,996 (26%)
Asia & Oceania	11,741,527 (21%)
NAFTA Region	6,272,360 (11%)
Europe	775,888 (1%)

*“Sorghum is the principal source of energy, protein, vitamins and minerals for millions of the poorest people.”*

-United Nations Food and Agriculture Organization<sup>2</sup>

## CHALLENGES & SOLUTIONS



#### CHALLENGE

Delivering essential vitamins to developing regions

#### SOLUTION

Nutrient-enhanced sorghum

Recipient of the US Patent & Trade Mark Office's Patent for Humanity Award, the Biofortified Sorghum project has developed a patented biotech sorghum variety that packs higher levels of Vitamin A, iron, zinc and protein. These essential nutrients can improve the lives of more than 30 million children in Africa affected by vitamin A deficiency<sup>3</sup>. By using intellectual property protections, researchers can ensure the technology is properly developed, bred into local varieties and delivered to farmers who need it most.



#### CHALLENGE

Improving sorghum sustainability

#### SOLUTION

Water-efficient sorghum

Palo Alto High Sorghum, a patented hybrid, non-biotech variety intended for feedstock, delivers higher yields while using significantly less water. This not only reduces the amount of input required to grow the crop, but cuts down on grower costs. Developing a complex trait like water-efficiency can take years of work and intellectual property protections ensure a company can recoup costs and invest in the next generation of technology.



#### CHALLENGE

Reducing pest pressures

#### SOLUTION

Weed-resistant sorghum

Sorghum is highly susceptible to striga, a deadly African weed variety that can devastate fields and completely eliminate a farmer's crop. Researchers around the world are developing varieties that resist the deadly striga weed and boost sorghum productivity<sup>4,5</sup>. By using intellectual property protections, these research teams can protect their invention and ensure it is developed and deployed properly.

*Intellectual Property Makes Agricultural Solutions Possible*