

Though Mohammad Milon Mia farms only a few acres of land in Bangladesh, he is a regional pioneer. Milon is cultivating Bt brinjal (eggplant), the first GE food crop developed and deployed through public sector cooperation for family farmers in South Asia. Bt brinjal resists the devastating caterpillar pest that normally forces growers like Milon to spray toxic insecticides dozens of times per season. Now he has cut his pesticide use by 90 percent, and freely shares seeds with his family and neighbors. However, anti-GMO activists have already spread false stories that Bt brinjal is poisonous, and activists in neighboring India and the Philippines have succeeded in blocking the crop altogether. This means that smallholder farmers in those countries continue to be denied the opportunity to grow pest-resistant seeds. Instead, they remain dependent on insecticide sprays, which can be harmful to humans and pollute the local environment.

> **The Alliance for Science is** committed to ensuring that all farmers have the right to choose improved seeds that can enhance their livelihoods and health.

Ugandan scientist Pamela Paparu is passionate about improving the common bean, a food security crop typically grown by women on compact farms in East Africa. Beans provide these small-holder farmers with extra income and an important source of protein for their families. But common beans are increasingly afflicted with root rot, a devastating disease that can cause crop losses of 80 to 100 percent. Pamela and other public sector scientists are using the tools of biotechnology to preserve critical indigenous foods, such as cowpea, matoke (banana), common beans, and cassava, and reduce the environmental impacts of agriculture. On average, genetically engineered crops have cut chemical pesticide use by 37 percent, increased crop yields by 22 percent, boosted farmer profits by 68 percent, and reduced greenhouse gas emissions equivalent to taking 12 million cars off the road. They've also helped to alleviate hunger by bringing financial stability to more than 65 million people in developing nations.

The Alliance for Science supports agricultural research that contributes to gender equality, addresses pressing issues like climate change and sustainability, and corrects the grave social injustices of poverty and hunger.

EVIDENCE

Regina Mwashilemo is struggling to support her five children and two grandchildren on a few meager acres of land in Tanzania. Climate change has disrupted rainfall patterns and the resulting severe drought — the worst in decades — has shriveled her maize crop. She is not alone: hunger is widespread. Regina is keen to try out the drought-tolerant Water Efficient Maize for Africa (WEMA) seeds that are already being grown by smallholder farmers like her in South Africa. But regulatory delays across sub-Saharan Africa are preventing Regina and millions of other farmers from choosing better seeds developed through genetic engineering.

For a contract of the set of the urgently need to support farmers, scientists, and policy-makers wh are working to improve livelihe of the rural poor. Every day of delay takes its toll in malnourishe children and damaged lives.

URGENCY

SCIENCE-BASED SOLUTIONS



The Alliance for Science supports global access to life-improving innovations that can shrink farming's footprint, deliver food security, reduce the drudgery of field work that often falls on women and children provide rural families with sufficient income to educate their children, and inspire young people to pursue a career in agriculture and science.



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TRAINING CHAMPIONS FOR SCIENCE

The Alliance's international training courses and Cornell-based Global Leadership Fellows program empower champions who are working to defend science and improve livelihoods in their nations. Would you like to host a training session or underwrite a Fellow? Contact us at allianceforsci@cornell.edu.

> **C** Knowledge is power and ignorance is the mother of all suppression. As the Alliance for Science empowers more people with knowledge on scientifi innovations, the world is gradually being put on the path to a better future where hunger is reduced to the barest minimum and farmers earn more from each acre of farmland.

> > Joseph Opoku 2016 AfS Fellow , Ghana



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GROWING A GLOBAL NETWORK

Our global network advances access to agricultural innovation through education and science-based policies.



The Alliance for Science າportant to me. 🎵 Andres Abea Cambronero 2016 AfS Fellow, Costa Rica



The Alliance for Science is the issue a human face. Katherine Chaweza 2016 AfS Fellow, Malawi



advocate of GM science. Patricia Nanteza 2015 AfS Fellow, Uganda



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