



Fighting **storage insect** pests in sub-Saharan Africa

Diatomaceous earths (DEs) have been shown to be a safe, effective way of protecting small farmers' hard-won grain harvests against insect pests. Now, policy makers need to make it easier for private companies to officially register DEs and sell them to small-scale producers.



Insects damage huge amounts of stored grain in sub-Saharan Africa (SSA), causing serious losses for farmers and traders. This threatens people's food security, self-sufficiency and incomes, as they often have to sell their grain before the best prices are available.

Above: Insect damage to stored grain (left) can be greatly reduced by mixing grain with a safe, natural protectant such as diatomaceous earth (right). Photos: T. Stathers

Farmers need new grain storage protectants

Many farmers and traders in SSA don't trust imported synthetic chemical pesticides, which are expensive and often don't work because their quality is not regulated. Many farmers also fear that treating their stored grain with these toxic chemicals could contaminate their food and damage their health.

A safe but effective option

Working closely with farmers and extension staff, researchers in Tanzania and Zimbabwe have shown that DEs are a safe and effective alternative to chemical pesticides. Mixed with dried grain, these whitish powders kill insect pests by absorbing their waterproof waxy coating, causing them to dry out and die.

Unlike chemical insecticides, DEs have very low levels of toxicity—falling under the 'Generally Regarded as Safe' category used by the US Environmental Protection Agency. They are already officially recognized and used as grain protectants in Australia, Brazil, Canada, China, Germany, Indonesia, Iran, Japan, Philippines, Saudi Arabia, United Arab Emirates, the UK and the USA.

Policy makers need to ensure DE availability

DEs aren't available in SSA yet simply because they have not been officially registered as grain protectants. Policy makers therefore need to:

- Speed up overly slow and complex registration processes by ensuring that registering bodies are fully aware of the results of DE trials, and that DEs are effective and farmers want to use them.
- Address the fact that agri-businesses may not adopt and promote DEs because they fear they will compete with an already profitable trade in synthetic chemical pesticides.
- Make sure that, once registered, DE use is promoted and their quality regulated. They must also be made widely available, as many small-scale farmers can't travel far to buy them.

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What is the purpose of this brief?

This Policy Brief was produced to show that complex subjects can be explained very quickly and simply to busy policy makers. It is part of a series that showcases proven technologies, policies and new approaches in order to demonstrate the importance of high-quality scientific communication.

Through its Policy Brief and Pocket Guide series, Research into Use aims to encourage partners in both the developed and developing worlds to invest more in their communication efforts. Only in this way will useful technologies be widely adopted, helping the people that they were intended to help and contributing to the achievement of the Millennium Development Goals.

What is Research into Use?

The Research into Use Programme aims to do exactly what its name says—to get research findings into use by resource-poor farmers in the developing world. The natural resources research programmes funded by the UK Department for International Development (DFID) produced many significant findings over their 11 year existence. Research into Use is working to put these results into practice—in order to reduce poverty on a very broad scale in sub-Saharan Africa and South Asia.

A key part of this work will involve helping partners to better understand how the promotion and widespread use of such research will help to cut poverty and boost economic growth.

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