

# PICS

## NEWSLETTER

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### In Focus: Media

## Purdue Improved Crop Storage

### Can you hear PICS? How Media/ICT Build PICS Awareness and Availability!

*Dieudonné Baributsa, Purdue University*

Media plays a critical role in bringing information about new technologies and innovations to smallholder farmers. We have used radio, television messages, posters and flyers, cellphone videos, short message services (sms) and Information and Communications Technology (ICT) platforms to (i) make farmers aware of the Purdue Improved Crop Storage (PICS) bags, (ii) train them how to properly use PICS bags, and (iii) advertise retail points and provide PICS bag vendors' information. This newsletter highlights our media efforts carried out under the [PICS3 project](#), funded by the Bill and Melinda Gates Foundation, to reduce grain postharvest storage losses in Sub-Saharan Africa. During the first two years of the PICS3 project, 94 radio and TV stations aired over 10,700 PICS jingles in more than 28 local languages in Nigeria, Ethiopia, Tanzania, Ghana, Uganda, Burkina Faso and Mali. In addition, [video documentaries](#) were produced and aired on local TV stations to build [awareness](#) in urban areas among government officials, development partners (NGOs, projects, etc.) and consumers. During an interview for a morning TV show in Uganda, a journalist commented: "This is just so simple;" I retorted: "That's why farmers like it."



A PICS extension agent participating in a radio talk show.

Radio talk shows have proven to generate interest in the PICS technology and increase the use of PICS bags. Combined with ICT platforms, radio talk shows are used to collect feedback or survey farmers to help us understand their postharvest storage pest management issues. Remarkably, four PICS radio talk shows on Radio Free Africa in Tanzania organized by Farm Radio International in collaboration with Purdue University generated queries/feedback from 600 callers within just one month. Using social media, PICS media consultants are taking

the discussion to a still higher level. Mr. MacDonald Mbalule led the way in initiating WhatsApp and [Facebook](#) platforms in Malawi. This social networking made it possible to create connections amongst vendors, NGOs, radio and TV stations, and the PICS manufacturers which resulted in increased sales of PICS bags.



Extension agents recording a PICS demonstration on their cellphones during a training of trainers in Arusha, Tanzania in 2015.

With the rise in cellphone ownership in rural Africa, many farmers have access to devices that can share videos clips in addition to basic functionalities. Short surveys conducted in Ghana and Eastern DR Congo under the PICS program indicate that half of the households in rural communities have cellphones, some of which have Bluetooth technology. To capitalize on this, we have developed [cellphone videos](#) in several local languages that are easily shared among farmers using Bluetooth technology -- a technology available on most phones that does not require Internet connectivity. Cellphone videos teach farmers critical steps in using PICS bags (e.g., checking air tightness of liners, closing the bags) that are difficult to describe in words but are easily understood when farmers see how it's done. Extension agents share these cellphone videos with farmers during field visits in communities, field days and village video shows.

Our continuing aim is to use media tools and technologies to reach farmers in more remote areas. We are interested in exploring, in collaboration with ICT/telecom companies and donors, how automated responses (contact of vendors and digital training materials) can help increase awareness and improve the availability of PICS bags to smallholder farmers in rural areas.

The PICS technology is simple – we are striving to find an equally simple and easy way to convey it.

## PICS Media Hub Increasing Awareness and Sales of Bags in Malawi

*MacDonald G. Mbalule, Creative Multimedia*

Malawi's economy is agro-based. Cereals and legumes including maize (staple food), rice, beans, groundnuts, cowpeas, and pigeon peas incur the greatest losses during storage because of weevil infestation. The use of pesticides to treat grain in storage is common but the quality of the chemicals is often questionable and the protective effect is limited in time. As a result, farmers have to apply pesticides frequently, exposing themselves to the chemicals and risking the appearance of resistant insect populations. The emergence of PICS bags has shined a ray of hope and PICS Mthetsanjala, as locally branded, is fast becoming a household name in the country.



Lead farmers from Traditional Authority Ngabu bagging their grain.

After joining the Malawi PICS3 team as the Media Consultant, I recognized the importance of coordinating with all the stakeholders to achieve success. Stakeholders included Catholic Relief Services, Care Malawi, Save the Children, NASFAM, CADECOM, Agro-dealers and Polypack, the manufacturer of PICS bags. I realized we all had to speak with one voice and what better way for all and sundry than through social media. Highest amongst social media platforms, favorite to many in Malawi, are WhatsApp and Facebook. These platforms put users in the fast lane of a rapidly changing digital age and provide an opportunity to share experiences. That is where the idea of a WhatsApp group to harness PICS activities amongst the stakeholders came from. The WhatsApp group was created in May 2016 with initial members among participants to the PICS CRS workshop in Mulanje. A selected few were made administrators to expedite the growth of the hub amongst cohorts advocating the PICS cause. PICS Media Hub immediately became the nucleus of communication for collaborating partners and stakeholders, thus accelerating the sharing of vital information including awareness and availability of PICS bags. Soon our colleagues from Tanzania, Nigeria, Ethiopia,



The head of Mbeta village and local farmers conducting a PICS bag demonstration.

Ghana, Botswana and Zimbabwe joined us and information sharing went global.

The Media Hub has crowd sourced responses to inquiries from its members and has provided updates on progress of PICS activities. In the last few weeks, the PICS Media Hub has provided updates on the promotion of PICS bags in the Ngabu Traditional Authority. Also, the distribution of PICS bags has gotten a boost, because through the Hub the manufacturer is able to act in response to user queries and recognize distribution shortcomings immediately when they arise.

The PICS Media Hub is an excellent platform - information and advice are just a click away.



## PICS Awareness Creation Through Voice Messaging in Ghana

*Garcia C. Honvoh, Image-Ad*

Image-Ad is one of the leading software development companies based in Accra, Ghana. Image-Ad provides web and mobile agribusiness solutions to the agricultural sector's stakeholders both public and private. Image-Ad solutions (called mFarms) is being used in over seventeen (17) countries in Sub-Saharan Africa.



From the markets to the fields, cellphones make it possible to spread the PICS message to those who benefit from it the most.

In collaboration with Purdue University, with funding from CTA, Image-Ad has embarked on an awareness campaign for PICS bags in selected regions of Ghana. The mFarms platform, an easy-to-use mobile and web based system for managing and communicating with actors within the agricultural value chain (<http://www.mfarms.org>), has been used to achieve this goal. Using SMS and voice, farmers as well as vendors are informed about the new opportunities that PICS bags offer- preserving grain without using chemicals and a business opportunity. At the end of the pilot, it is expected that PICS bags will be well known to farmers in Brong Ahafo, Ashanti and Northern regions of Ghana. New vendors will be identified across the country to bring PICS bags closer to its final beneficiaries. At the end, we will share our successes, challenges and lessons learned.

## PICS Village Video Show: An Effective Commercialization Strategy in Nigeria

*Onu Anyebe, IITA*

Purdue University is partnering with the International Institute of Tropical Agriculture (IITA) to promote PICS bags for grain storage in several countries in West and Central Africa. In Nigeria, IITA through the PICS3 project reached about 61,181 farmers in 1,500 villages during the 2014/15 harvest season. PICS bag activities in Nigeria are now at the commercialization stage.



Villagers gather to take part in the village video show in Bauchi state.

One common saying among Nigerians is “seeing is believing.” In the light of this statement, the IITA PICS team in Nigeria developed a new strategy to promote the PICS technology. This simple and relatively cheap strategy was tagged ‘PICS village video show’. Since its introduction in 2010, it has proven to be an effective approach to commercialize the bags.

To implement a “PICS village video show,” we strategically select villages based on potential demand for grain storage technologies. A village head is asked to grant permission for the event and then assists in coordination of the selection of venue, dates and arrangements for publicity. Common venues are town halls, schools, marketplaces, and the home seat of the village head. On the day of the event, the villagers assemble at the venue. A laptop and a projector powered by a small generator are used to project the film on a wall or a white cloth. The presentation begins with the playing of a PICS jingle via a public address system. This is followed by the presentation of a PICS show in the local language. Next, an entertaining film is shown (a popular movie or comedy in the local language, English or pidgin). The film is paused several times for a repeat presentation of the PICS drama



During a break at the Crossriver village video show, a PICS agent performs a demonstration and shares information about the PICS technology.

and at the end. In villages where culture or tradition does not allow women to convene together with men, this ‘PICS village video show’ is often organized for women in the palace of the village head.

Sometimes during this ‘PICS village video show,’ hands-on demonstrations of PICS bags are conducted with volunteering farmers. Of course, the nearest PICS bag vendors are always invited to attend the “PICS village video show” to sell bags.

Unlike other PICS awareness strategies, the ‘PICS village video show’ often provides ample opportunity for farmers to talk with the IITA team on adoption and sustainability of supply. Farmers do not easily forget the opportunities provided by the PICS technology - this grows the demand for PICS bags.



## The Role of Radio and Television in Commercializing PICS Bags in Ghana

*David K. Babayara, NuImage*

As Mark Twain once said “Many a small thing has been made large by the right kind of advertising.” That statement is true when you consider the influence of media and advertising towards the successful commercialization of PICS bags in Ghana today. The PICS bags were first introduced into Ghana in 2010 with the aim of helping smallholder farmers store their farm produce safely and effectively. At the time, commercial activities involving the sale of the bags were limited to the cowpea areas of the country and only reached eight to ten thousand bags sold per year. Today, thanks to mass media advertising, PICS bags have become a commercially viable product throughout Ghana. Both smallholder and large-scale farmers are now using PICS bags to store their grain.



*Since I started using these bags I have never encountered any problem again with my clients over spoiled grains.*

*- Martha Abugri*

Madam Martha Abugri, a grain aggregator located at the Aboabo market in Tamale in the Northern region of Ghana, stores between two to five tons of maize and beans per season in PICS bags. She was introduced to the bags by watching an advert on Ghana Television (GTV) and decided to buy a few to try. She was surprised to notice that all the grains she stored were still in good condition after four months and decided to order more bags. She is very happy with the results: “Since I started using these bags I have never encountered any problem again with my clients over spoiled grains.”

Similarly, Madam Hannah Nsiah, a maize and cowpea farmer as well as a school caterer based at Ejura in the Ashanti region of Ghana, called into a live PICS radio discussion program recently and reported with joy, "After trying a few PICS bags for three months and realizing their efficacy, I then proceeded to buy large quantities of them; and I have since not experienced a single issue with my stored grains." Presently Hannah uses over three hundred PICS bags to store her grains both for sale and to prepare meals for her students. She has even volunteered to join the PICS media team to help educate other farmers about the benefits of using PICS bags for storage.

*[Since switching to PICS bags] I have not experienced a single issue with my stored grains*

- Hannah Nsiah



With similar testimonies from several other farmers, boarding schools, and grain traders throughout the country, it is now clear that the commercial success of PICS bags today is directly linked to the media efforts carried out over the period. "This has resulted in increased demand for the bags, which has quadrupled in the last 4 years," as noted by Mr. Prince Koveh, the Managing Director of Simple Prince Enterprise, one of the main distributors of PICS bags in Ghana. Without the publicity efforts, the PICS bags wouldn't have experienced the huge commercial success they are enjoying today in Ghana.



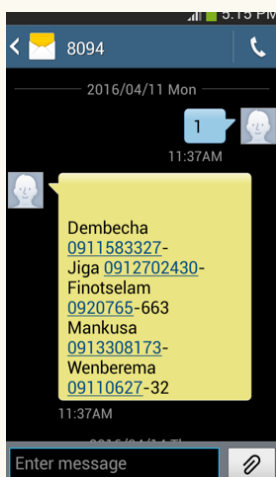
## Radio plus ICT Improve the Availability of PICS Bags in Ethiopia

*Yared Sertse, Shayashone Trading, PLC*

Shayashone – a service provider - piloted information and communications technology (ICT) aided media in the promotion of PICS in two areas in Ethiopia: Shashemene and Finote Selam. The pilot project sought to measure the impact of ICT platform plus radio compared to the traditional radio-only PICS promotion. The program was designed as follows: after

each PICS radio commercial advertisement or radio talk show, farmers were given a short code (8094 or 8017) to send SMS inquiries using their cellphones by choosing one of the following:

- 1 - Need contacts of PICS bags vendors in the area (80941 or 80171)
- 2 - Need more information about the PICS technology (80942 or 80172)
- 3 - Interested in becoming a PICS bag vendor (80943 or 80173)



Auto-reply messages for each of these messages were prepared in two major local languages, Amharic and Oromiffa. Senders received automatic answers to their questions or they were provided with a telephone number to call direct.



Business around charging phone batteries (\$0.20 per battery) during a market day in rural Zinder Niger. People leave batteries for charging while selling and buying foodstuff in the market.

Though the final results of a follow-up study are not yet available, the experiment seems to have had quite positive results thus far. In one month, over 1,550 farmers sent short message service (SMS) messages asking questions about the PICS technology during radio programs. About 40% of the messages were requests for contact information of PICS bag vendors. In addition, the ICT platform also helped recruit new vendors in the pilot areas. Among 59 inquiries to become PICS bag vendors, 18 applicants were retained.



A farmer in Finote Selam, West Gojam, using his mobile to seek more information about PICS.

Meet Getasew Abebe, a young farmer in Mankusa village near Finote Selam. After listening to a PICS radio talk show, he decided to send an SMS to the assigned short code-8094. He received an automatic reply with a list of vendors near his village (see Figure 1). Getasew purchased 7 PICS bags after he got connected to the local vendor. According to Getasew, the use of ICT simplifies access to information and requires little effort from farmers with limited literacy. The information is saved on the phone and can be shared with other farmers. Tadesse Alen, a vendor in Mankusa, shares Getasew's view. According to Tadesse, 90% of his PICS bag buyers were put in contact with him using the ICT platform. He sold over 200 bags in his village.

## Airwaves Creating Change in Uganda

Frank Namundenyi, PICS Media Consultant

Radio in Uganda is the number one medium of communication reaching communities across the country. 152 radio stations hit the airwaves daily with 80% being community stations. Their broadcasts reach the majority of Ugandans in rural areas, many of whom are small-holder farmers.

The PICS3 Project has reached most Ugandans with our message about better grain storage methods. Partnerships with national radio stations and community stations like Radio Uganda, Bukedda FM, KFM and six others have helped spread the PICS message.

Talk shows on these stations have increased awareness of the PICS bag technology and even extended awareness into areas where the PICS team has not yet stepped foot. Farmers have been calling in from as far away as Arua, a district located just along the Uganda/Congo border. There have even been calls coming in from the neighbouring country of Rwanda when the PICS message is broadcast from larger radio stations located in Kampala, Uganda's capitol city.

Thanks to the talk shows, coupled with the mobile USSD platform -- which makes it possible to communicate with the radio stations via smartphones -- listeners have been able to continue the conversation even after the talk show has gone off the airwaves. They send in various questions on how to use and access the bags, and how much the bags cost. Our platform has already generated over 5,000 inquires on how users can gain access to the technology.



A mother and her child listen to radio programming in rural Uganda.

Thanks to on-the-ground experiences, the PICS3 team found that radio is the preferred mode for accessing agricultural information among the majority of smallholder farmers. Not only is radio affordable and accessible to those without formal education, it is also a great way to reach people in a variety of local languages. PICS bag jingles have been translated into five different languages in Uganda and talk shows have even been aired in these local languages. Most importantly, radio, particularly when coupled with other technologies such as mobile phones, enables end-users to have a voice through participatory radio programs. Thanks to this, radio is an effective tool to help farmers make informed decisions to invest in the PICS bag technology.

As a result of our radio awareness efforts, Ugandan farmers now understand what PICS bags can do for them in terms of health and wealth.

## PICS at the International Congress of Entomology – Orlando, Florida

Scott Williams, Purdue University

This past September, the PICS program hosted a symposium “Advances in Hermetic Storage Technology” on September 27, 2016 at the 25th International Congress on Entomology (ICE) in Orlando, Florida. Themed “Entomology without Borders,” the congress was a perfect opportunity to connect and discuss pest management challenges in a global context. Moderators Drs Dieudonné Baributsa and Scott Williams from Purdue University, hosted a discussion on the issues of grain storage in the developing world.



Jean Njiru speaks during the PICS Symposium at the ICE Conference.



Suraj Devani, the Director of PPTL Tanzania, speaks during the PICS Symposium at the ICE conference.

The symposium featured presentations and a panel discussion which was followed by a poster session. A total of sixteen presenters from eight countries and four continents took part in the poster presentation session. Key presenters included Dr. Dieudonné Baributsa and Mrs. Stacy Prieto from Purdue University, Dr. Maria Carvalho from Portugal, and Jean Njiru of Kenya. Dr. Carvalho facilitated a panel discussion with John Macharia from AGRA Kenya, Hari Sudini from ICRISAT India, and Suraj Devani from PPTL Tanzania discussing the future directions of hermetic storage for the developing world. The poster session concluded the symposium, giving participants from NGOs, universities in the USA and Africa and the private sector the opportunity to share their research and experiences in developing and commercializing hermetic technologies.

The Advances in Hermetic Storage Technology symposium was an overall success; bringing together researchers, development partners and the private sector with a dedication to solving food security challenges on smallholder farms through improved postharvest methods. Looking forward, the insights shared at the international congress may inspire future work and collaborations.



Panel discussion during the PICS Symposium at the ICE conference. From left to right- Suraj Devani, PPTL Tanzania; Hari Sudini, ICRISAT India; John Macharia, AGRA Kenya, and Maria Dr. Maria Carvalho, University of Lisbon, Portugal; Scott Williams, Purdue University, USA.

## Community Voices

[Martha Zongo's Story](#)



## Upcoming Events

**NOVEMBER 2016**

PICS short term training for East Africa, Uganda

**FEBRUARY 2017**

PICS Supply Chain Workshop, Uganda

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