**////Title: Providing Effective Pest Management Education Through Animations**

**////Standfirst:**

Integrated pest management describes effective and environmentally sensitive approaches to controlling agricultural pests, which are based on combinations of different practices. Educational information on integrated pest management is much more accessible in the developed world than in developing countries. This is due to a combination of language and technology barriers around information sharing. To ensure that reliable content related to integrated pest management systems and other educational resources can also be widely accessed by people in developing countries, researchers at Michigan State University and Purdue University have created Scientific Animations Without Borders – or SAWBO [saw-boe] – which provides scientifically accurate animations about various important topics.

**////Main text:**

Integrated pest management systems are comprehensive approaches to manage, contain, and reduce pest populations. These systems typically combine a series of biological, chemical, and crop-specific pest management strategies, aimed at promoting the growth of healthy crops and limiting the use of ecologically damaging pesticides.

In the developed world, integrated pest management systems are widespread and advanced. In these countries, information about these systems and resources for those thinking to implement them are generally readily available. This makes it easy for farmers, crop producers, and pest control technicians to learn about new and effective ways to manage insect populations, minimise crop losses, and reduce the environmental damage and health risks associated with excessive pesticide use.

In developing countries, on the other hand, reliable and scientifically accurate information about integrated pest management is still scarce, partly due to a lack of institutional support for the creation and dissemination of relevant resources. In addition, farmers living in developing countries often have low-literacy levels and speak different languages and dialects; thus, they might struggle to understand or access available resources.

With this in mind, Dr Julia Bello-Bravo, Dr Barry Pittendrigh, and other researchers at Purdue University created SAWBO, a media platform that provides informative and educational content tailored for individuals in every corner of the globe. The SAWBO platform provides an easy way for people in developing countries to learn about various topics that might benefit them, including integrated pest management systems.

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SAWBO was launched in 2011, with the key mission of disseminating reliable information related to crop growing, food security, health, women’s empowerment and other crucial issues to people with low literacy levels or those who might be unable to understand available educational content due to language barriers.

The animated videos produced by the SAWBO team are published on YouTube and can be easily accessed on smartphones, tablets and laptops. Before they are published online, the videos undergo a strict four-step review process, to ensure that all the information contained in them is reliable, scientifically accurate, and easy to understand.

The topics covered in SAWBO animations are carefully selected and typically offer suggestions that could benefit the lives of people in developing countries, for instance outlining strategies to improve pest control strategies, enhance crop production, or increase professional opportunities for women.

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Learning about integrated pest management systems could be very advantageous for farmers in developing countries, helping them to ensure food security in their locality and protect the surrounding natural environment. The SAWBO team has thus created several science-based animated videos discussing pest management systems and outlining different crop growing strategies that could be particularly valuable for farmers in developing parts of the world.   
  
For instance, Dr Bello-Bravo and her colleagues conducted extensive research focusing on agricultural processes in West Africa, including systems for growing cowpea, a nutritious legume found in many regions across Africa and Asia. Their studies identified particularly effective strategies for cowpea cropping, including safe storage and pest management methods.

The findings collected by the researchers informed the creation of educational animated videos in different languages and dialects, offering suggestions for enhancing cowpea production and reducing the use of harmful pesticides. Over 1300 videos are now available on the SAWBO website and YouTube channel on over 100 topics in 240 different languages.

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The SAWBO project also aimed to explore the potential of using educational animated videos that can be accessed on mobile devices to inform people living in developing countries and learners with low literacy levels. In their recent work, Dr Bello-Bravo and her colleagues therefore asked people in their target audience to watch some of the videos they produced and share their feedback.   
  
The researchers found that farmers in rural Benin [beh-neen] and Mozambique who watched the animations twice learned just as much information as farmers who had attended a one to two hour talk on the same topics discussed in the videos.

In a follow-up study, the team also found that more than 89% of the farmers in Mozambique who had watched the videos decided to adopt the techniques or pest management systems outlined in them. This suggests that the information presented in the videos was educational and helpful to viewers, as it later informed their farming practices.

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The researchers are now working on scaling up the SAWBO platform to make it even easier to access by individuals worldwide. Over the past three years, they worked closely with developers to create an online library of videos. This system allows users to easily browse through the SAWBO library, filtering available videos based on the topics they discuss, the languages they are available in, or the countries they are applicable to.

Mobile technology is revolutionising the way in which people worldwide access information and learn new things. While there are still challenges to overcome, such as ensuring that all areas have mobile internet coverage and that data plans are affordable, the use of smartphones is now becoming increasingly widespread in developing countries.

Educational content that can be accessed on mobile devices, such as SAWBO videos, could thus be invaluable learning tools for people with low-literacy levels or in developing parts of the world, allowing them to make informed choices and improving their quality of life.

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This SciPod is a summary of the paper ‘Scientific Animations Without Borders (SAWBO): Animating IPM information and education everywhere’, from *Outlooks on Pest Management.* [doi.org/10.1564/v29\_apr\_02](https://doi.org/10.1564/v29_apr_02)

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