

# Scientific Animations Without Borders<sup>SM</sup> (SAWBO)



## An International Collaborative Approach for Building Scientific Educational Materials to Enable Prevention of Post-Harvest Losses in Developing Nations

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**Abstract:** International organizations, government agencies, non-governmental agencies, researchers, adult educators, and extension agents have long sought effective ways to provide useful information to the least educated people throughout the world. Although there is no absolute relationship between poverty and illiteracy, many poor people are also low-literate learners (or illiterate) and many live in rural areas of developing countries. Most educational materials targeting low-literate or illiterate individuals have involved the use of books, radio programs, or television. However, an estimated 80% of people living in rural areas of developing countries now have access to information via cell phones. The rapid development of cell phones and the Internet has also changed how people learn in that both literate and illiterate learners are increasingly familiar with and receptive to technology-mediated activities. Regardless of their level of formal education, many people interact with technology, discover things for themselves, and learn through multi-media. Therefore, providing useful information to illiterate individuals should no longer depend only on books, radio, or television programs; educators should now recognize that the cell phone and other electronic video viewing devices are valuable learning tools. Here we describe how information in the form of short animations can be transferred to those who deliver information to low-literate learners and to the learners themselves via cell phones and DVDs. Voice overlays in a diversity of languages can be added to these animations so that ideas can be efficiently shared across language groups. The animated videos, which are being developed by Scientific Animations Without Borders<sup>SM</sup> (SAWBO<sup>SM</sup>), can be viewed on cell phones or other video capable electronic devices. The development of these animations is multidisciplinary and horizontal in that it involves the free exchange of ideas amongst collaborators through the utilization of social networks and cell phone technology.

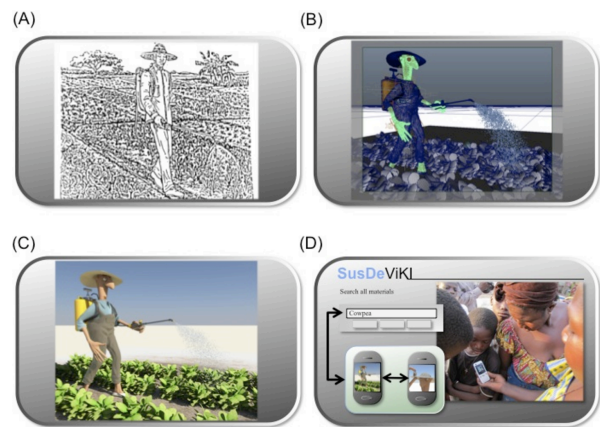


Figure 2: Steps taken in the creation and the deployment of an animated video: the production and use of neem sprays is used as an example. (A) Existing extension materials are used as the basis for the development of the animations [drawing courtesy of Institut d'Economie Rurale, Mali]. (B) A wire framework is initially developed, and once the initial concepts of the scenes are accepted. (C) A complete draft of the animated video is created and edited, and a final version is produced with voice overlays. (D) The final cell-phone-ready animated videos can be placed on the Sustainable Development Knowledge Interface (SusDeViKI; Bello-Bravo et al., 2010) for easy download onto a computer and transferred onto cell phones, where the animated videos can be transferred between cell phones, via Bluetooth<sup>®</sup> Technology, and used by farmers in the field. The picture of the individuals watching the cell phone is courtesy of Dr. Tamo of IITA in Benin.

### Outcomes Since SAWBO<sup>SM</sup> Launched in 2011

- 1) Three post-harvest loss videos created for cowpea production.
- 2) Fourth soon to be completed – on novel effective pest control strategy – neem plus viral control.
- 3) SAWBO<sup>SM</sup> server built for easy access to all videos in numerous formats for different devices.
- 4) Connection to direct cell phone application coming soon.
- 5) Numerous languages available and numbers are growing each month.
- 6) Virtual online collaborations for new language voice overlays.
- 7) In-country testing occurring.
- 8) Materials are available **free** for all groups interested.
- 9) New collaborations for voice overlays and deployment have emerged (e.g., Indian Society for Agricultural Professionals in Hindi).
- 10) SAWBO<sup>SM</sup> has developed into a platform to address other educational challenges.
- 11) Outside funding obtained from private donations for important world-wide diseases (cholera, malaria, etc.).
- 12) SAWBO<sup>SM</sup> has received funding support from the ADM Institute for the Prevention of Postharvest Loss – **SAWBO will issue a “Request for Videos” over the next two years to produce a total of six high-impact postharvest loss videos.**
- 13) SAWBO<sup>SM</sup> is collaborating with the Medical School at University of Illinois at Chicago to create videos for educational content on topics of importance to the U.S. Medical System – for a diversity of languages.
- 14) Ultra low cost DVD strategy currently in development.

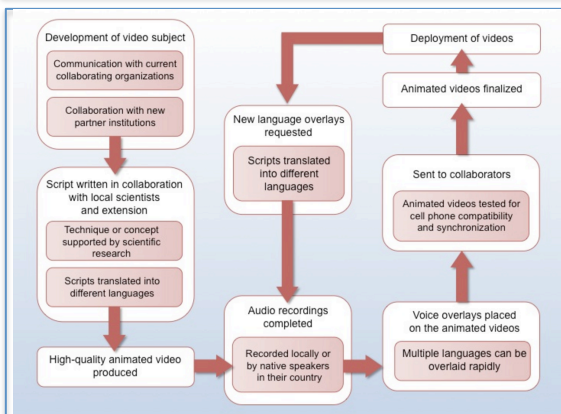


Figure 1: Flowchart explaining the development of animated videos and voice overlays through an international network of collaborators.



Dry Grain Pulses CRSP



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#### Reference

Bello-Bravo, J., Diaz, R., Venugopal, S., Viswanathan, M., and B.R. Pittendrigh. 2010. Expanding the impact of practical scientific concepts for low-literate learners through an inclusive and participatory virtual knowledge ecosystem. *Journal of the World Universities Forum*. 3(4): 147-164.