

*Nature* features ASPB member crop biotechnologists fighting world hunger

In its December 4, 2008 issue, *Nature* highlighted top scientists whose work could have significant impact on world hunger. The full article, *Five Crop Researchers Who Could Change the World*, is available to *Nature* subscribers at <http://www.nature.com/news/2008/081203/pdf/456563a.pdf>. Two of the scientists featured in the article are ASPB members: Richard Sayre and Zhang Jianhua.

Richard Sayre serves on the ASPB Public Affairs Committee and is the Director of the Enterprise Rent-A-Car Institute for Renewable Fuels at the Donald Danforth Plant Science Center in St. Louis, MO ([www.danforthcenter.org](http://www.danforthcenter.org)). Sayre is working with a team at the institute to turn algae into biofuel. Sayre also is supporting the start-up of Phycal, a renewable energy firm in Cleveland, Ohio. But it is his role as the head of the BioCassava Plus project (<http://biocassavaplus.org/>) that caught *Nature's* attention. The BioCassava Plus collaboration is a 5-plus year, \$12-million project aimed at turning cassava into a super-nutritious food throughout the regions in Africa where it is a staple crop. This project, which is funded by the Grand Challenges in Global Health arm of the Bill & Melinda Gates Foundation (<http://www.gcgh.org/Pages/default.aspx>), involves 19 scientists on five continents. The primary objective is to reduce malnutrition among sub-Saharan Africans by delivering more nutritious, higher yielding, and more marketable cultivars of cassava. The program has six major objectives for improving traits that will enhance bioavailable levels of zinc, iron, protein, vitamin A, and vitamin E, as well as reduce quantities of toxic cyanogenic glycosides, improve post-harvest durability, and improve resistance against viral diseases.

Zhang Jianhua is a plant physiologist at Hong Kong Baptist University but still considers himself an active member of the impoverished rural community in China in which he once lived. Early experiences on a collective farm afforded Zhang the chance to study crop production at a local agricultural college. He taught himself English, and in 1985 the Chinese government sent Zhang abroad to work in Bill Davies's lab at Lancaster University in the UK. Since then Zhang has published extensively, becoming an expert on 'deficit irrigation' and 'partial root zone drying', two crop management techniques that can impel a plant to devote the bulk of its nutritional resources to the grains if drought seems imminent. Zhang is now based in Hong Kong and travels throughout China helping farmers – many still living in poverty - understand how his research can be applied to improve agricultural efficiency. Zhang is highly motivated to initiate and maintain contact with farmers and other agricultural experts in China. His direct approach continues to make significant inroads to improving both water resources management and the quality of daily life and food supply for villagers across the country.

Peter Dodds, of CSIRO in Australia, Jerry Glover (Washington State University), and Julian Hibberd (University of Cambridge) were the other three scientists highlighted by *Nature*. Hibberd is a member of the C<sub>4</sub> Rice Consortium (<http://seeds.irri.org/c4rice/index.php/home>), which is affiliated to the International Rice Research Institute. Members of this consortium are organizing a workshop entitled *C<sub>3</sub> to C<sub>4</sub>: A Workshop to Evaluate Strategies for Engineering C<sub>4</sub> Photosynthesis into C<sub>3</sub> Plants* on July 23, 2009, immediately following ASPB's annual meeting in

Honolulu, Hawaii. The workshop will be held at Hilton Hawaiian Village hotel. More information about PB'09 is available at <http://www.aspb.org/meetings/pb-2009/>. An abstract for the  $C_3$  to  $C_4$  workshop can be found at <http://www.aspb.org/meetings/pb-2009/C4toC3workshop.pdf>.