

## GPC News RoundUp August 2013



### News

#### **Sustainable Intensification**

##### **Rice Gene Digs Deep**

Scientists in Japan have discovered a gene that gives rice plants deeper roots can triple yields during droughts.

<http://bit.ly/18aVBMO>

<http://bit.ly/14e8hjK>

##### **Developing Countries Dominate World Demand for Agricultural Products**

According to USDA's baseline projections, developing countries will account for much of the increase in projected growth in global consumption of meats and crops in 2013-22. The developing-country shares of the projected growth include 81 percent for meat, 83 percent for grains and oilseeds, and 95 percent for cotton.

<http://1.usa.gov/15EJyZk>

##### **Soil carbon 'blowing in the wind'**

Australian soils are losing about 1.6 million tonnes of carbon per year from wind erosion and dust storms affecting agricultural productivity, our economy and carbon accounts, according to new research.

<http://bit.ly/195jHtF>

##### **Seeding the future: tapping gene banks to secure our food future**

Thousands of years of crop domestication mean that fewer than a dozen flowering plant species now account for some 80 per cent of the world's diet. Some scientists argue the global food crisis could be solved by re-opening seed banks to refresh crop gene pools and increase diversity.

<http://bit.ly/15IWp5B>

##### **UK & USA scientists collaborate to design crops of the future**

Three teams of UK and USA researchers will begin a programme of novel research to revolutionise current farming methods by giving crops the ability to thrive without using costly, polluting manufactured fertilisers.

<http://bit.ly/1dxZvqb>

##### **Transition towards a Green Economy**

###### **Desert 'carbon farming' to curb CO2**

Scientists say that planting large numbers of jatropha trees in desert areas could be an effective way of curbing emissions of CO2. Dubbed "carbon farming", researchers say the idea is economically competitive with high-tech carbon capture and storage projects. But critics say the idea could have unforeseen, negative impacts including driving up food prices.

<http://bbc.in/17ryYnd>

### **Could Carbon Farms Reverse Global Warming?**

A recent study by German researchers presents the possibility of "carbon farming" as a less risky alternative to other carbon capture and storage technologies. It suggests that a significant percentage of atmospheric CO<sub>2</sub> could potentially be removed by planting millions of acres of a hardy little shrub known as *Jatropha curcas*, or the Barbados nut, in dry, coastal areas.

<http://bit.ly/15p49g1>

### **New Possibilities for Efficient Biofuel Production**

An international collaboration of plant scientists from VIB and Ghent University (Belgium), the University of Dundee (UK), The James Hutton Institute (UK) and the University of Wisconsin (USA) identified a new gene in the biosynthetic pathway of lignin, a major component of plant secondary cell walls that limits the conversion of biomass to energy.

<http://bit.ly/19STrU7>

<http://bit.ly/1dXfCLC>

### **Food Security and Health**

#### **GM rice approval 'edging closer'**

Scientists in the Philippines are weeks from submitting a genetically modified variety of rice to the authorities for biosafety evaluations.

<http://bbc.in/15IWTI>

#### **Let's rally against malnutrition**

It is high time for all to rally against malnutrition. A rally to help people. A rally to help improve the nutrition of all children and mothers.

<http://bit.ly/15EKE7s>

#### **Overwhelming support for Golden Rice received**

Despite the destruction of Golden Rice field Trials in the Philippines, people from across the world have shown their support for this work.

<http://bit.ly/1dtv3f>

#### **Biofortified pearl millet 'can combat iron deficiency'**

Pearl millet bred with more iron through a special breeding process — called biofortification — can address the nutritional deficiencies of children and women in Africa and Asia, two trials have shown.

<http://bit.ly/17rC4vi>

#### **Genetic Treasure Hunting in Sorghum May Benefit Crop Improvement**

A consortium of Australian and Chinese researchers has discovered that sorghum, Africa's most widespread crop, contains vastly more genetic variation than previously realised.

<http://bit.ly/17nCwc>

### **Adapting to Climate Change**

#### **World food security more vulnerable than ever to climate change**

A new study, published in Science, has called for a 'climate-smart food system' to prevent climate change from slowing progress in eradicating global hunger.

<http://bit.ly/1cnYtci>

### **Farmers should use trees to cushion their farms from degradation**

Agroforestry may help to provide climate smart agriculture in East Africa.

<http://bit.ly/12TDwDe>

### **Farmers struggle to adopt climate-smart methods**

Preliminary results from a project aimed at helping Malawi, Vietnam and Zambia make the transition to a "climate-smart" approach to agriculture show that some farmers are struggling to adopt the new methods, while others are finding ways to cope well with climate-change problems like late rains.

<http://bit.ly/16Ttp2E>

### **Researchers discover protein that helps plants tolerate drought, flooding and other stresses**

A team of researchers from Dartmouth University, the University of Aberdeen and the University of has uncovered a protein that plays a vital role in how plant roots use water and nutrients, a key step in improving the production and quality of crops and biofuels.

<http://bit.ly/14K88bt>

### **Investors in agriculture ignore environmental risks at their peril**

A new report on the environmental risks faced by agriculture spells out risk factors for investors and food companies

<http://bit.ly/17rCLkA>

### **Building Resilient Food Systems, Adaptation to Climate Change**

Ecosystem-based adaptation approaches should be mainstreamed and up-scaled to build resilient food systems and adapt to climate change in Africa. This was the declaration made by participants to the 1st Africa Food Security and Adaptation Conference held on 20-21 August 2013 in the UN offices in Nairobi, Kenya.

<http://bit.ly/1dtyF1t>

### **Once and future climate**

Special issue of Science looking at the effects of climate change with a number of interesting reviews including

<http://bit.ly/1cnZqRU>

Climate Change and Cumulative Impacts

<http://bit.ly/1fojJhC>

Climate Change and the Past, Present, and Future of Biotic Interactions

<http://bit.ly/19SWDze>

Climate Change Impacts on Global Food Security

<http://bit.ly/17rIZVr>

### **Knowledge, Data and Resources**

#### **FAO Plant Genetic Resources**

UNFAO plant genetic expert, Kakoli Ghosh, highlights the importance of plant genetic resources in our futures

<http://bit.ly/13ox6cj>

### **Open access to research publications reaching 'tipping point'**

The global shift towards making research findings available free of charge for readers—so-called 'open access'—was confirmed in a study funded by the European Commission. This new research suggests that open access is reaching the tipping point, with around 50% of scientific papers published in 2011 now available for free.

<http://bit.ly/17qAXfj>

### **Other News**

#### **MAFRA seeks convergence of scientific technology and agriculture**

The Korean government is seeking the convergence of scientific technology and agriculture to tide over the current crisis facing Korea's agriculture,

<http://bit.ly/16WCqaC>

#### **Bioversity International and Indian Council of Agricultural Research sign agreement**

Bioversity International and the Indian Council of Agricultural Research (ICAR) have signed an agreement today to improve agricultural sustainability, smallholder well-being and resilience to climate change in India through the use and conservation of agricultural biodiversity.

<http://bit.ly/17oqe3i>

## GPC Bulletin September 2013



### Events

#### **AgriGenomics World Congress 2013**

24-25 Sept 2013

Norwich, UK

<http://bit.ly/18wEPGP>

#### **Plant Based Summit**

19-21 November

Paris, France

<http://bit.ly/15OsX5C>

#### **Borlaug Summit on Food Security**

25-28 March 2014

Ciudad Obregón, Mexico

<http://bit.ly/172lrna>

### Reports

#### **Biodiversity Annual Report**

<http://bit.ly/17ygH7Z>

#### **World Bank Report**

**Turn down the heat : climate extremes, regional impacts, and the case for resilience**

<http://bit.ly/15kXeFP>

## **Funding Opportunities**

### **Royal Society University Fellowship**

The Royal Society invites applications for its university research fellowships. The aim of this scheme is to provide outstanding scientists who have the potential to become leaders in their field with the opportunity to build an independent research career.

<http://bit.ly/18wF3xL>

### **Innovation prize for Africa**

The African Innovation Foundation invites applications for its innovation prize for Africa. This honours and encourages innovative achievements that contribute towards developing new products, increasing efficiency or cost-saving in Africa.

<http://bit.ly/15xkzDk>

### **Harvesting Nutrition**

Secure Nutrition along with GAIN and Save the Children are partnering to create the Harvesting Nutrition contest, which aims to showcase projects from around the globe that have bridged gaps between agriculture, food security, and nutrition.

<http://bit.ly/15xkAag>

### **CAS Fellowship for Postdoctoral and Visiting Scholars from Developing Countries**

The Chinese Academy of Sciences (CAS) Fellowship for Postdoctoral and Visiting Scholars from Developing Countries Programme is designed to enhance scientific cooperation between CAS-affiliated research institutions and academic institutions in developing countries.

<http://bit.ly/19bwfQc>

### **Gates African Studentships**

Three PhD Studentships funded by the Bill & Melinda Gates Foundation in collaboration with Mikochei Agricultural Research Institute. Projects will be offered in the general areas of cassava epidemiology:

1. Epidemiological models for prediction and control.
2. Coupling meteorological and epidemiological models to predict virus and vector spread.
3. Sampling and surveillance strategies.

<http://bit.ly/17hedbM>