QUESTION ON NOTICE
No. 90
Asked on Thursday, 8 February 2007

MR WENDT asked the Minister for Primary Industries and Fisheries (MR MULHERIN)-

QUESTION:

How has the Department of Primary Industries and Fisheries Genetic Research Centre at Biloela contributed to the fight against famine in Africa, Asia and Central America?

ANSWER:

Millions of people in the semi-arid tropics of Africa and Asia depend on sorghum and pigeon pea as staple foods. Improving the natural resistance of these crops to drought, insects and disease has major humanitarian benefits.

The Department of Primary Industries and Fisheries (DPI&F) scientists at the Genetic Resource Centre in Biloela are using 'smart science' to successfully harness Queensland's impressive genetic diversity in wild relatives of sorghum and pigeon pea. These native species have been shaped by our harsh environment and may provide new genetic solutions to the old problems of drought, insects and disease. They may also provide the key to addressing the new challenges of global climate change.

In a 'world's first', Dr Sally Dillon at Biloela has produced inter-species hybrids to transfer genes from wild pigeon pea into cultivated types. In conjunction with Texas A&M University in the United States of America, she also helped produce the first inter-species sorghum hybrid.

Our native pigeon pea has been shown to be extremely tolerant of limited soil moisture and naturally resistant to attack from heliothis and pod borer insects. Our native sorghums may also carry genes for novel grain starch properties to assist our intensive livestock industries. Therefore, the inter-species hybrids produced at Biloela may be the key to transforming both crops and significantly impacting on staple food production in Africa, Asia and the Americas.

The next challenge is to use biotechnology to identify the unique genes that confer superior traits and to target these genes in a concerted breeding effort.

The breakthroughs at DPI&F's Genetic Resource Centre could be the catalyst for an international research project. This work is already well aligned with the Global Crop Diversity Trust, to which Australia provides major funding and support. Together we seek to conserve and utilise crop genetic diversity as a global resource for future generations.