

Information highlights from World Potato Congress, Kunming, China, April 2004

World Outlook

- Potatoes are 4th most important global food crop.
- Average world production is 16 t/ha. All data on European potato industry is at www.europotato.org
- Infrastructure development, seed quality and genetics are major issues in many countries (eg. Russia, South Africa, China).
- Climate change models predict a -10 to +10% change in yield of Tasmanian potato production. Simulated temperature changes in Tas are likely to be -1 to +1°C.
- Breeding potatoes with heat tolerance will be critical for Africa, China, India. Also important to plan for changes in the severity of pest and disease pressure in area with significant climate change.

Production

GE

- Huge potential for GE in potatoes, but currently the risk of consumer backlash is preventing significant progress in this area.
- Conventional breeding is slow, and potatoes are tetraploid with a narrow genetic base. High alkaloid wild types can be problematic in breeding programs.
- Most important emphasis for GE in potatoes should be late blight followed by bacterial wilt.
- High protein "Protato" is being developed, to address consumer interest in high protein diets.
- Since all major agbio companies have withdrawn from GM potatoes due to consumer backlash, research with GM potatoes must be publicly funded. It is likely that 1/3 of public spending worldwide on GM crops will occur in China. China is very proud of the Beijing National Potato Hi-Tech Park, which is a major new facility devoted to biotech in the potato industry.

Late blight

- This is the most serious disease of potatoes worldwide, responsible for 15% of crop loss annually at a cost of \$US3 billion/year.
- Breeding for resistance will be the most important means of combating the disease.
- There is an international group called Global Initiatives in Late Blight (GiLB), but no Australian reps on the committee. See web address <http://web.riu.cip.cgiar.org>

Sustainability

- Speaker on water issues (Ian Makin) noted that the world's current water crisis is about government decisions on allocation of water, especially service delivery and resource management. He said that "water flows to the money, not down the hill". In decisions about water allocation, nature is often neglected. Running out of water for nature is a serious issue in many countries where government decisions are based on population pressures.
- Ian cited a good quote from Kofi Anan "We need a Blue Revolution in agriculture to focus on increased productivity per unit of water. We need 'more crop per drop'." To maintain employment in rural areas, we also need 'more jobs per drop'.
- Prince Edward Island has introduced crop rotation legislation and buffer zone legislation. If farmers do a one day environmental farm plan course, then they are eligible for up to \$35,000 of funding to implement environmental management activities on their farm.

Potato Industry in China

- There are currently 523 McDonalds outlets in China, and number growing quickly.
- Consumption of Western style potato products is increasing dramatically in China.
- China is world's largest potato producer, with 20% of production. 4.5 to 5.0 million ha grown annually.
- Starch production is a major industry in China.
- Everybody is welcome to invest in China's potato industry!