



RICE BREAKTHROUGH

Paddocks, not paddies

By EMMA FIELD

THE most exciting development in Australia's rice industry is an opportunity to grow an aerobic rice culture, which allows more flexibility for rice production.

NSW Department of Primary Industries rice breeder Peter Snell told last week's International Temperate Rice Conference, in Griffith, of the development.

Dr Snell, who is based at Yanco, NSW, said aerobic or non-flooded rice cultures were an exciting step.

International Rice Research Institute defines aerobic rice production when rice is grown in well-drained, non-puddled and non-saturated soils. Dr Snell said using an aerobic rice system would mean growers could use a pad-

dock that was not graded into a rice bay and could be planted on an area used for irrigated cereal crops or row crops, such as cotton.

"It's like any other irrigated cereal, there is no paddy set up ... it is similar to any row crop, but can also be under a pivot or a lateral irrigator," he said.

He said besides using less water, this system would make it easier for growers to include rice in their rotation, as it fitted well with winter cropping as the rice was planted later.

Despite promising trials in Queensland, Dr Snell said there were still a few issues to overcome in the NSW Riverina because of the cooler temperatures.

"We are not quite there with aerobic rice, because the water does provide a buffering for cool temperatures," he said.

Deep water is effective at protecting the rice at the early pollen microspore stage, from cool temperatures, which can cause sterility and devastate yield.

"We still advocate deep water in late January and early February to protect the microspore and the developing pollen," Dr Snell said.

He said one way to solve this issue was to develop varieties that had a shorter growing season and could tolerate the cold better to pave the way for adapting a system that was closer to an aerobic system.

SunRice's research arm, Rice Research Australia, is conducting the first field trials of the late-sowing varieties YRM70 and YRK5 at its Old Coree farm near Jerilderie, NSW.

Dr Snell said YRM70 was a

big medium-grain variety, and a potential replacement for reiziq and could also be used to oversow reiziq if seed was lost to pest such as ducks.

Meanwhile YRK5 was a short-grain rice suitable for sushi, which could be grown in areas that experience cooler night temperatures such as the western Murray Valley.

Dr Snell said other trials at Old Coree used delayed permanent water, which was the "closest we have to an aerobic rice system, we still have standing water in that critical period".

"Our vision is to remove the need for a ponded system and have intermittent irrigation or saturated soil," he said.

"It's never having a standard volume of water that could be lost to evaporation or is deeper than it needs to be."



New ideas: Attendees at the annual rice industry field day at Rice Research Australia's Old Coree research farm near Jerilderie, NSW, where aerobic rice techniques and new varieties were being trialed.
Picture: BRETT NASEBY