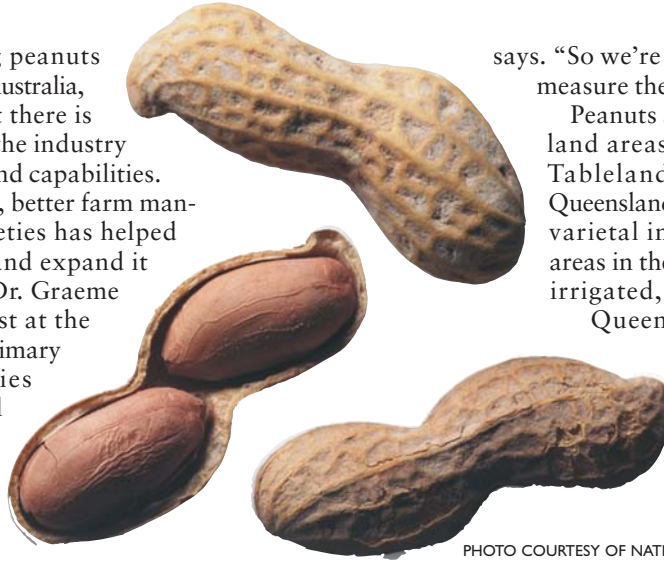


Research Gives Peanuts the Good Oil for Growth

Farmers have been growing peanuts commercially in Queensland, Australia, for more than 100 years, yet there is still the potential to expand the industry well beyond its present size and capabilities.

While research into disease, better farm management and new crop varieties has helped drive the industry forward and expand it into new production areas, Dr. Graeme Wright, principal agronomist at the Queensland Department of Primary Industries and Fisheries (QDPI&F), believes it is oil production that offers the most untapped potential. "Peanuts are really under-utilized in Australia," he



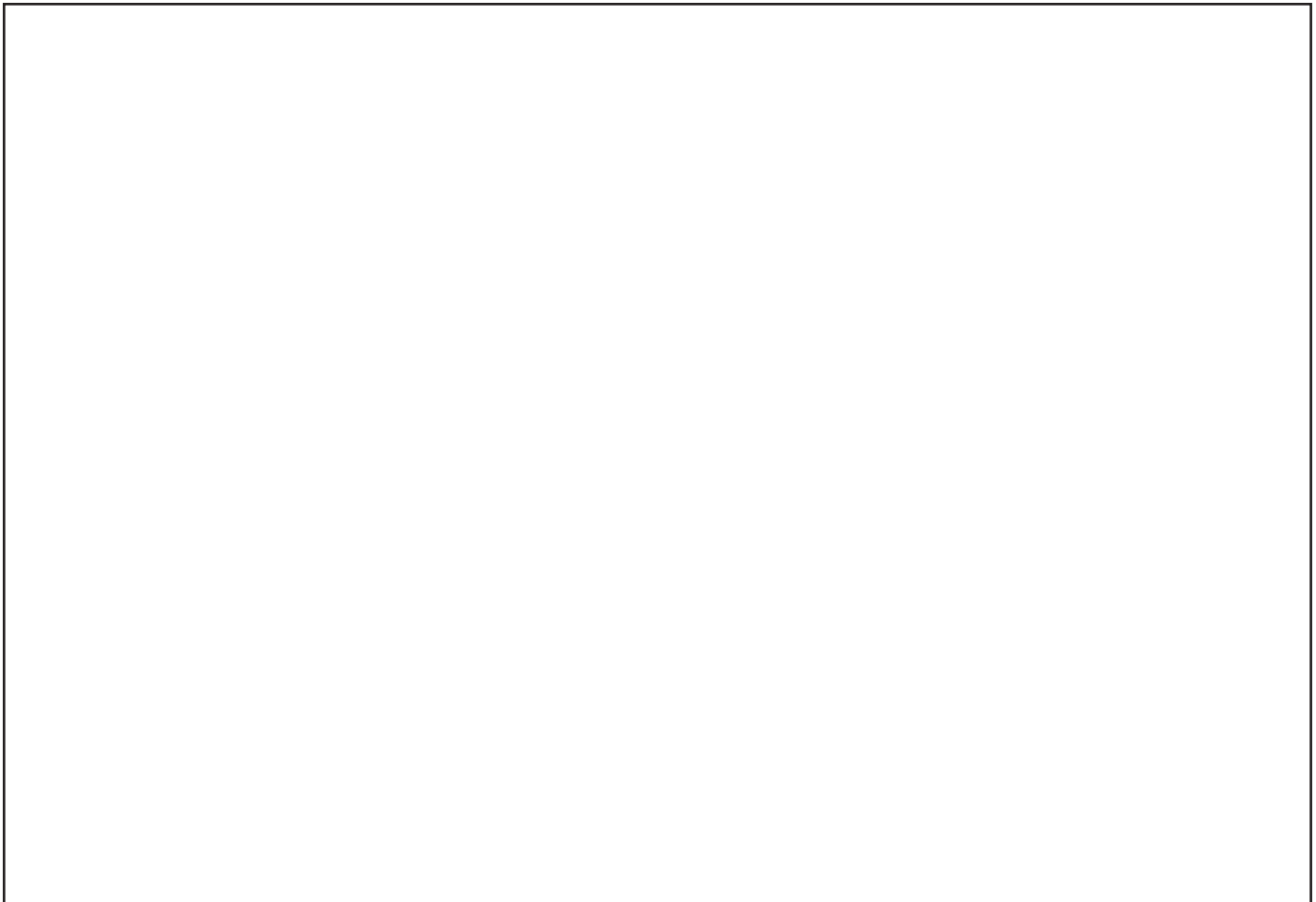
says. "So we're undertaking a scoping study to measure the potential value of peanut oil."

Peanuts are traditionally grown on dry-land areas of the Burnett and Atherton Tablelands, in southern and northern Queensland respectively. However, through varietal improvement, new production areas in the Northern Territory and on the irrigated, coastal sugarcane regions of

Queensland have been established, helping to boost production and strengthen security of supply.

Wright now wants to expand peanut production further and create a profitable

PHOTO COURTESY OF NATIONAL PEANUT BOARD



oil industry: “We plan to assess the potential for establishing peanuts as an oilseed crop in non-traditional production regions throughout southern and northern Australia,” he says. “With the highest oil content of any crop species—ranging between 45 and 53 percent—peanuts offer some exciting possibilities for growers, processors and consumers.”

The scoping study will coincide with the imminent release of ultra-early maturing high-oleic varieties developed by the QDPI&F through Grains Research Development Corporation (GRDC)-funded projects.

High-oleic peanuts have health benefits over conventional peanuts because the linoleic (polyunsaturated fat) and palmitic (saturated fat) fatty acids have been naturally replaced by the healthier oleic fatty acid (monounsaturated fat). They also have up to 10 times the shelf life of conventional peanuts.

“Our ultra-early maturing varieties will give dryland growers more options to spread the production risk under drought conditions, which unfortunately occur with a high frequency in the Burnett area,” says Wright. Early varieties grow for 100 to 110 days, compared to 150 days for other Virginia and runner peanut varieties, and effectively escape severe drought conditions.

“They are lower yielding, but in tough conditions they will give an economic yield. Growers will probably plant both types to hedge their bets. Conventional dryland crops can yield anything from half a ton (metric ton [MT]) to five MT a hectare. These will yield one to four MT a hectare, depending on rainfall.”

Quality Infrared To Lift Quality Assurance

The Peanut Company of Australia (PCA) is testing a near infrared (NIR) scanning system for detecting aflatoxin and other peanut qualities in a bid to cut costs and ensure a better quality product reaches customers.

Kevin Norman, PCA technical manager, says four lamps scan conveyors of peanuts for various qualities. Currently, peanuts are sorted by hand and samples are tested in the company’s state-of-the-art Innovation and Technology Centre, opened in 2003. But once the NIR machine is up and running, it could save the company more than \$1 million a year, while lifting quality. “We’re basically at the stage of training the machine to look for different compounds,” he says. “We are getting very good results, but we still need to improve our aflatoxin scanning.

It is proving to be more difficult than other quality traits because we’re looking for this contaminant at parts per billion levels.” The Australian standard for aflatoxin is 15 parts per billion (ppb). International standards vary from four to 30 (ppb). Norman likens the process to “looking for a tiny piece of glass in the sand on the beach.”

Courtesy of the Peanut Company of Australia (www.pca.com.au).

Wright says new varieties also have enormous potential as an oilseed crop in lowinput farming systems. “Peanuts potentially provide a highly drought-tolerant summer grain legume for a number of farming systems, including cereal, cotton and sugar, which have a special need for a more effective nitrogen-fixing and profitable rotation crop.”

Oil is manufactured by crushing and chemical extraction of kernels, with the meal providing a top-quality stock-feed. The scoping study will determine the market potential for kernel, oil and high-value meal, agronomic suitability and likely profitability of peanuts as an oilseed.

“If we can be sure that the marketing potential exists, then we could have real success with growing an oil crop,” he says. “China has a preference for peanut oil and in five to ten years could be a net importer.”

Olive, canola, and sunflower currently dominate the higher-quality global vegetable oil market, mainly because of perceived and measurable health benefits. However, the health benefits of high-oleic peanut oil, including the potential to reduce cholesterol, could ensure the new peanut oil is also a marketing success.

“Given Australia’s access to cutting-edge peanut genetics, a unique opportunity exists to develop an elite market for high-oleic peanut oil in an already high-value market,” says Wright.

Courtesy of the Queensland Department of Primary Industries and Fisheries, Australia (www.dpi.qld.gov.au) ■

