



LEADING EDGE

Leading Edge, supported by the Society for Engineering in Agriculture and the Australian Centre for Precision Agriculture, provides a local and worldwide window on engineering and PA research.

Agricultural engineering is an 'amazing' profession

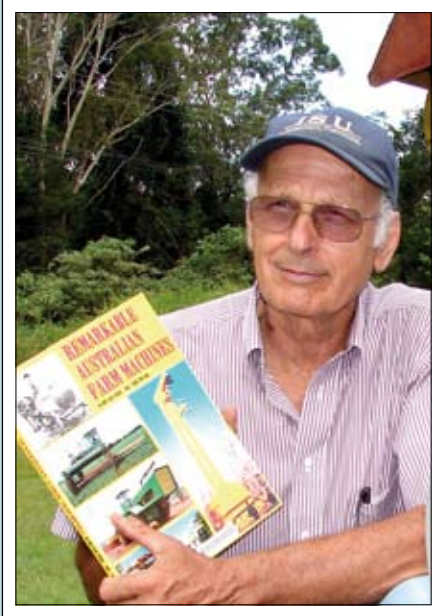
By Gary Alcorn

Clever people — forerunners of today's agricultural engineers — were active in Biblical times mechanising the harvest of grain crops.

They used person-power to knock the heads of cereal crops into a wheeled wooden box bearing spikes and pushed ahead into the crop by a draft animal (see illustration).

This innovation was first reported by Roman historian Pliny around AD 70.

Present day ag engineer Dr Graeme Quick has visited areas in Gaul (today's France), Belgium and Southern Germany) several times in recent years to gather content for his latest educational video presentation, *Amazing Agricultural Machines*.



Dr Graeme Quick is offering a copy of one of his recent books including *Remarkable Australian Farm Machines* to readers who send suitable stories and photos of unique tractors for his latest work.

"I travelled through the old Celtic colonies to capture images related to this epochal 'stripper harvester' which influenced harvester designers 1800 years later," Graeme said.

"It was the direct inspiration for the legendary Australian strippers made in South Australia," he said.

This four-part DVD/video series has four volumes — History and Development, Modern Machines, Outdoor Power Equipment, and Safety, Cost and the Operator.

Volume 1 History and Development (22 minutes) covers the evolution of farming tools from simple hand-powered iron implements to the latest high-tech harvesters and tractors including the 900 hp Big Bud.

"Although the series was prepared primarily for use in schools, I believe farmers and contractors will also learn a lot about the many clever solutions that have been invented to meet the need to produce and harvest more food more effectively as populations grew.

"Other issues covered include a pictorial record of traditional farming techniques from various countries, how labour shortages and the need to lighten the work load on individuals promoted mechanisation," Graeme said.

Volume 2 Modern Machines (25 min) documents the development of today's sophisticated agricultural machines and sustainable agricultural practices to reduce losses, maintain and protect soil structure and fertility.

Precision farming is becoming an industry standard using modern technologies to increase crop yields while protecting soil resources, saving fuel and reducing operator fatigue.

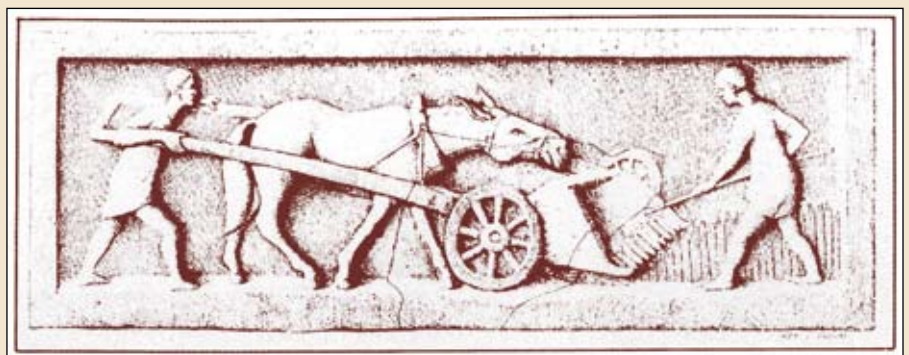
"We cover laser-guided steering, GPS navigation, video-assisted operations and controlled traffic farming. Australian farmers and engineers are up there with the best in developing and adopting these innovations," he said.

...52 ▶

WORLD'S FIRST WHEELED MACHINE

The Roman Vallus or Gallic Stripper — a harvesting machine, as reported by historian Pliny in AD 70, but discredited for centuries.

This drawing is an artist's reconstruction based on stone fragments from Roman sarcophagi found only last century



<51...AN 'AMAZING' PROFESSION

Volume 3 Outdoor Power Equipment (25 min) covers the fastest growing machinery sector.

Engineers are involved in the design of compact tractors, chainsaws, blowers, trimmers, trenchers, turf harvesters and skid steers.

"This whole area of manufacturing has been sustaining farm machinery dealers while large-acreage equipment sales have slowed.

"Innovations such as zero-turn mowers and skid-steers incorporate clever design in the world of small-scale farms, vineyards, sports fields and golf courses," Graeme said.

Volume 4 Safety, Cost and the Operator (22 min) includes some gruesome vision of injuries sustained in farm accidents including pto-related incidents. The role of ag engineers in safety design such as PTO shaft shields is highlighted.

"Farming is one of the most hazardous industries. This segment examines what has been achieved in preventing accidents through smart design.

"Ergonomics — operator comfort, control layout, visibility and rollover protection have been included," Graeme said.

Safety design aspects of a range of machinery including tractors, field machines, ATVs, chainsaws and lawnmowers are examined from the perspectives of owners, employees, manufacturers, government and consumers.

The two-DVD four-part information package, while aimed primarily at educational bodies should prove entertaining to anyone involved in agriculture. It sells for \$A400 and can be obtained from Dr Graeme Quick, ph 07 5494 9920 or email: g.quick@bigpond.com

FREE BOOK OFFER

Graeme has just completed his 10th book *International Harvester Tractors and Equipment in Australia and New Zealand* and is working on his 11th book *Tall* (but true) *Tractor Tales*.

Readers who send him unique stories and photos about tractors that are suitable for this book will be given a free copy of one of his recently-published books: *The Compact Tractor Bible* (MBI, 2006), *Remarkable Australian Farm Machines* (2007), or *Australian Tractors* (2006). These titles are available from Rosenberg Publishing or Dymocks.

Additional platforms released for iTEC Pro

Last year, John Deere announced the introduction of the completely automated system — iTEC Pro (intelligent Total Equipment Control), for 8030 Series Wheel Tractors. Now additional iTEC Pro tractor platforms have been added to the product line-up. Newly approved models include the 8030 Series Track Tractors, 9030 Series Wheel Tractors and 9030 Series Track Tractors.

This exclusive pro module extends the functionality of the GreenStar AutoTrac Assisted-Steering system and the Implement Management system on your tractor. As you approach a headland turn, iTEC

Pro slows down your ground speed, lifts the implement, steers the tractor into the next row and re-engages the implement without you ever touching the wheel.

Growers who use it perform faster, more efficient headland turns with consistency they can't match themselves. The results — more savings, greater productivity and less stress.

The system will help growers reach a new level of precision, once they have experienced it, they won't want to turn around without it.

To learn more stop by your local John Deere dealership or visit www.JohnDeere.com.au



Environmental award

Incitec Pivot Limited took out the Fertiliser Industry Federation of Australia's 2008 Platypus Environmental Award last month.

The award recognised the company's extensive water management works at its Gibson Island fertiliser plant in Brisbane, Queensland.

The project has delivered two important benefits. Firstly, the company has reduced its reliance on potable water in a time of drought. Secondly, the amount of nutrients present in waste and stormwater discharged from the site will be reduced.

FIFA Chairperson, David Ford, acknowledged Incitec Pivot's positive environmental contribution to the Australian fertiliser industry as part of an awards ceremony at the FIFA national conference in Western Australia.



Incitec Pivot staff and contractors involved in the award winning design and operation of the Gibson Island fertiliser plant in Brisbane include (from left) Damien Ziebarth, Garry Kuhn, Marc Habermehl and Peter Vollert.