



FSA Update

FSA Consulting
FSA Environmental
FSA Irrigation
Feedlot Services Australia P/L

FSA Update

July-September 2005

Review of On-Farm Strategies to Improve the Food Safety of Meat

The safety of meat as food is of critical concern to the meat industry. The major food safety hazards in fresh meats are microorganisms that arise from the animals processed for meat, such as *Salmonella* and pathogenic *Escherichia coli*. Over the past decade considerable advances have been made in both food safety systems and technologies for ensuring that meat is safe to eat. It is recognized that food safety needs to be controlled through the supply chain, though most controls over microbial contamination of meat occur in the abattoir. A quality systems approach to food safety suggests that the best approach is to eliminate or reduce contamination to a safe level as early in the supply chain as possible.

The North American industry has recently introduced recommended practices to reduce microbial contamination of livestock. These interventions range from cleaning of water troughs, to direct-fed antimicrobials or chemical sterilants prior to slaughter. The suitability and value of these practices for Australian conditions and the Australian industry is yet to be evaluated. However, there is a risk that large international customers for Australian meat might include these practices in their purchasing specifications. For example, large international customers for Australian meat may take up North American codes of practice into their purchasing specifications. Additionally, some of these practices might provide benefits for Australian



producers and the Australian industry. This project, set for completion October 2005, will identify and compare the recommended practices to reduce microbial contamination to a safe level in the livestock sector in North America with those used in the Australian livestock sector.

For the recommended practices not currently followed in Australia, the project will identify the scientific support for the practices and suggest further investigations that might be needed to prove or implement these practices in Australia. Hence, the project will provide a starting point for the assessment of the value of the practices for adoption within Australia.

For further information contact:
Dr Kaara Klepper on 07 - 4632 8230
Kaara.Klepper@fsaconsulting.net

Inside this issue:

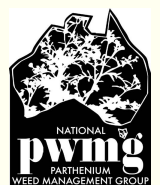
<i>Review of on-farm strategies to improve the food</i>	1
<i>FSA Consulting wins contract to audit vehicle wash-down facilities</i>	1
<i>Best practice guidelines for the Australian meat chicken industry</i>	2
<i>Sugar cane harvester research</i>	2
<i>Staff profile: Nathan Heinrich</i>	3
<i>Staff training</i>	3
<i>Goodbye to Chris & Heather Henry</i>	3

FSA Consulting Wins Contract to Audit Vehicle Wash-down Facilities

Queensland Murray-Darling Committee (QMDC) recently contracted FSA Consulting to undertake an audit and needs analysis of public wash-down facilities in the QMDC region with funding from the Natural Heritage Trust. There is growing concern that weed seed spread is causing increased economic and environmental costs to Australia. The cost of weeds to agricultural industries alone has been estimated at over \$4 billion per annum. The establishment of washdown facilities at strategic locations has become a preventative tool in reducing the potential for weed seed spread and assist in reducing the spread of soil borne diseases.

This project will determine how efficiently and effectively existing facilities in the QMDC region meet Occupational Health and Safety requirements, dispose of and/or store waste material, use water, use power; remove soil and organic material from vehicles and clean the number and range of vehicles required to make a significant impact in weed spread prevention.

The project outcomes will identify the most appropriate location for new wash-down facilities and provide advice on design and maintenance for upgrades and proposed wash-down facilities. It will include a community consultation process led by QMDC that will deliver results of the audit process and identify organisations that are willing to invest in building and maintaining facilities in the recommended locations.



For further information contact:
Rod Davis on 07 - 4632 8230
Rod.Davis@fsaconsulting.net

Visit us @ www.fsaconsulting.net



Best Practice Guidelines for the Australian Meat Chicken Industry

FSA Consulting has been contracted by the Environmental Protection Agency in Queensland to develop a Best Practice Technical Guide for the Meat Chicken Industry in Queensland.

This guide is drawing together elements of:

- ♦ the Manual of Good Environmental Practice contained in the National Environmental Management System for the Chicken Meat Industry developed by FSA Consulting in 2003;
- ♦ the Victorian Code of Practice: Broiler Farms; and
- ♦ best practice planning, technology and systems backed by proven scientific and reliable data.

The guideline is being developed under the guidance of the Queensland Poultry Industry Taskforce. This taskforce comprises representatives of the community, Department of Local Government and Planning, Department of Primary Industries, Department of State Development, Environment Protection Agency, the Local Government Association of Queensland, Queensland Chicken Growers Association, Queensland Chicken Meat Council, Queensland Farmers Federation and the South East Queensland Local Government's.

This Guide is intended to provide the industry, planning and environmental approval authorities and the community with the most recent information on Best Practice Environmental Management applicable to meat chicken farms in Queensland.



For further information contact
Eugene McGahan
07 - 4632 8230
Eugene.McGahan@fsaconsulting.net

Sugar Cane Harvester Research

Bundaberg Sugar Ltd recently contracted FSA Consulting to undertake an SRDC funded project "Modified Rotary-Pinch Chopper System for Improved Harvesting Efficiency".

Bundaberg Sugar Limited believes it is vital to maximise sugar production from every hectare of cane delivered to the mill. They believe that significant gains are possible through the implementation of harvesting best practices that reduce cane and juice losses.

Cane and sugar losses are caused by complex interactions between the crop and the inherent design characteristics of the harvester and also the operational settings during harvesting. The component in the harvester with the highest loss contribution is the feed/train and rotary-pinch chopper system. The feed train delivers whole stalks of cane to the chopper system, which cuts the stalks into segments or billets nominally of equal length. Synchronisation of the feed train rollers and the chopper system reduces these losses.

This project will develop a modified rotary-pinch chopper system which will be designed to cut a range of billet lengths, while maintaining synchronisation between the chopper and feedtrain rollers. The main aim of the project is to achieve better packing of billets in cane bins (to maximise bin weight) while reducing sugar loss through the adoption of chopper/feedtrain synchronisation.

This project has undertaken a series of proof-of-concept trials in Bundaberg to assess the impact of variable length versus uniform length billets on packing density and bin weight. These trials demonstrated that variable length billets treatment has the highest packing density, with the uniform length billets being 8.1% lower – a significant difference.



For further information contact
Rod Davis on 07 - 4632 8230
Rod.Davis@fsaconsulting.net



Staff Profile – Nathan Heinrich

Nathan Heinrich joined FSA Consulting in November 2003 as an Agricultural Engineering student. He completed his studies in November of 2004 and is now a qualified Agricultural Engineer.

During his time with FSA Consulting, Nathan has worked extensively with water budgeting of irrigation water supplies; irrigation monitoring and design; and research into evaporation and seepage losses from on-farm storages. Technical aspects of Nathan's work have involved the installation and use of sensors and data logging equipment and RTK surveying of water storages and feedlots.

Nathan's upbringing on a broadacre cropping property and his extensive and varied first-hand experience in the agricultural environment have equipped him with a keen interest and knowledge in the sector.

Position: Agricultural Engineer

Special Work Interests:

Irrigation / water resources, broadacre cropping, agricultural machinery, recycled organics / composting.

Leisure Time Interests: AFL,

exercising, motor-sport, gardening and tinkering in the shed.



Nathan can be contacted by phoning 07—4632 8230 or 0427—328 010 or on email: Nathan.Heinrich @ fsaconsulting.net

Staff News

Staff Training

Eugene McGahan and Justin Galloway jumped at the opportunity to update their skills recently when they undertook and completed a Certificate IV in Workplace Assessment and Training. The course included four days of training followed by a day of practical assessment involving training small groups and delivering a training session.

This latest training positions FSA Consulting very favorably when it comes to assisting industry and our clients with agricultural and environmental training with Robyn Tucker and Ainsley Smith already accredited as workplace trainers and assessors.

For further information contact:

Justin Galloway

Phone: 07 4632 8230

Justin.Galloway@fsaconsulting.net

Goodbye to Chris and Heather Henry

In late August, FSA Consulting said goodbye to Chris and Heather Henry. Chris is an Extension Engineer and PhD candidate from the University of Nebraska and was a Fulbright Postgraduate Scholar undertaking research in air quality for livestock operations at the National Centre for Engineering in Agriculture, at the University of Southern Queensland in Toowoomba. For Chris, the Fulbright experience has created invaluable relationships with colleagues in government, private industry, and academia that will, no doubt, continue throughout his professional career. Chris worked closely with FSA Consulting during his time in Toowoomba and we wish Chris and Heather all the best.



FSA Consulting

Toowoomba Office

PO Box 2175
(11 Clifford St)
Toowoomba Qld 4350

Ph: 07-4632 8230

FAX: 07-4632 8057

Email:

fsa@fsaconsulting.net



Horsham Office

2 Lewis St
Horsham Vic 3400

Ph: 03-5381 0709

FAX: 03-5381 0719

Email:

Robyn.Tucker@fsaconsulting.net

Visit us @ www.fsaconsulting.net