HUMAN SAFETY IN THE COTTON INDUSTRY

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The problem – the size and nature of the risk

The human resource is the most important resource in our industry. Human resource managers and trainers often repeat these words in such presentations as this.

What is the value placed on the human resources in the cotton industry or in an individual business enterprise?
How is that value established?
In terms of the wages or labour bill?
In terms of the skills input to the enterprise?
In terms of the cost to the enterprise when a worker is injured or dies?

Society at large places a very high value on the workforce, and that is reflected in the Occupational Health and Safety Act in each state, in workers compensation schemes, and in the premiums we pay for insuring against the risk of injury or illness occurring at work.

Injury and illness in the cotton industry

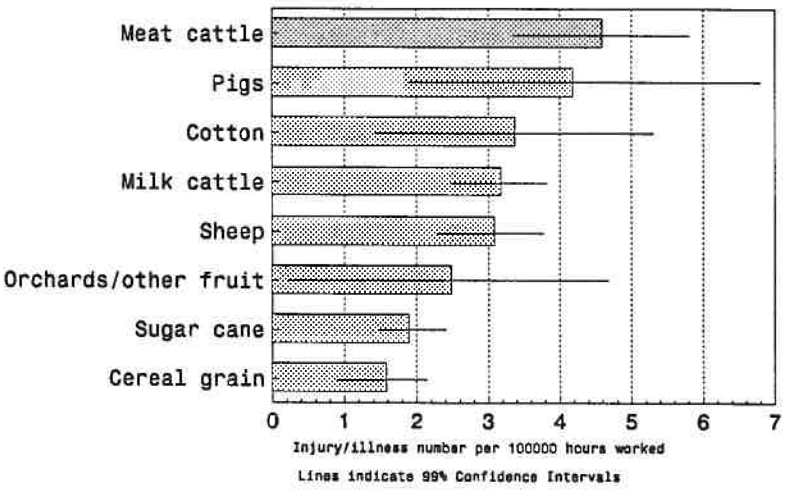
Unfortunately, there remains difficulty in identifying injury rates for various causes in the cotton industry from the workers compensation databases held in Queensland or New South Wales, and is information not available from other sources – hospital admissions, emergency department presentations etc.

A review of available data was undertaken with assistance of Cotton Australia and a number of cotton enterprises that supplied injury data from their company records. This resulted has resulted in publication of Health and Safety Risks associated with Cotton Production (1). Information from this report is presented.

Data from the Queensland Division of Workplace Health and Safety Study in 1996 has provided preliminary information about injury incidence relative to other agricultural industries (2). The study was undertaken by mail out census survey of farms 11 shires in Queensland in the Oakey, Longreach, Ayr and Malanda regions.

It should be noted that chronic injury is under-reported in this data, but will be reflected in workers compensation data.

Figure 1: Annual injury/illness rates per 100000 hours work exposure for differenet ASIC industries
Source: Ferguson 1996



A small number of larger cotton organisations have supplied company accident and injury data that was tabulated to provide further information to define the nature of the injury risk across the industry.

Table 1 illustrates the number and percentage of accidents that occur within each work production phase.

Production Phase	Number of Accidents	Percent
Ground Preparation	19	5.9
Planting	15	4.6
Plant Growth	37	11.4
Picking and Carting	36	11.1
Machinery and Equipment Maintenance	92	28.4
Ginning	81	25
Unknown	44	13.6
Total	**324**	**100**

Table 2 indicates the agents associated with injury in each production phase.

Production Phase	Animal	Chemical	Structure	Vehicle	Fixed plant	Hand tool	Material	Mobile plant	Machine	Motion Posture	Environ	Workshop
Ground Preparation	1	0	0	0	0	0	0	11	1	0	2	1
Planting	0	0	0	1	1	1	0	6	1	2	2	0
Plant Growth	1	3	2	2	4	1	0	11	2	1	4	0
Picking and Carting	0	0	1	1	4	2	2	14	0	0	2	1
Machinery and Equipment Maintenance	1	2	3	5	7	18	9	11	2	5	3	31
Ginning	0	0	0	0	26	2	2	2	4	3	3	1
Unknown	1	1	2	8	3	4	3	5	5	1	6	2
Total	**4**	**6**	**8**	**17**	**45**	**28**	**16**	**60**	**15**	**12**	**22**	**36**

Tables 3-7 indicate the common agents of injury within each broad category

Table 3: Common vehicles involved in injury

Vehicle	Number of Injuries	Percent
Truck	1	5.9
Utility	7	41.1
Trailer	1	5.9
Motorcycle 2 wheel	1	5.9
Motorcycle 4 wheel	5	29.4
Not Specified	2	11.8
Total	**17**	**100**

Table 4: Common mobile farm machines involved in injury

Mobile Farm Machinery	Number of Injuries	Percent
Tractor	9	15
Tillage / Seeder	3	5
Spray Equipment	1	1.7
Picker	3	5
Auger	1	1.7
Forklift	2	3.3
Earth moving implements	2	3.3
Grader	1	1.7
Not Specified	38	63.3
Total	**60**	**100**

Table 5: Common workshop equipment involved in injury

Workshop Equipment	Number of Injuries	Percent
Angle grinder	4	11.1
Ladder	3	8.3
Air compressor	3	8.3
Oxy welder	10	27.8
Not Specified	16	44.4
Total	**36**	**100**

Table 6: Common components of the physical environment involved in injury

Component of the Physical Environment	Number of injuries	Percent
Dust Particle	3	13.6
Vegetation	2	9.1
Water	1	4.5
Fire/Smoke	3	13.6
Ground/Rock/Stump	3	13.6
Not Specified	10	45.5
Total	**22**	**100**

Table 7: Common items of Fixed Plant involved in injury

Item of Fixed Plant	Number of Injuries	Percent
Pump	5	11.1
Generator	1	2.2
Module Builder	5	11.1
Not Specified	34	75.6
Total	**45**	**100**

Table 8 indicates the number of days off work associated with the groups of agents of injury.

Table 8 Number of days off work associated with groups of agents of injury

Broad Agent	0 days	1 to 5 days	6 to 10 days	11 to 20 days	21 + days
Farm Chemicals	4	2	0	0	0
Farm Structure	5	2	0	0	1
Farm Vehicle	11	2	1	1	2
Fixed Plant	29	9	3	3	1
Hand Tools	22	3	2	1	0
Materials	14	2	0	0	0
Mobile Plant	44	10	2	2	3
Other	11	1	2	1	0
Work Motion/Position	10	1	0	1	0
Work Environment	20	2	0	0	0
Workshop equipment	27	7	1	1	0
Total	**203**	**41**	**11**	**10**	7

Cost

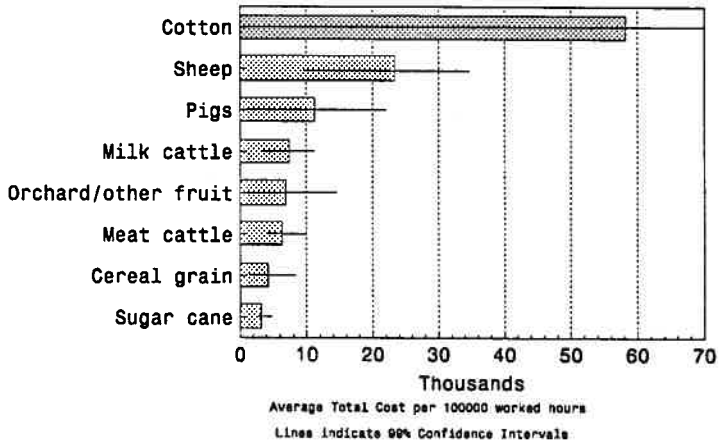
The costs of work related injury and illness in the Agricultural sector is estimated by Worksafe Australia to be between $0.52 and $1.29 billion annually for Australia as a whole. Almost 1.7 million working days are lost over a twelve-month period as a result of occupational injury or illness in the agriculture sector (3).

"If the incidence rate could be lowered to the same rate as All Industries, this would represent an increase of between 9% and 23% in Realised Farm Income."

To these costs must be added the costs of injury/illness of other workers, costs of replacement labour, costs associated with reduced productivity, and for litigation at common law. The cotton industry, along with other agricultural industries, experience high rates of work related deaths, injury and illness.

Ferguson, in his study of farm injury and illness in Queensland, has estimated the average total cost of injury and illness per 100000 hours work exposure in the agricultural industries (2). Again, it should be noted that chronic effects of injury and illness are probably under-reported in this study – such would include exposure to chemicals, noise and musculoskeletal injury.

Figure 2: Average total cost ($) of injury and illness per 100000 hours work exposure for for differenet ASIC industries
Source: Ferguson 1996



While the total cost to the cotton industry cannot be established from this data, costs of poor occupational health and safety performance is important, and is likely to become more important with planed changes to workers compensation arrangements in New South Wales.

Legal issues

In addition to the costs associated with injury and illness claims, cotton growers need to be aware of their obligations under occupational health and safety law, and associated regulations in each state. Prosecution for breaches under these acts can also be costly.

Employers are required to ensure the health and safety of their employees and visitors to the workplace, to provide safe systems of work, to provide the necessary instruction, information and supervision to ensure safety, and to maintain a safe working environment.

More specific requirements are laid down for plant and equipment, hazardous substances, and noise.

The solution

Farmsafe Australia is working with individual agricultural industries have been establishing industry-wide occupational health and safety strategies and plans aimed at improving OHS performance through provision of relevant management resources and training in OHS risk management skills.

This has involved the following steps:

- Defining the key hazards and risks resulting in injury and illness/ costs to the industry
- Preparation and piloting of on-farm audit/checklist tools
- Defining OHS competencies for each OQF level
- Preparing guidance notes describing industry best practice for managing risk for specific hazards
- Piloting and running *Managing Farm Safety* training courses for owners/managers
- Evaluation of the program
- Research into issues where information regarding risk or effectiveness of control options

To date, the following industries have participated in the program, and have developed customised OHS risk management resources and guidelines.

- Sheep industries
- Dairy industry
- Grains industries
- Viticulture

The cotton industry is well placed to develop its industry-specific strategy and plans for improving OHS performance.

Best practice in OHS risk management

Best practice in OHS risk management is now essentially defined by the Farmsafe Australia program – essential elements for adoption of OHS best practice include:

1. Hazard identification
2. Risk assessment
3. Risk control, according to the hierarchy of control effectiveness, and including short term and long term options
4. Effective OHS induction and training
5. Screening to identify workers at risk

The Farmsafe Australia program has produced relevant management tools to assist employers in each of these areas. The tools are based on industry specific data, industry experience, enterprise cash flow and current OHS legal obligations.

Training opportunities

The *Managing Farm Safety* 2-day course has been produced, piloted and customised for individual industries. It is an accredited course, and meets requirements under the revised competencies for the industry.

Each state has established its Farm Safety Training Centre, and instructors have been trained and licensed to deliver the course. In New South Wales, moves are being made to derive workers compensation and accident insurance premium reduction for those employers who have undertaken the course and who have evidence of a Business Plan addressing OHS risk.

In summary

The cotton industry has begun important work to define the OHS risk in the industry, and has signalled its ongoing involvement in development of industry specific guidelines for growers. This is in addition to its research commitment, particularly in the area of pesticide exposure, which must be ongoing.

Producers are strongly urged to participate in this program.

References

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3. Worksafe Australia. 1995. *Occupational Health and Safety Performance Overviews, Selected Industries. Issue No 9 – Agriculture and Services to Agriculture Industries*. Australian Government Publishing Service. Canberra