

**If you don't know what you
are looking for,
you are never going to find it**

**Dr. Scott McCoombe
Lecturer NCFH**

What's the problem?

We all accept:

- > Sub-optimal health outcomes in Agricultural communities
- > Injury, physical illness, mental illness

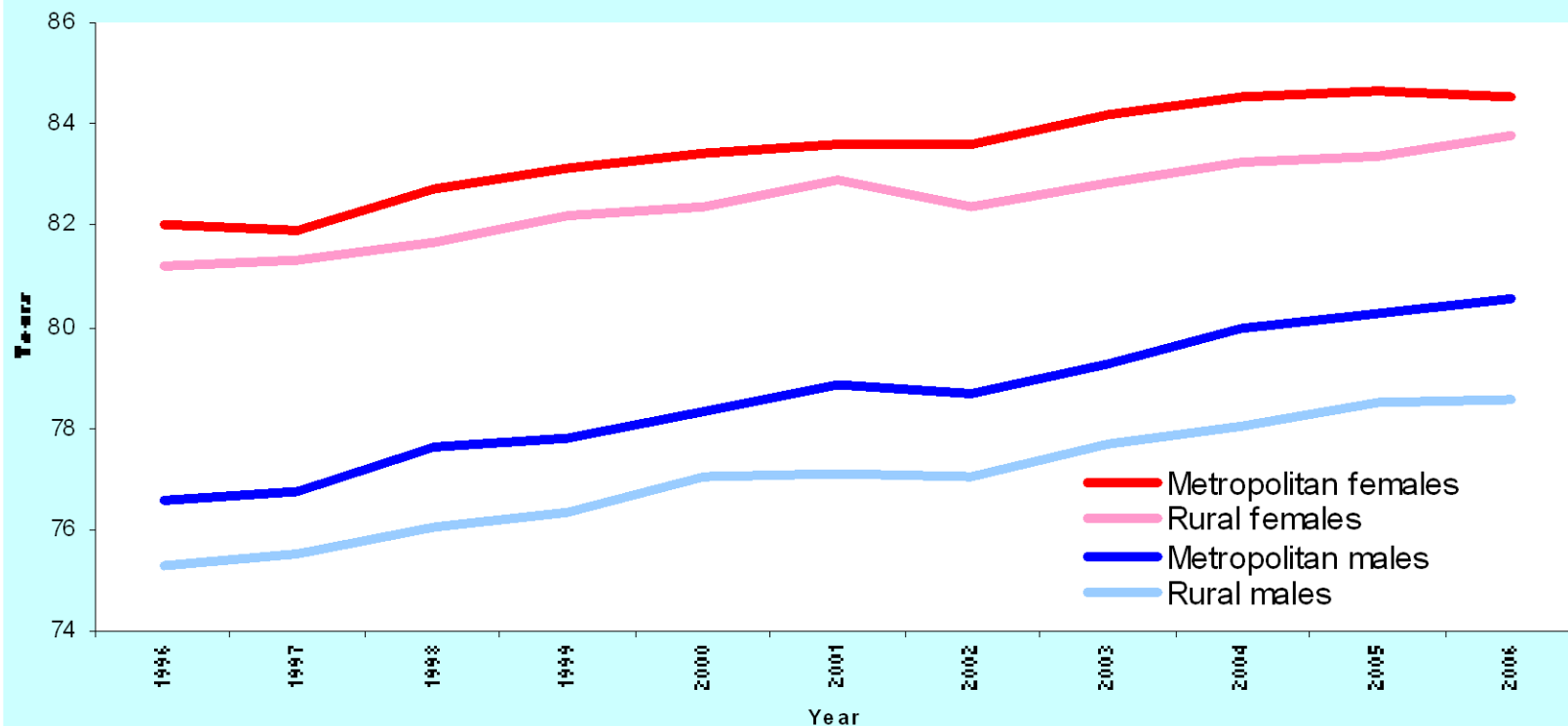
Health inequity caused by:

- > Lack of health and safety literacy – farmer
- > Access to clinical services/specialists
- > Limited community well-being programs
- > Inadequate health provider training
 - > Lifetime experience – few cases/year
 - > Huge diversity of conditions
- > Environmental factors



Rural Health?

**Life expectancy at birth by sex
in metropolitan and rural LGAs, 1996-2006**



Most injuries and deaths are avoidable or preventable

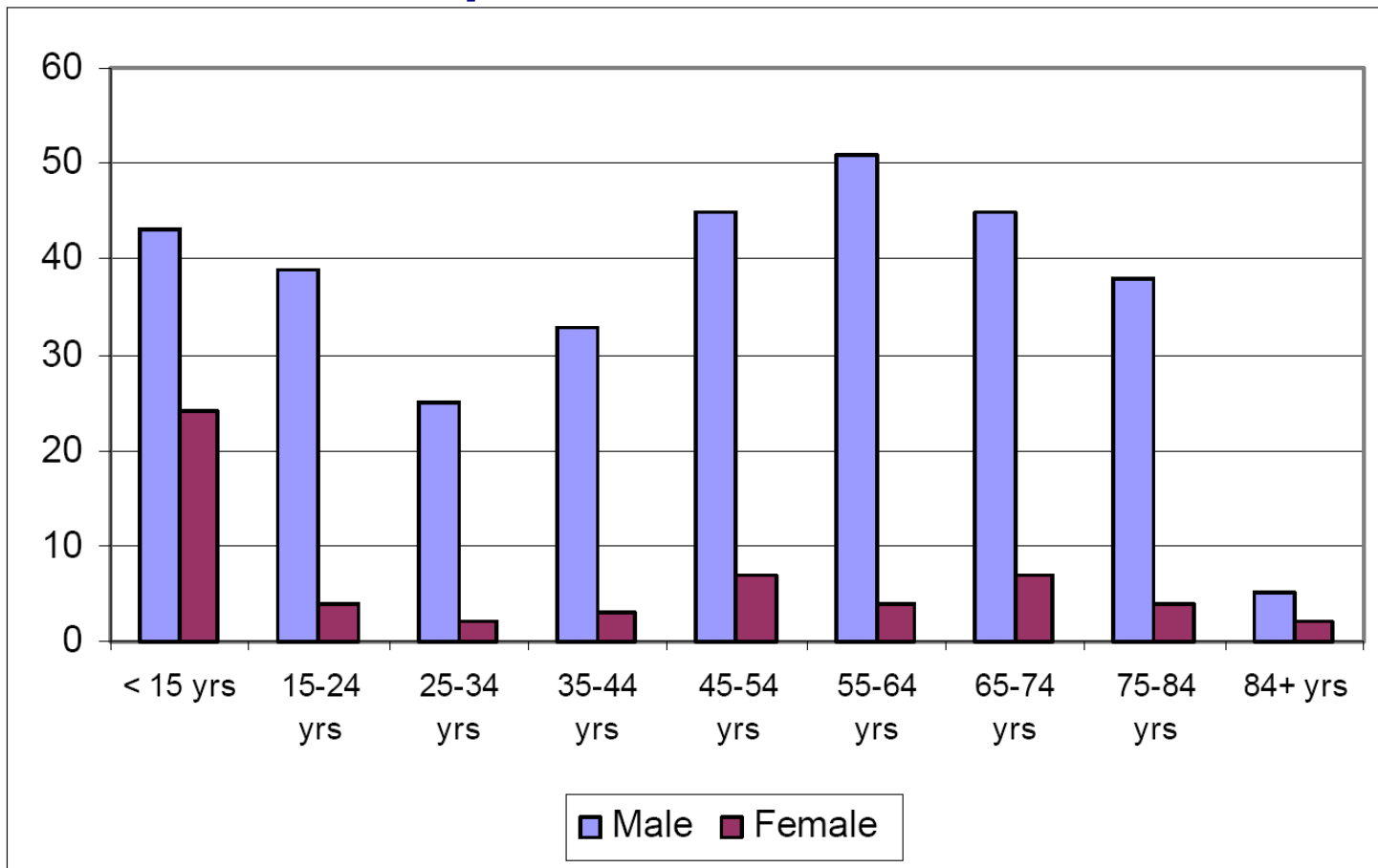
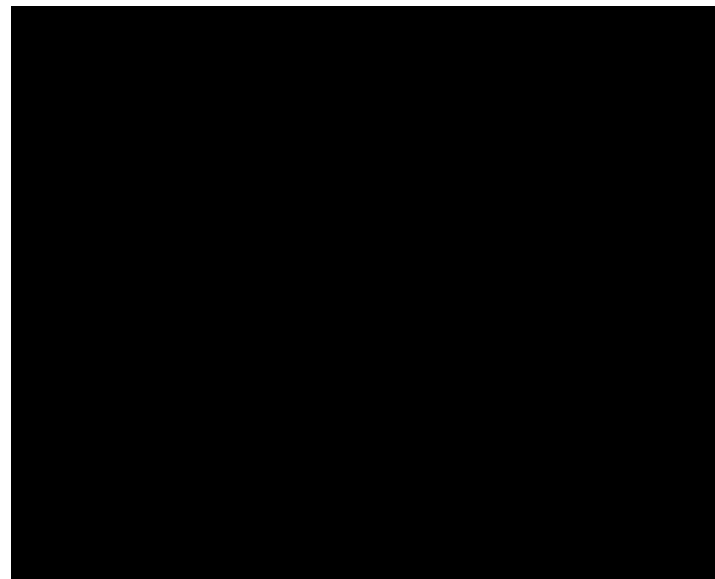
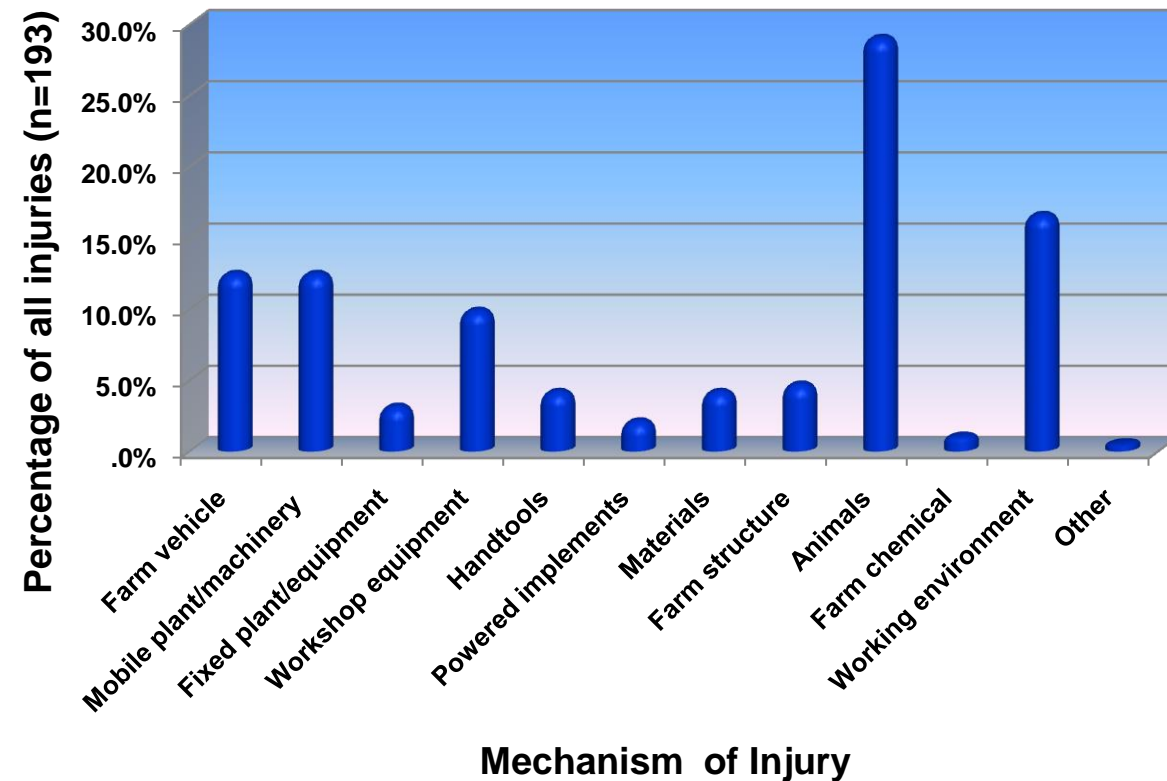


Figure 5: Number of on-farm deaths by age. Australia 2001-2004

Source: NCIS database

SFF Results

Farm injuries



A dangerous life?



Improvement requires a blanket approach

Improve services

Up-skill HP's

Remove dangers

Legislation

Policy

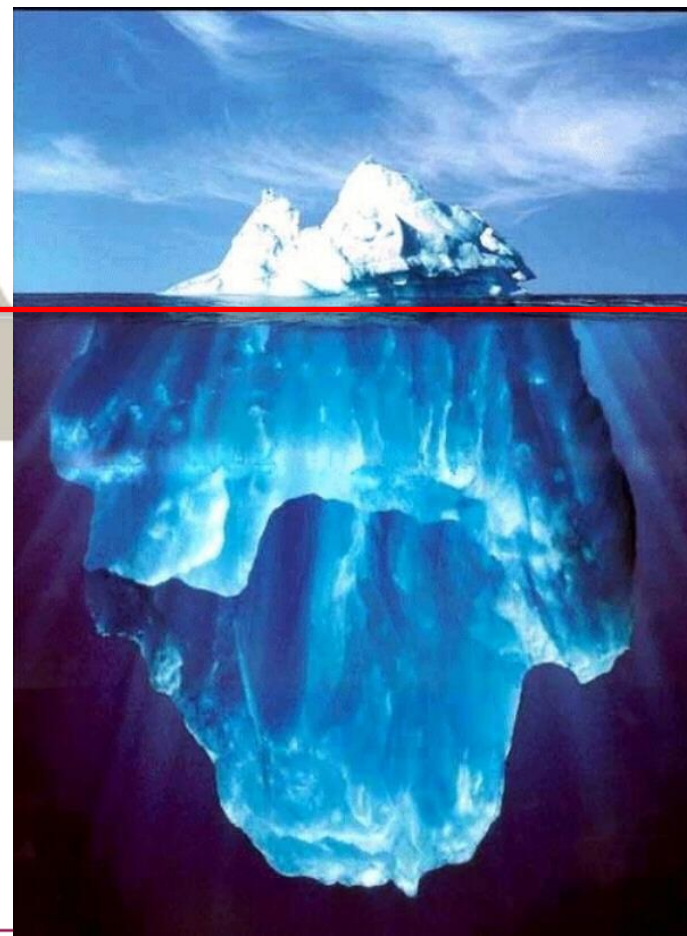


Prevention

Community education

Health promotion

Champion wellness



Farmer Health snapshot?

Things we need to look for.

5 Agricultural medicine problems in 5 minutes

1. Zoonoses
2. Cancer
3. Pesticides
4. Trauma
5. Mental illness



1. Zoonotic disease

70% of emerging or re-emerging infections are zoonotic or vector-borne

- > Difficult to diagnose
- > Very common
- > Many different types
- > Brucella
- > Anthrax



- > What percentage are properly diagnosed?

H5N1 – Bird Flu

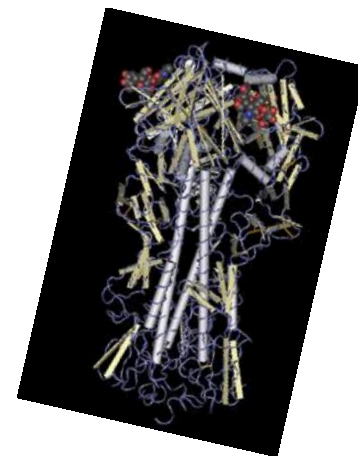
- > Highly pathogenic avian influenza
- > 2005-2008 outbreaks - media
- > Type A highly pathogenic – 60% fatality
- > Culling of hundreds of millions of commercial birds



H5N1

- > In 2003, Robert G. Webster - "The world is teetering on the edge of a pandemic that could kill a large fraction of the human population"
- > 2005 UN predicts up to 150 million deaths.

RESULT???



- > 263 deaths worldwide – limited human:human
- > Most close contact with sick/dead birds (WHO)
- > No evidence in Australia

2. Cancer

The following are more common in Rural Australia:

1. Leukaemia/Non-Hodgkin's lymphoma / Multiple myeloma)
2. Skin / lip
3. GIT (Stomach)
4. Urological (Prostate)
5. Brain and Soft tissue sarcomas

WHY?



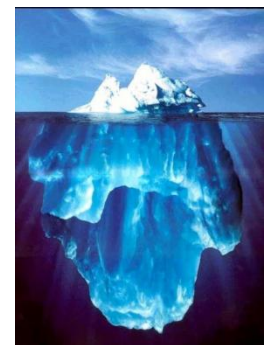
3. Pesticides

- > Greatly improve production
- > Many have health impacts
- > Choose safer options
- > Be aware of exposure signs
- > Long term effects

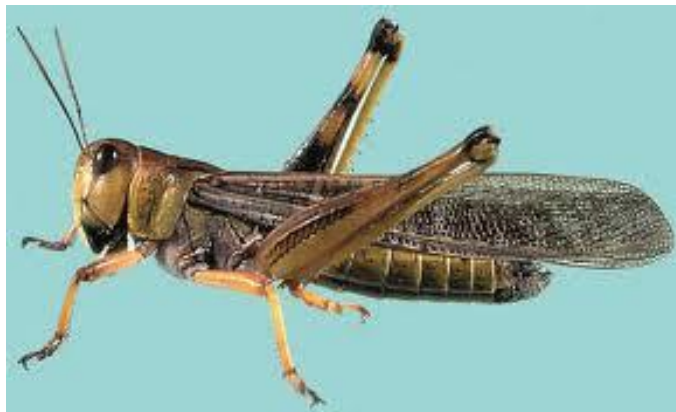


Pesticide type	Accidental n	Intentional n	Total hospital separations	%
Organophosphate/carbamate	130	69	388	41.1
Halogenated insecticides	10	2	27	2.9
Other insecticides	22	10	52	5.5
Herbicides & fungicides	29	24	103	10.9
Rodenticides	59	60	202	21.4
Other pesticides	20	11	63	6.7
Pesticides unspecified	32	19	109	11.5
Total	302	195	944	100

Source: Harrison & Henley 2003, AIHW National Injury Surveillance Unit



Organophosphate action and toxicity



- Rapid dermal absorption but they
- OP's bind cholinesterase enzymes irreversibly
- Unregulated Acetylcholine stimulation
- Acute toxicity symptoms of hyperactivity, tremors, convulsions, and eventually death.
- Sweating plus bradycardia
- Difficult to treat
- Long term effects
- Common method of suicide

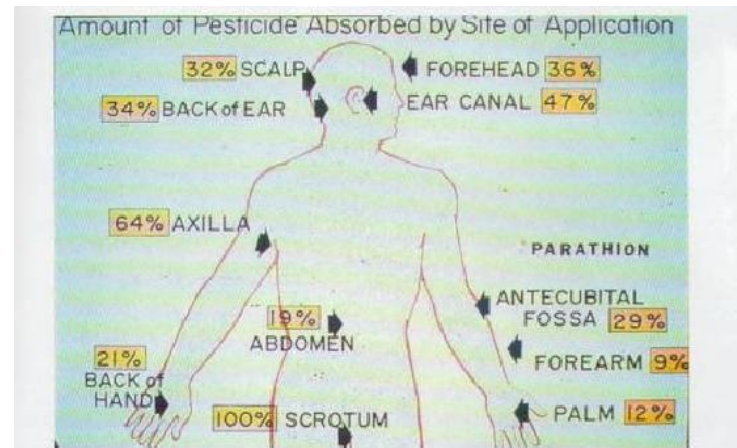


Figure 6.2. The most common systemic exposure to pesticide is through skin contact. Skin absorption of organophosphate pesticides is especially efficient in areas of thin skin with high blood supply.

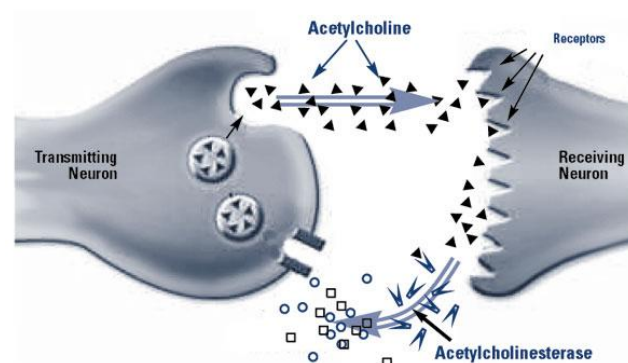


Fig. 1. After signalling, acetylcholine is released from receptors and broken down by acetylcholinesterase to be recycled in a continuous process.

Trauma - Chainsaw



Trauma - Gudair



PTO



Motorbikes & 4 wheeler bikes



~15-20



Mental illness

- > Rural 10% more likely of lifelong MI
- > Substance abuse
- > Suicide – much more common in Agriculture

Table 8: Intentional self harm fatalities of male farmers and farm workers, by occupation and age group, Australia 1999-2002 (number and age standardised fatality rate* per 100,000 employed in agriculture)

	Intentional self harm		Rate /100,000	
	15-54 yrs	55+ yrs	15-54 yrs	55+ yrs
Farmers & farm managers	119	109	36.7	54.4
Farm workers	97	9	20.7	17.1
Total	223	112	27.1	44.0

Source: ABS Mortality Data (HOIST), January 2006.

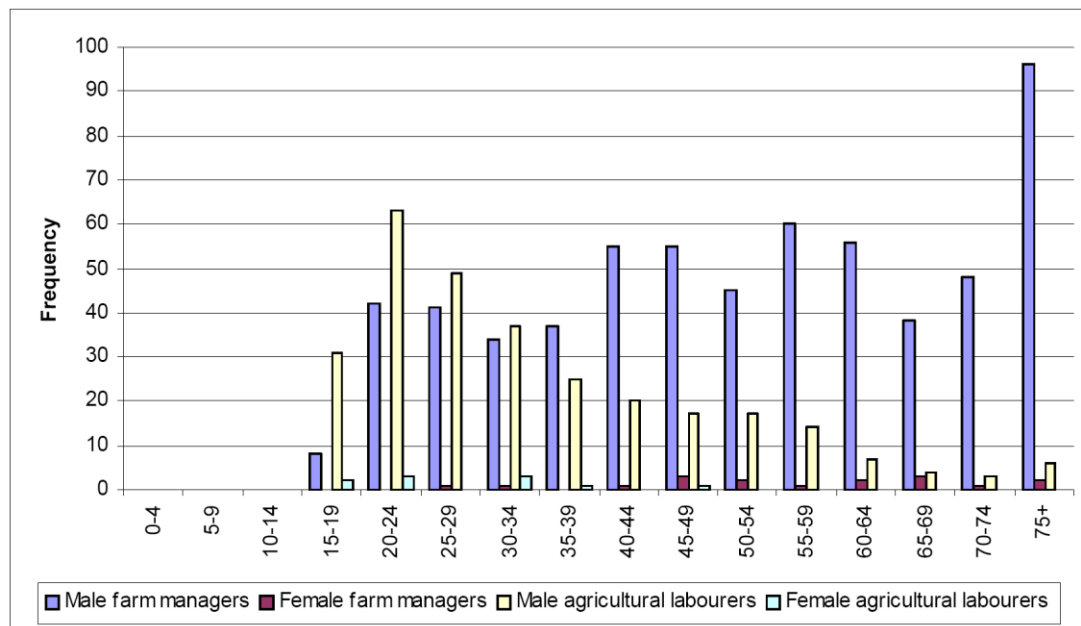
*Notes: Occupation codes used include 1400 (Farmers & farm managers) and 8200 (Agricultural labourers & related workers). *Age standardised rate based on 2001 ABS Census Occupation figures (agriculture and horticulture).*

Suicide

- > More common in agricultural workers
- > More in tune with life/death cycle
- > Know how to carry it out effectively
- > Made to look like 'accidental death' for insurance
- > Range of means available
- > Isolation – reduces possible intervention - facilitates efficiency



Figure 13: Number of suicides for farm manager and agricultural labourer classifications by age group and sex, Australia, 1988-97 (n=621)



Source: Page & Fragar (2002) *Suicide in Australian Farming*.

Note: 'Australian (Males)' is the age standardised rate per 100 000 provided for reference purposes (ABS, 1998).

Just a sample



Who can solve it – You?

- > Doctors, mental health professionals and nurses
 - > Health equity - need more
 - > Farmers being at higher risk, need more services than urban population
 - > Reward (financial, lifestyle) and up skill
- > Allied Health
 - > Need more
 - > Focus on prevention and wellbeing
 - > up skill and be Ag. specific



Who can solve it?

> Ag. Professionals

- > First port of call, existing relationships
- > Can deliver health messages in a comfortable setting
- > Health and safety needs to be at the core of farming decisions
- > Ag. Professionals need to know what to look for

Health and safety messages are more effective when delivered by Ag. Colleagues, friends and family.

Know what to look for?



Agricultural Health and Medicine training

- > February 28th – March 4th 2011
- > Hamilton Base Hospital
- > 5 day intensive training
- > Part 1 of a 4 part Grad Cert program
- > www.farmerhealth.org.au

TOPICS

- > Sustainable Farm Families
- > Health Checks practical
- > AgriSafe
- > Ag. PPE
- > Skin conditions incl. cancer
- > Zoonoses
- > Metabolic syndrome
- > Hearing & eye injuries
- > Ag. cancers
- > Musculoskeletal
- > **Occupational history**
- > Farm trauma
- > Pesticides
- > Vet chemicals
- > Respiratory Health and PPE
- > Mental Health and Suicide
- > Addiction and alcohol



Healthy and Sustainable Farming communities

- > Promoting healthy farming life
- > June 20th-24th, 2011
- > Hamilton Base Hospital
- > 5 day intensive training
- > Part 2 of a 4 part Grad. Cert program

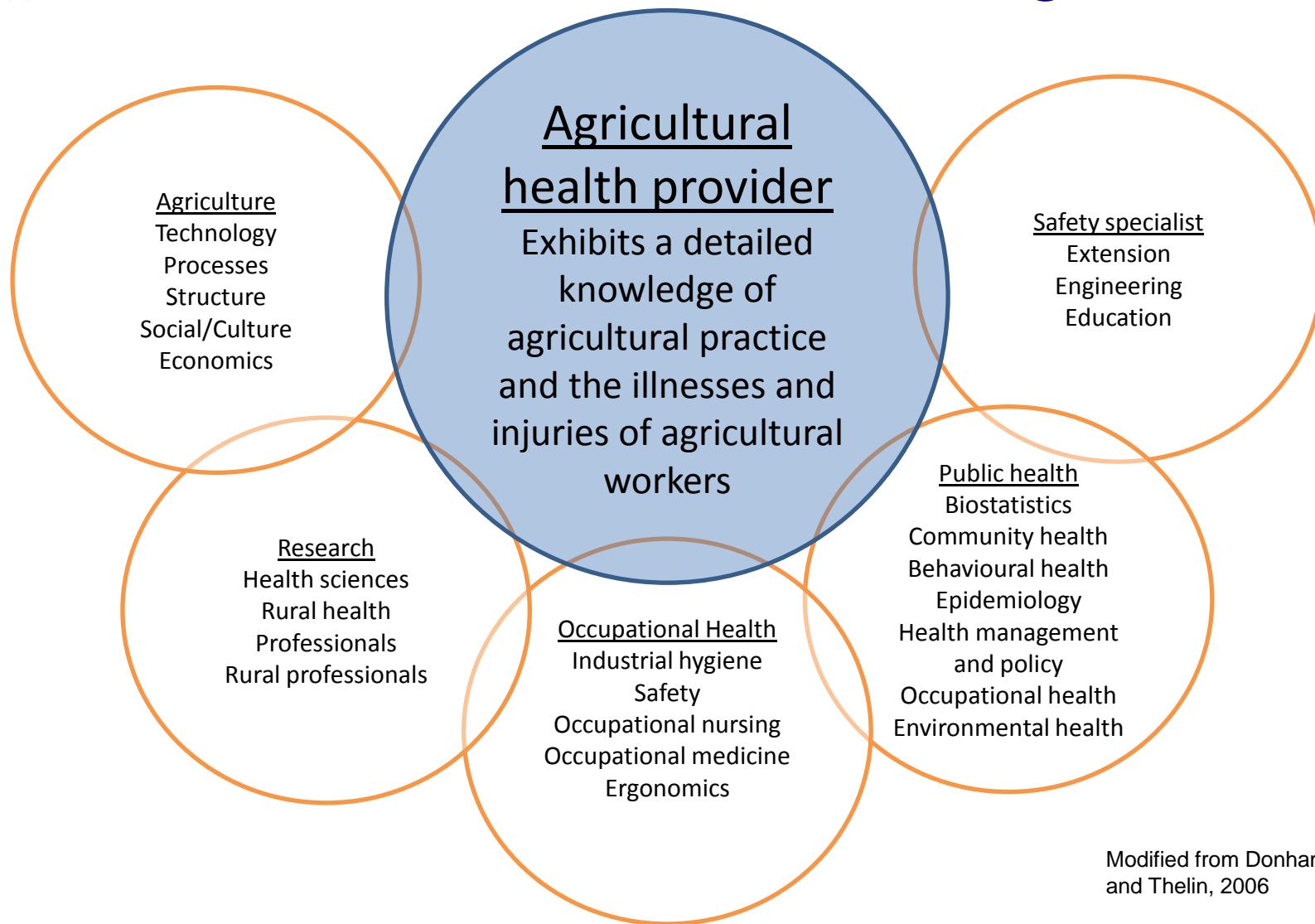


TOPICS

- > Rural and remote health
- > Aboriginal and minority workforce health
- > Health decisions/ healthy towns
- > Diabetes
- > CVD
- > Diet, Cholesterol Salt
- > Health promotion planning and the environment
- > Rural health literacy
- > Ag. OH&S
- > Rural Emergency Medicine
- > Climate influences on Health
- > Biosecurity
- > Rural GP's
- > Worksafe/Farmsafe/Agrisafe
- > Rural networks
- > Rural Policy - getting it to work

- > Parts 3 and 4 completed by research or electives

What farmers are looking for?



Modified from Donham
and Thelin, 2006

scott.mccoombe@deakin.edu.au