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Tasmanian Quad Bike Safety Taskforce

Dear Taskforce members,

Re: Quad bike safety Tasmania

The following comments are provided from an organisational perspective to assist in informing the Taskforce.

Each of the questions raised has been addressed where possible, with responses provided focusing on the agricultural sector.

1. Increasing rider awareness of risks

What do you believe are the best ways to communicate to quad bike users about risks and safe use practices?

Response

This would require locally based research to gauge the most effective mechanisms in Tasmania – it would also be necessary to examine variations by agricultural and recreational user preferences.

What do you think are the key safety messages for quad bike users?

Response

Messages **MUST** be based on the hierarchy of controls as per the relevant WHS Regulations. The key messages should be - (a) seek a safer alternative vehicle; (b) if still choosing to use a quad, then ensure a Crush Protection Device (CPD) is fitted; (c) Administrative Controls - ensure training, induction and rider supervision (strictly no passengers of any age, no loads/spray tanks and no children under 16 riding quads of any size); (d) use of a suitable helmet and other PPE; (e) alcohol use is an issue predominantly within recreational use (not in agricultural production).

In your experience, what are the most prevalent risk factors associated with the use of quad bikes?

Response

There is extensive information available on this issue, however in summary - the major risk factor is the use of the vehicle itself for tasks that are not fit for purpose - hence the focus on alternative vehicles. Subsequent to that, if quads continue to be used the major risk factors for fatal incidents are: (a) Age - both older (50+) and younger persons (<15) (b) Loads - including spray tanks, trailers and passengers (c) Head injury (helmet compliance); (d) alcohol use.

2. Improving rider skills

Do you think training should be mandated (legally required) in some way?

Response

Although training is often touted as a solution (or a part thereof), there is little to no empirical evidence to suggest that it will make a difference to injury rates or severity. While it can enhance knowledge and awareness, the translation of this to reduce injury has not been demonstrated. Indeed, emerging evidence from training programs for two wheel motorcycles (which has been more thoroughly assessed), reinforces the lack of effectiveness and suggests that crash risk may in fact be increased in some individuals as a result of training (Ivers et al 2016). Further information on the lack of effectiveness of approaches that have focused on training in different jurisdictions, can be provided to the Taskforce on request.

With regards to licensing, quads in a work-context are deemed as “plant”, however if the designation was changed to “High Risk Plant”, then a formal licensing requirement would be obligatory. However, a high risk work licence is generally required where there is significant risk to other workers and/or the public (e.g. crane, forklift). This is typically not the case with quads and whether they could be classified as “high risk” in this context is unclear. Furthermore, such an approach drawing on high risk plant requirements would only have applicability in a work-context. An additional system would be required for recreational users and the issues of enforcement and management of these requirements would prove challenging. If one is to draw on the hierarchy of controls as a model to manage risks (regardless of whether use is occupational or recreational), then training and certification continues to be at the lower end of the hierarchy. While training and potential certification may form a component of an overall approach, without addressing issues higher within the hierarchy including vehicle selection and engineering controls, the potential benefits of training will be restricted. As has been noted:

“While education and law enforcement approaches may eventually help to create a safety culture around these vehicles, they are resource-intense and only manifest results over a long period of time. This makes engineering approaches to improve vehicle safety particularly critical and time-efficient.” (Jennisen & Denning, 2014)

What do you think are the barriers to greater numbers of riders using training courses? How could these be addressed?

Response

There is a perception that quads are simple vehicles to ride and control. This is reinforced when individuals see inexperienced children operating these vehicles and the actual “value” that a training course will provide above and beyond training that can be conducted by farmers on-site with staff.

It is worth noting that the USA has had “free” training available for new purchasers since 1988 as part of the Consent Decree which required manufacturers’ to provide this training - however fewer than 10% of riders have been trained in the subsequent nearly 30 year period (Vitrano, 2013). More recent feedback from Queensland and New South Wales, would also suggest that it is difficult to interest persons in training even when costs are subsidized.

Finances are always limited in any program and given the lack of evidence supporting the efficacy of training (and its low status in the hierarchy of controls), it would be logical for the taskforce either not to invest in this aspect or to do so only with significant caution. Further, if the industry itself denotes training as being so critical and it provides it free of charge in the US (as a requirement of the Consent Decree), why does it not also replicate that in other countries including Australia?

3. Greater Rider Protection

Response

In your experience, is there a high prevalence of quad bike users wearing helmets?

There is a lack of validated data on this question in Australia however our estimate for agricultural production nationally would be in the vicinity of 20%. Notwithstanding this, we believe there has been a steady improvement in compliance in recent years.

What would encourage greater use of helmets?

Response

We are aware that approximately one-third of fatal injuries involve the head and reinforce that helmets should be used when riding a quad. What is of issue is the type of helmet that is required. Consistency of messaging is important and is currently lacking.

In Australia, the proposed helmet requirements for quads are centred on the use of Australia New Zealand Standard AS/NZS 1698 - Protective Helmets for Vehicle Users. However, to our knowledge there are no known scientific principles underlying the adoption of AS/NZS 1698 (particularly as it relates to use in an agricultural work context). In our view, the proposed requirement for AS/NZS 1698 appears to have been driven by several influences:

- (a) a relatively simple fall-back position for the Work Health Authorities to mandate and enforce an existing Standard
- (b) the emphasis on the USA market by manufacturers where the predominate use is recreational (see also (c) below)
- (c) risk-averse manufacturers seeking to cover as many potential legal issues as possible and
- (d) vested interests of motorcycle helmet manufacturers/distributors.

Globally, the requirements for helmet Standards seem equally unclear. To our knowledge the only quad specific standard that exists is that from Standards New Zealand NZS 8600:2002. For those states in the US with regulations, they tend to require U.S. Department of Transportation (DOT) approved helmets for on-road use, but this is the lowest level of standard approval and may not necessarily meet American National Standards Institute or SNELL recommendations. In contrast, the United Kingdom proposes several Standards depending on circumstances (risk assessment) as being appropriate for quad use (equivalence) -

“Helmet types suitable for ATV operations, depending on the circumstances, are motorcycle helmets, equestrian helmets, specialist ATV helmets, cycle helmets and mountaineering helmets. All helmets should be manufactured and tested in accordance with the current relevant EN/BS standard, have a chinstrap and be capable of being used with suitable eye protection. The type of helmet chosen should be based on an assessment of the circumstances in which the ATV will be used, eg the types of surface travelled over and anticipated speeds.” (UK Health & Safety Executive, 2013)

These standards include motorcycle helmets to BS 6658:1985 or UN ECE regulation 22.0, equestrian helmets to BS EN 1384:1997, including specialist ATV helmets, bicycle helmets to BS EN 1078:1997 and mountaineering helmets to BS EN 12492:2000.

While cognisant of the fact that different countries have alternate standards, the Australian distributors insist on AS/NZS 1698 yet the very same manufacturers as partners in the European ATV Safety Institute, appear happy to openly promote a more flexible light weight standard in agriculture and forestry. (European ATV Safety Institute, 2015) These issues clearly reflect the lack of scientific rigour in this area and are likely to negatively impact on compliance with use.

What is currently a barrier to the wearing of helmets?

Response

It is generally accepted that heat (particularly when quads are used at low speed) and helmet weight, are issues impacting on compliance with use. There are also potentially issues related to vision and hearing, though anecdotally less credence is given to the latter two factors. There is good evidence from other areas (equestrian) that even in the hot climes of northern Australia, well ventilated equestrian helmets are no hotter than a standard Akubra. (Taylor et al. 2008)

Would you support the creation of an Australian Standard for quad bike helmets?

Historically, a Draft Interim Standard for ATV Helmets for on-farm occupational use developed by a subcommittee of the Standards Australia technical committee (CS-076) was circumvented in 2007. The purported issue was that:

“... ATV helmets will be confused with AS/NZS 1968 (sic - 1698) motorcycle helmets and will be misused by the farming community and this will create problems in implementation of this ATV standard for the relevant jurisdictions.” (Nawella, 2007)

The basis for and validity of such concerns are unknown, however Farmsafe Australia which was represented on this subcommittee was strongly in favour of the Draft Interim Standard as this would assist in ameliorating the issues with heat, vision, hearing and helmet weight consistently raised by producers in relation to AS/NZS 1698.

Given the lack of a specific quad helmet Standard and the limited research base in relation to helmet use in Australia, it is recommended that an equivalence approach be adopted. This would allow helmets meeting or exceeding the NZS 8600:2002 or those advocated by the UK HSE to be used as an interim measure in the workplace while further research is completed. (UK Health & Safety Executive, 2013; Standards New Zealand, 2002) We believe several existing Australian Standard

helmets would also meet similar requirements e.g. equestrian (AS 3838:2006) and cycling (AS/NZS 2063) may comply, however this would need assessment and clarification.

The use of any helmet should be based on a risk assessment of the work practices undertaken, as in some instances it is likely that an AS/NZS 1698 helmet is required. It is our contention that this equivalence approach will increase compliance with helmet usage. The fundamental issue is getting helmets on heads and irrespective of the Standard applied, from a public health viewpoint this will result in mortality and morbidity reductions.

The use of an equivalence approach using helmets with alternate standards when crossing/using a public road would likely to be in contravention of road requirements in all Australian jurisdictions. This would undoubtedly result in issues associated with enforcement/prosecutions, however exemptions for primary producers to use Standards other than AS/NZS 1698 in these circumstances could manage this issue (though does not address the issue of on-road registration requirements). Given the above developments since 2007, this does not preclude the establishment of a Standard for quad helmets into the future, however the equivalence approach may be more timely and possibly effective.

Should helmets be mandatory (legally required) for quad bike riders?

Response

While mandating helmet use is emphatically supported, it is difficult to understand why a formal legislative approach to that is required in a work-context. Given the existing WHS legislation and regulations in every Australian jurisdiction, there is no question that helmets must be worn. In contrast, recreational use would not be covered under the WHS requirements and as such a broader mandatory approach may be required.

In summary, mandatory helmet use and the use of an equivalence approach using helmets with alternate standards in addition to AS/NZ 1698, is supported for work-related purposes on farms.

4. Rollover Protection

Have you installed rollover protection? If so, what has been your experience? If not, why not?

Response

We are of the view that the existing data supports the fitting of suitably tested Crush Protection Devices. However, in line with the hierarchy of controls the preferred option is a switch to an alternate, safer and more “fit for purpose” vehicle.

Is the cost of installing rollover protection a barrier?

Response

The experience gained from previous tractor ROPS rebate programs, suggests that financial incentives can be successful. In the recent NSW and Victorian CPD rebates, it is noteworthy that the uptake in Victoria (which is a stronger financial incentive), is leading to greater uptake than in NSW.

5. Government led action

Response

Do you support the development of an Australian Standard for quad bike design?

The current standard is the ANSI/SVIA 1-2010 which derives from the USA. It is our understanding that the ANSI/SVIA 1-2010 has no legal status in Australia and there are no known impediments for Australia necessitating more comprehensive requirements in any area (including lateral stability, crush protection, child-resistant start mechanisms and vehicle dynamics).

We believe that there is a need for establishment of requirements within an Australian Design Rule (ADR) for each of these issues. This ADR should be stipulated specifically for off-road use of the vehicles, as it is important that quads not be permitted (with due exceptions already covered under conditional registration schemes in states/territories), to use public roads. Allowing quads to use public roads beyond the existing conditional registration requirements would likely result in a large increase in deaths and injuries on public roads as is the case in the US. Thankfully on-road incidents currently constitute only a small proportion of incidents in Australia.

In summary, while the ANSI/SVIA 1-2010 may form the basis of a new quad ADR, the additional elements required - a lateral stability standard, crush protection, child-resistant start mechanism and enhancements in vehicle dynamics, must be part of such an ADR for Australia if developed. However, this would be a significant undertaking and would take many years to come to fruition.

6. Consumer safety rating system

Would a safety rating system affect your purchasing choices in the future?

Response

A system akin to the Australian New Car Assessment Program (ANCAP) for quads has potential and we support this approach to provide consumers with better information on the products. Based on our understanding of the manner in which the car ratings system was developed and evolved in Australia (including the initial resistance by manufacturers), it is our opinion that such a system would also have greater utility in both the short and long term than development of an ADR.

If a system was implemented, what do you think should be included as part of the system?

Response

The work already undertaken as a component of the UNSW – TARS project should underpin the safety ratings (lateral stability, crush protection and vehicle dynamics), with the addition of child-resistant start mechanisms.

7. Rebate Scheme

Response

Would a similar rebate scheme deliver improved quad bike safety in the Tasmanian context?

Currently, 70% of all fatal quad cases occur on a farm in Australia (2001-2016). Hence, targeting the agricultural community for a rebate is a logical approach. We fully support the use of a rebate approach that is integrated in the initial instance with a safety campaign and subsequently followed by enforcement. This is the approach that worked effectively with the tractor ROPS rebate approach and there is no suggestion why this should be different for trading up to a safer vehicle or purchase of CPDs.

It is our view that rebates for training (given the lack of demonstrable effectiveness) and for helmets (given their relative small input cost), should NOT form part of the rebate. We are also of the view that the Victorian scheme and its constituent components and approach are superior to the NSW scheme in attaining uptake.

References

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I thank the Taskforce for this opportunity to have input to their deliberations and should you require further details please do not hesitate to contact me.

Sincerely,



Hon. Associate Professor Tony Lower
ACAHS