



## ATVs in Agriculture

### Assess a Person's Skill Level to Operate an ATV

One of the best methods to assess the skill level of a person to operate an all terrain vehicle (ATV) is to spend time discussing aspects of ATV operation from your experience and getting the operator to demonstrate their skill while under your direct supervision.

When first learning to ride an ATV, it is advisable to select an area of flat ground free of obstacles and hazards. After ensuring that the operator is familiar with the controls, initial riding should involve the use of low gears only, taking time to get used to the controls, in particular, the throttle and brakes. Gear changes need to be practised until they can be made smoothly because, under difficult conditions, an ability to change gears quickly and smoothly and correct gear selection, are very important.

Familiarisation with the ATV should include: ATV components; controls; gears; start and stop procedures and the layout and function of controls. Identify hazards such as speed, obstacles, surfaces, slopes, undulations and ruts as well as routes to be taken, terrain peculiarities and alternative routes that can be used in bad weather conditions. Use this time to familiarise the operator with your property.

### ATV Limitations

Follow the manufacturer's recommendations for safe operation (owner's manual). These should include maximum load capacity for carriers and safe operating speeds.

The most unique thing about an ATV is its handling characteristics on corners. Because the rear axle is locked it is necessary for the rider to aid the inside rear wheel to slip while turning a corner. The normal tendency is for the locked rear wheel to try and drive the ATV in a straight line. To get unequal traction from the two rear wheels you need to shift

weight onto the outside rear wheel allowing the inside rear wheel to create less traction and slip on the surface more easily. This increases the chance of the ATV rolling over on turns.

### Implements and Their Effect on ATVs

#### Mounted Loads

Most ATVs have carry frames front and rear. The manufacturer's loading for these carry frames should be noted and not exceeded. Ensure the load is distributed evenly.

Attachments, such as spray tanks and fertiliser spreaders, will raise the centre of gravity of an ATV and make it harder to control. This will reduce the ATV's stability and steering capabilities. When mounted implements are being emptied, the weight displacement changes and operators need to be aware of this.

It is preferable to tow such loads rather than carry them on the ATV.

### Trailers and Trailed Implements

The operator's manual will show the manufacturer's recommended maximum gross towing capacity.

Load the trailer to achieve an appropriate balance with 10% of the gross weight of the trailer and its load on the draw bar of the ATV. If the weight is too great, the ATV will be difficult to steer; if it is too light, the trailer will be heavy at the rear causing a loss of traction at the rear of the ATV.

Selection of gears is important to maintain control, especially on slopes.

When towing, the weight of the trailer and its load should not exceed double the weight of the unladen ATV. The load should be reduced on steep and slippery slopes.

## Terrain/Environmental Conditions

Pick a speed and gear suitable for the terrain and conditions. Smooth throttle applications when climbing a slope will help maintain stability.

An active rider uses body positions and weight distribution for going up, down and across slopes. When riding up a slope lean forward and select a suitable low gear. Riding down a slope move your body backward.

When travelling down slopes use the front brakes as the front wheels have the greatest traction.

## Vehicle Maintenance

Follow the manufacturer's/supplier's recommended maintenance plan and ensure all repairs are carried out by a competent person.

Visually check regularly: tyre inflation and tread; brake and throttle cable condition; steering ball joints; oil level; and accessory attachments. After riding through water, check brakes and watch for slippery foot pegs.

## ATV Passengers

Manufacturers' recommendations state that passengers SHOULD NOT be carried on ATVs and this is a position strongly supported by OSH.

## Age of Rider

Children lack the strength or weight to effectively handle a full-size ATV.

No children under the age of 16 years should operate an ATV.

Manufacturers' recommendations state that 16 is the minimum age to operate an ATV safely.

## ATV Roll Bars and Frames (ROPS)

ATVs have a history of roll-over accidents causing injury. Among the most common causation factors for roll overs are speed, uneven terrain and wet conditions. Roll bars and frames can be fitted to ATVs. While the fitting of such devices is voluntary, it is strongly recommended by OSH. When ATV ROPS are supplied and fitted, the *Guidelines for the Design, Construction and Installation of (ROPS) for All-Terrain Vehicles* should be followed.

## Safety Helmets

Many ATV accidents have resulted in head injuries. A suitable helmet should be worn at all times when operating an ATV.

At the present time suitable helmets are made by two firms that OSH is aware of and they are (in alphabetical order):

- Ferrentino Manufacturing, 9 Baber St, Waihi - the Aghat Safety Helmet which complies with Australian Standard AS 2063.1.
- Pacific Helmets, 315 Heads Road, Wanganui - R5K Farm Helmets. They are constructed to Australian Standard AS 1801.

## Have You Assessed the Critical Factors for ATVs on the *Critical Factors Chart*?

- Assessment of skill level to operate an ATV
- Vehicle limitations
- Implements and their effect on vehicle
- Environmental conditions
- Terrain
- Vehicle maintenance level
- ATV passenger
- Age of rider
- Safety frame
- Safety helmet.

## References

Further information is contained in:

- Health and Safety in Employment Act 1992
- *Farm Health and Safety Manual*, available from Federated Farmers.
- *ATV Skills*, available from ACC.
- Operator's manual provided by the ATV supplier.

Available from OSH:

- *Critical Factors Chart: A guide for farmers to manage hazards in the workplace.*
- *Guidelines for the Provision of Safety, Health and Accommodation in Agriculture.*
- *Guidelines for the Design, Construction and Installation of Roll Over Protective Structures (ROPS) for All Terrain Vehicles 1998.*