

Safe Use of
**All Terrain
Vehicles (ATVs)**
on New Zealand Farms

The results of a joint survey by the Occupational
Safety and Health Service and
Federated Farmers



Acknowledgements:

The OSH team responsible for carrying out this project were:

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Federated Farmers of NZ (Inc.)
NZ Federation of Young Farmers Clubs Inc.
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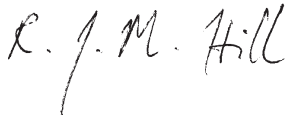
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FOREWORD FROM THE OCCUPATIONAL SAFETY & HEALTH SERVICE

During 1995-96, the Department of Labour's Occupational Safety and Health Service (OSH) conducted a national project to gather the opinions of farmers on the safe use of all terrain vehicles (ATVs).

This project was unique in that it involved a partnership approach by OSH, farmers and industry organisations. This booklet presents the findings of that project.

It is planned at a later date to issue a "best practice" document which will draw on these findings and set out practical recommendations to reduce the likelihood of harm occurring from the use of ATVs.



R.J.M. Hill
General Manager
Occupational Safety and Health Service

FOREWORD BY FEDERATED FARMERS

Developed primarily for recreational use in the sand dunes of the USA, all terrain vehicles (ATVs) — and four-wheelers in particular— have become an integral part of the farming industry. Many farmers describe them as the biggest technological advance since the topdressing aircraft or the modern milking machine.

Unfortunately, while ATVs replace horses, tractors and utilities, they bring some of the dangers of the modes of transport they replace. Significant numbers of people have been killed or seriously injured by ATVs — and many of those involved have been young people.

There are many unanswered questions as to how farmers and recreationalists alike can use ATVs more safely. This project is an attempt to find answers by talking to practical people who use ATVs in their daily lives.

A number of themes come through in the interviews, especially the skill needed to ride ATVs safely, and the need for ATVs to be treated with common sense. The key message is that speed and terrain are major factors in accidents. Two views in particular stand out — the need for some form of training for novices and the desire to restrict the use of ATVs by young people.

For Federated Farmers, OSH and the community, the challenge is to work together to address these and other issues raised in the survey. This booklet is only a start towards achieving the safer use of ATVs on farms.



Alistair Polson

Senior Vice-President, Federated Farmers

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INTRODUCTION

This report sets out the findings of a joint OSH and Federated Farmers project to gather information on the use of ATVs on New Zealand farms. Information was gathered from 377 farms in the project, which was carried out between August 1995 and June 1996.

The section entitled Summary Of The Project Findings (pp 8-12) gives a quick overview of the major findings and recommendations.

The remaining sections list the questions asked of farmers in the project questionnaire and summarise the responses made to those questions. Where appropriate, pie charts are used to present the information visually.

Further details on this project, including the questionnaire used and the findings, are available from:

Centre for National Support,
Occupational Safety and Health Service,
Department of Labour,
PO Box 3705, Wellington.
Phone (04) 915-4419
Fax: (04) 499-0891

SUMMARY OF THE PROJECT FINDINGS

WHO USES ATVS?

More employees and family members are recorded as users of ATVs than farmers.

TYPE OF FARMING

Of the 377 farmers involved in the ATV questionnaire, 92.5% described themselves as being dairy, beef, sheep, or a mixture of these.

TYPE OF TERRAIN

77% of farms were described as being other than flat, i.e. steep, rolling, or a combination, etc.

ATV DESIGN ISSUES

The majority of those questioned were satisfied with the ATV design, but a large number of suggestions were made on improvements that could be made.

Of those questioned, 54% had no safety devices fitted to the ATV; 28.5% had roll-bars fitted; the remaining 17.5% had bull-bars or side frames fitted.

ATV USAGE

The average weekly use of an ATV was calculated to be 11 hours per week. The most common implements used were trailers, spray units and spreaders.

INFORMATION ON SAFE ATV USE

The majority of ATV owners had received an instruction manual on the safe use of ATVs and information on maintaining ATVs in a safe working condition. However, a significant number stated that they had received none of the above.

A large number of suggestions were put forward on the level of maintenance an ATV should have to keep it in a safe working condition.

The majority of respondents stated that they had received additional information from other than the supplier or dealer and had been able to use it.

90% stated they had provided information to employees using ATVs.

TRAINING IN SAFE ATV USE

72% of farmers stated they were self-taught or had no training prior to general use of an ATV.

52% of employees did not receive any training or were self-taught.

33% of family members were either self-taught or did not receive any training.

69% of visitors to farms did not receive any training prior to using an ATV.

The majority wanted training courses that developed skills and enabled the operator to understand the limitations of the ATV and its capabilities on various types of terrain in differing weather conditions. Most were also of the opinion that additional training was needed for the use of implements, given the effects they have on the ATV's stability and traction.

SHOULD YOUNG PEOPLE USE ATVS?

87% stated that young people should be able to use ATVs, but restrictions should apply. A range of restrictions were suggested.

10.5% stated they didn't want any restrictions on young people using ATVs.

2.5% stated that young people should not be allowed to use ATVs.

WHAT GENERAL RESTRICTIONS SHOULD THERE BE?

Most stated they did not favour restrictions in general for ATVs, but 25% stated they would like to see a speed restriction.

WHAT IS THE MOST COMMON ERROR MADE?

The most common error made by ATV operators was travelling too fast for the conditions and at too high a speed in general. The solution suggested was a need for greater levels of training in the form of 'hands on' skills courses and an awareness of the ATV's limitations.

The greatest risk to ATV operators was their lack of knowledge, skill and awareness, and their inability to assess the conditions. The suggested solution is training courses that develop knowledge, skill and awareness.

CARRYING PASSENGERS

92.5% of respondents stated they carried passengers and made suggestions on the limiting factors.

7.5% of respondents stated passengers should not be carried on ATVs.

The most common suggestion for safely carrying passengers related to experienced operators who were able to assess the terrain and conditions with passengers not being carried on steep terrain.

HOW COULD ACCIDENTS BE REDUCED?

51% of respondents stated they were aware of an accident and gave details of the event. 49% suggested steps for reducing the likelihood of accidents occurring.

The most common suggestions related to:

- Reducing speed and riding to the conditions.
- Developing knowledge and experience through training and skills courses.
- Fitting roll-bars or safety frames to ATVs.

PROTECTIVE EQUIPMENT

The majority of respondents to the question on personal protective equipment and safety devices on ATVs favoured

having roll-bars or safety frames fitted to ATVs.

Just under half of the respondents stated that good footwear or safety footwear should be worn.

There was approximately an equal number who stated they favoured the use of helmets, as who stated they wouldn't wear a helmet.

The majority of those interviewed stated the best way to get ATV operators to use personal protective equipment was through seminars and training courses.

WHAT TYPE OF ATV DOCUMENT IS NEEDED?

Those who made comment preferred the ATV document to be a code of practice, either approved or not approved.

A significant number stated the information should be presented in video form, or in a booklet with photos and diagrams.

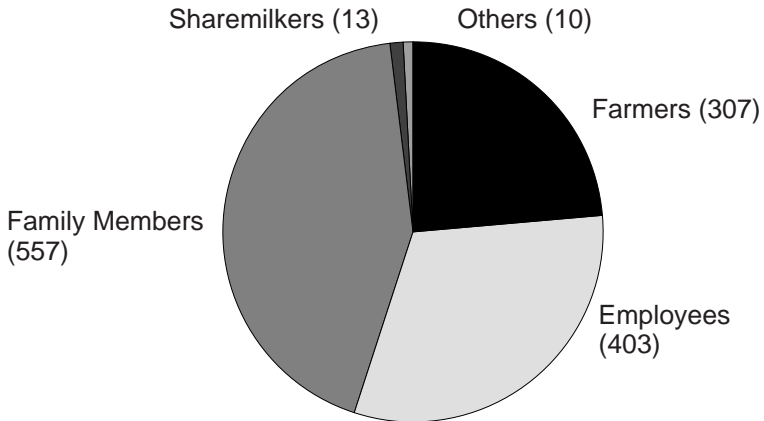
Those making comment wanted the content to include both safety and maintenance procedures. They wanted general instruction on how to safely use an ATV and a general training standard. They would also like information on accident case histories.

Information on riding techniques covering all types of terrain and conditions, along with information on loading and stability of ATVs, was also suggested.

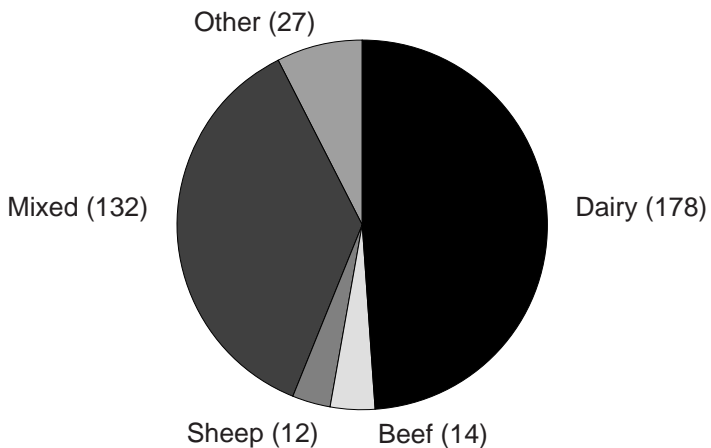
218 of those involved in the project would like the opportunity to make further comment on any future draft document or Standard.

Who Uses ATVs And Where?

WHO USES ATVS ON FARMS?

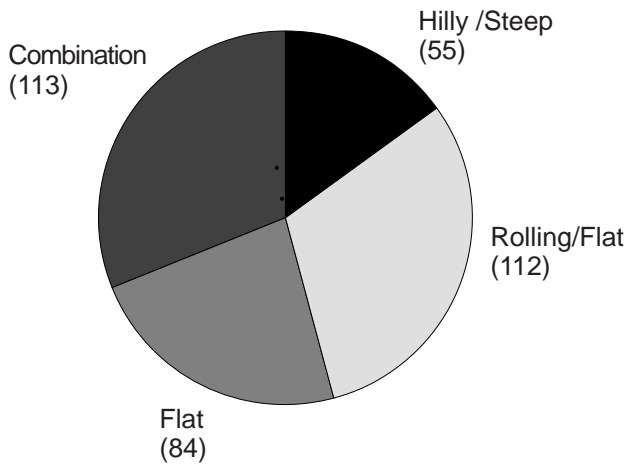


WHAT TYPES OF FARM?



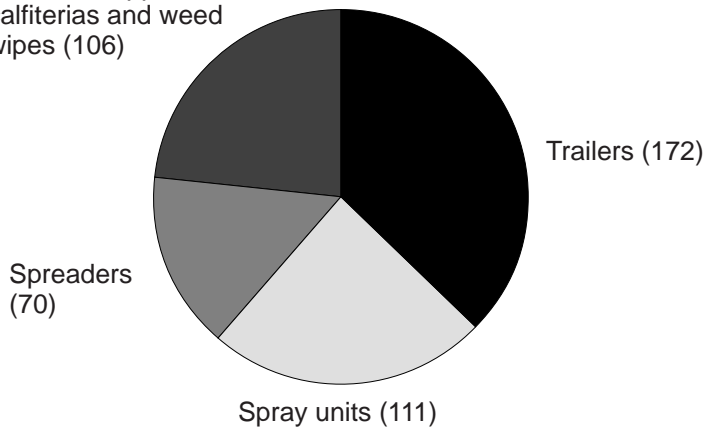
Other: Crop (4), Horse (1), Forestry (1), Grazing (1), Pest Control (8), Deer (2), Vineyard (3), Glasshouse (1), Orchard (2), Motorcycle Dealers Shop (3), Goat (1)

WHAT TYPE OF TERRAIN?



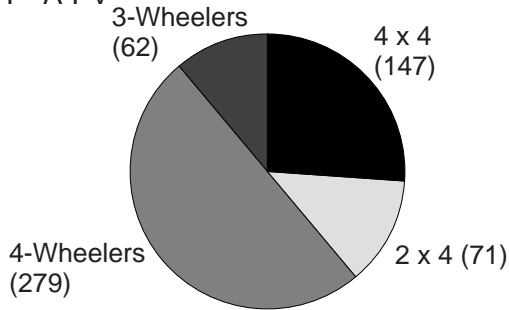
WHAT TYPES OF IMPLEMENTS ARE USED?

Fertiliser hoppers,
califiers and weed
wipes (106)



Type, Make And Engine Capacity Of ATVs In Project

TYPE OF ATV

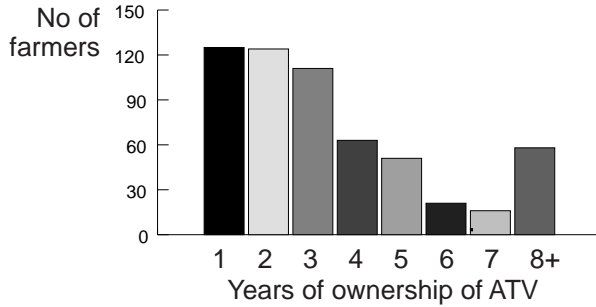


MAKE OF ATV

Honda	291
Suzuki	164
Yamaha	82
Kawasaki	66
Polaris	4
Argo	2

ATV ENGINE CAPACITY

450cc	2	300cc	290	200cc	48	125cc	7
440cc	1	250cc	131	185cc	2	110cc	3
400cc	15	230cc	3	175cc	4	100cc	3
350cc	57	225cc	3	160cc	5	90cc	1
320cc	1	220cc	5	150cc	2	80cc	4



YEARS OF OWNERSHIP

1	125	2	124
3	111	4	63
5	51	6	21
7	16	8+	58

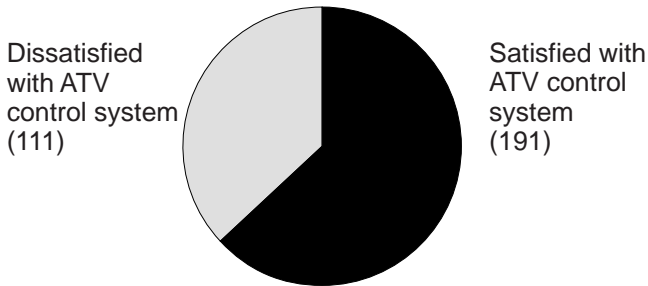
PURCHASED

New	440
2H	84
2H(P)	18
2H(D)	42

HOW OFTEN ARE ATVS USED?

The average hours of ATV use among those surveyed was 1.1 hours per week.

What ATV Design Features Should Be Changed?



20 felt ATV brake design changes need to be considered. Disc brakes are more reliable than drum brakes. Brake cables were of poor quality. Brakes could be better covered to keep out moisture and mud.

19 felt ATV thumb throttle design changes need to be considered. Thumb throttles could be replaced by finger or foot throttles.

9 felt ATV foot peg design changes need to be considered. Foot peg should be wider or be replaced by foot plates.

5 felt ATV size design changes need to be considered to carry pillion passengers.

4 felt ATV mud flap design changes need to be considered. Mud flaps should be wider to prevent mud flicking up.

3 felt ATV gear design changes need to be considered for lower gear ranges.

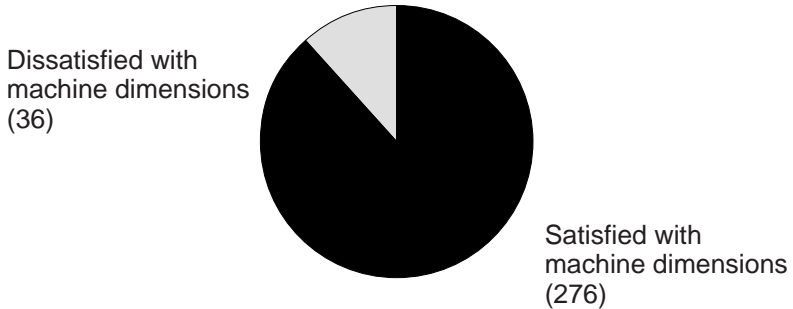
3 felt ATV steering design changes needs to be considered. A better turning lock was suggested. Steering was too light.

3 felt ATV oil gauge design changes needs to be considered—should be replaced by a dip stick.

The remaining 16 responses suggested various design changes on ATVs such as:

- An audible warning system for reverse gear.
- An adjustable seat.
- An additional fan for cooling on the engine.
- Greater ATV width for stability.
- Norf bars for lower leg protection.
- Improved suspension.
- Design for ease of cleaning.
- Wider tyres for traction/stability.
- Large carriers.
- Power steering.
- Master switch to isolate battery.
- Improved lighting and controls.
- Standardised controls for bike brands.
- Roll-over protection made compulsory.
- Carrying compartment with lid.
- Fit a horn.
- Differential instead of chain drive.
- Fit towbar.
- Differential lock/unlock.
- Fit spade holder.

Machine Dimension Suitability



6 felt their ATV's wheel-base was too narrow. The dimension suitability could be improved by increasing the ATV's width and length to provide greater stability.

4 felt ATV suspension was not adequate. It gave farmers sore backs and was perceived as too light or too rigid.

4 felt ATV tyres were not adequate. Dimension suitability could be improved by fitting dual wheels rear of the ATV, or fitting larger tyres.

4 felt ATV seating was not adequate. Dimension suitability could be improved by fitting longer or adjustable seats to accommodate tall operators and pillion passengers.

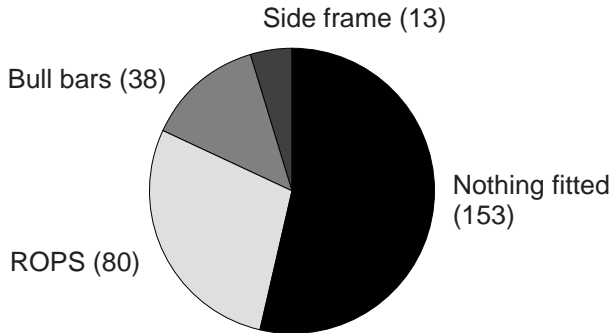
3 felt ATV foot pegs were not adequate. Dimension suitability could be improved by fitting wider foot pegs or grates capable of adjustment.

Of the remaining 7 responses, various machine suitability issues were listed:

- Three-wheeler ATVs were dangerous.
- ATVs were very stable to ride.

- ATVs should not be overloaded.
- ATV should have bigger tray carry loads.
- The 400cc ATV was too big to handle.

What Safety Devices Should Be Fitted To ATVs?



27 felt roll-over protection should be fitted standard to the ATV by the manufacturer.

17 felt a T-bar style roll-over protection was the most acceptable device for an ATV.

11 felt a full roll cage style roll-over protection was not acceptable as it impeded vision and made access on and off the ATV difficult.

7 felt roll-over protection should be optional for the ATV owner.

5 felt roll-over protection should not be fitted to ATVs, as it overweighs / overbalances the ATV

5 felt seatbelts should not be fitted to ATVs in conjunction with roll-over protection.

Of the remaining responses, 8 various safety devices fitted to ATVs were listed:

- Roll-over protection should be fitted to ATVs in bush operations.

- Bull bars should be fitted standard by the manufacturer.
- An emergency stop switch should be fitted to the handlebars.
- Foot pegs should be wider, or a grate.
- Roll-over protection should be fitted if ATVs are used on hilly country.
- A weather cab should be fitted to ATVs as it is stronger fabricated.
- ATVs should be fitted with larger mud flaps.
- ATVs should be fitted with a foolproof, non-slip hand brake.

How Could ATV Design Be Improved?

19 suggested as a design improvement that roll-over protection be fitted standard to all brands of ATVs by the manufacturer.

1 suggested mounting lights on the handlebars, or so the lights turn with the steering.

9 suggested making mudguards wider to cover the tyres and prevent ejection of mud.

9 suggested wider foot pegs or a grate capable of adjustment.

7 suggested a wider wheel base by increasing the width and length of the ATV to improve stability.

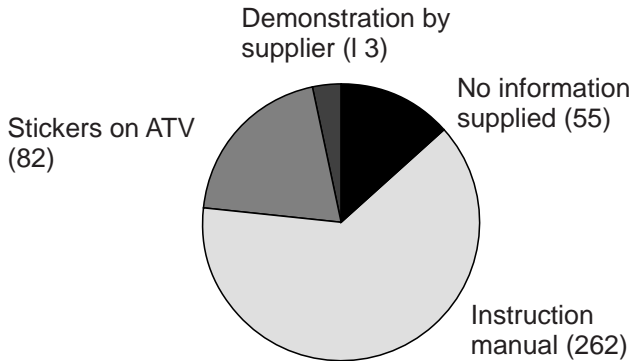
6 suggested a design improvement with brakes, a locking device for the handbrake, enclosed disc brakes, better seat covers to emit moisture and mud, and a hydraulic brake system.

Of the remaining 30 responses, various design improvements were suggested:

- Independent suspension.
- Differential lock — replace chain drive with differential.
- Passenger seat.
- Larger tyres.
- Dipstick rather than sight glass, or remount out of mud.
- Tighter turning circle.
- Bull bars and side bars.

- Speed restrictor (governor).
- Different tyre type to suit terrain.
- Upgrade metal used in foot pegs.
- Fit cooling fan.
- Fit towbar trailer hitch.
- Standardised controls on all brands of ATVs.
- Power steering.
- Larger carrier trays.
- Larger fuel tank.
- Fit speedometer.
- Fit better throttle.
- Provide ATV helmet.
- Fit clutch for hill country.
- Fit hand grip protection.
- Reverse gear option.
- Lower centre of gravity by remounting engine.
- Establish Certificate of Fitness.
- Galvanise chassis.
- Low fuel audible warning.
- Fit rear vision mirror.
- Inhibitor over-ride for neutral.
- Sun protection canopy.
- Fit safety belt.

What Information On Safe Use of ATVs Was Provided By Supplier?



262 received from the supplier a manufacturer's manual on the operation of their brand of ATV.

82 had stickers or decals affixed relating to safety information.

55 received no instructions from the supplier on the operation of their ATV.

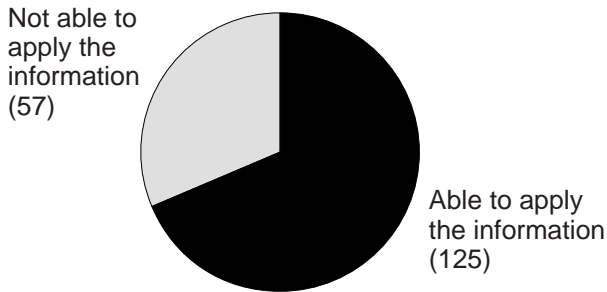
14 received verbal instruction from the supplier on the operation of their ATV.

13 received a practical demonstration from their supplier.

8 received a supplementary ATV safety document from the supplier covering the operation of their brand of ATV.

8 received the publication *ATV Skills* from the supplier.

Were You Able To Apply The Information Provided By Supplier?



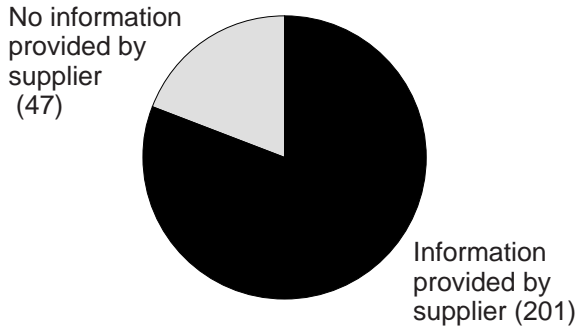
125 understood and used or were able to apply the information provided by the supplier about the operation of their ATV.

57 were not able to understand or apply the information provided by the supplier about the operation of their ATV.

5 were of the opinion that the manufacturer's manual was clear and comprehensive to read about the operation of their ATV.

2 found the information provided by the supplier allowed them to understand and demonstrate the capability of their ATV.

Did The Supplier Provide Instructions On Maintaining ATVs In A Safe Working Condition?



223 received an operator's service manual from the supplier on maintaining their ATV in a safe working condition.

202 received instructions from the supplier on maintaining their ATV in a safe working condition.

47 received no information from the supplier on maintaining their ATV in a safe working condition.

What Is The Minimum Level Of Maintenance To Keep An ATV In A Safe Working Condition?

120 visually check mechanical aspects of high risk in their opinion like correct tyre inflation, brake condition, ball joint condition and oil level as a minimum level of maintenance to keep an ATV in a safe working condition.

215 are of the opinion a full service is required as a minimum level to keep an ATV in a safe working condition.

15 were of the opinion a full service is required regularly.

23 were of the opinion a full service every 200 to 300 hours is required.

4 were of the opinion a full service every 2,000 km is required.

61 were of the opinion a full service every 3 months is required.

9 were of the opinion a full service every 4-5 months is required.

71 were of the opinion a full service every 6 months is required.

21 were of the opinion a full service every 12 months is required.

11 were of the opinion as per the manufacturer's service manual warranty requirements.

28 are of the opinion it is essential a full service be carried out by a recognised / authorised ATV dealership as a minimum level to keep an ATV in a safe working condition.

3 were of the opinion a full service by a recognised ATV dealership every 200 to 300 hours.

5 were of the opinion a full service by a recognised ATV dealership every 3 months.

15 were of the opinion a full service by a recognised ATV dealership every 6 months.

5 were of the opinion a full service by a recognised ATV dealership every 12 months.

3 were of the opinion it took under 30 minutes a month to maintain an ATV in a safe working condition.

What Additional Information From ATV Suppliers Would Be Helpful?

13 were of the opinion the publication *ATV Skills* would be helpful.

12 were of the opinion a skills video on how to operate their ATV would be helpful.

10 were of the opinion a servicing guide or manual to maintain their ATV would be helpful.

8 were of the opinion a publication listing do's and don'ts on ATV operation would be helpful.

7 were of the opinion verbal personal supplier instruction on the operation of their ATV would be helpful.

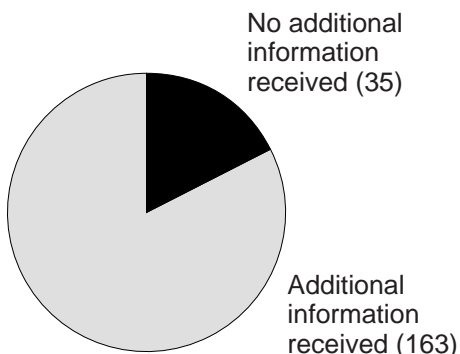
5 were of the opinion that first-time buyer's information on the operation of their ATV would be helpful.

4 were of the opinion a practical supplier demonstration on the operation of their ATV would be helpful.

Of the remaining 11 responses, various opinions were as follows:

- An invitation to a field day.
- A skills manual.
- A Warrant of Fitness.
- A service history.
- A code of practice.

What Additional Information Have You Received? Have You Been Able To Use That Information?



(a) Of those surveyed, 62 received the joint OSH/ACC publication *ATV Skills*.

50 received information from farming newspapers such as *Straight Furrow*, *Thursday Farmer*, *Farming with Pictures*, *NZ Farmer*.

31 received information by watching an ACC video, dairy company video, Wool Board video, Bank of NZ video, OSH video.

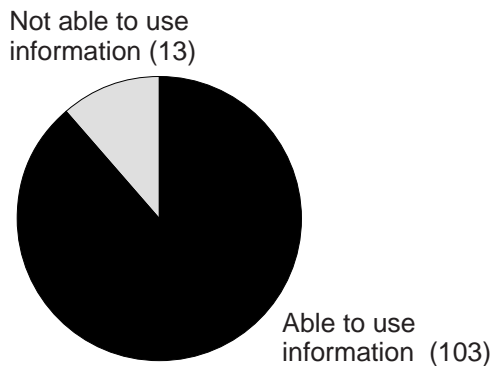
14 received information from Young Farmers and Feta ITO courses.

12 received information from speaking with or being visited by OSH field staff, and reading OSH publication and accident statistics.

7 received information from Federated Farmers publications.

The remaining 22 responses received information in various forms, as follows:

- Instructions from an ATV association.
- A polytechnic course.
- An ATV farm skills discussion.
- Taught by another farmer.
- MAF access training course (MAFTEC).
- An agriculture field day.
- Community discussion group.
- Farmers' and growers' publication.
- Landcorp Worksafe programme.

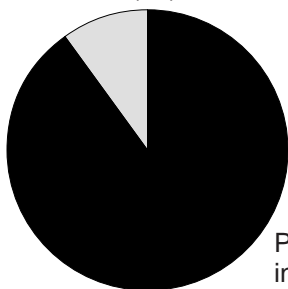


(b) Of the additional information received, 103 were able to use the additional information.

13 were not able to use the additional information.

What Information Have You Provided Your Employees?

Did not provide employee information (12)



Provided employee information (110)

100 provided their employees with verbal instruction on the control of an ATV, skills of weight transfer, terrain dangers / hazards, and a practical demonstration under supervision to ensure the skills were attained.

45 employers stated their employees already had the necessary experience to operate an ATV unsupervised.

17 provided their employees with the publication *ATV Skills*.

4 provided their employees with information from a farm cadet training course.

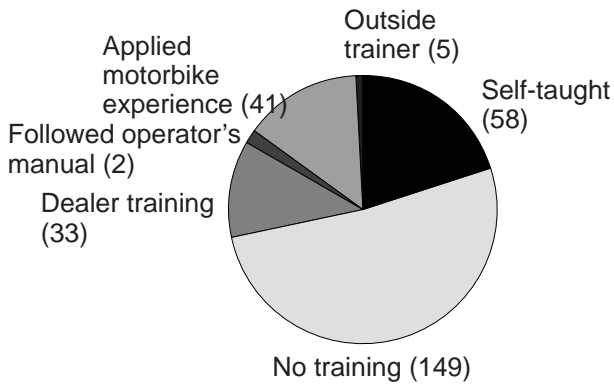
Of the remaining 15 responses, employers provided employees with information in the following ways:

- Sent their employee on an ATV supplier in-house training programme.
- Provided an operator's manual.
- Expected the employee to use common sense and judgment.

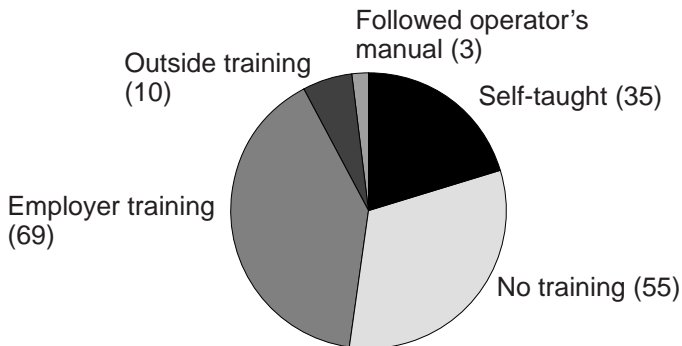
- Set speed restrictions in certain areas of the farm.
- Sent employee to a BNZ lecture.
- Sent employee to a practical demonstration by an ATV supplier.
- Let employee watch a dairy company video.

What Training Did You Get Prior To Using Your ATV? Who Provided The Training?

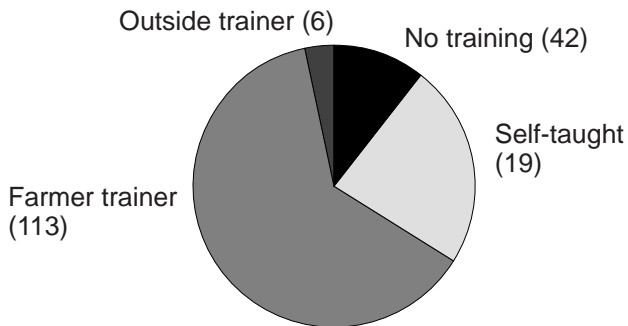
TRAINING FOR FARMERS



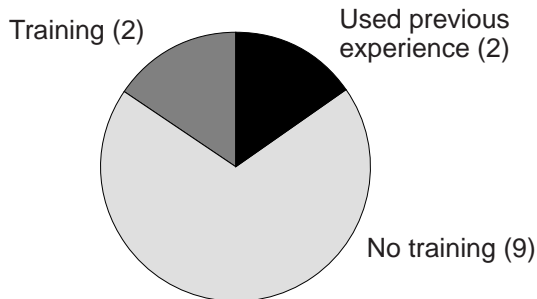
TRAINING FOR EMPLOYEES



TRAINING FOR FAMILY MEMBERS



TRAINING FOR VISITORS/OTHERS



113 farmers provided training for family members.

72 farmers provided training for employees.

23 instructors of a bike supplier provided training.

7 Ag. ITO farm cadet courses provided training.

4 ACC course provided training.

Of the remaining 5 responses, training was provided by:

- ATV Association.
- Polytechnic course.
- Another farmer.

What Aspects Of The Training Were Most Useful?

25 cited learning the capability of an ATV on different terrain as most useful aspect of training.

20 cited practical experience gained on learning to turn and falling off.

4 found watching a video on weight distribution vs. turning technique of an ATV was most useful.

The remaining 12 responses where various training was most useful was:

- One on one tuition.
- Dangers.
- Mechanical.
- Speed restriction.
- International Agriculture Exchange Association.
- ATV club.
- ATV supplier.
- Control familiarisation.

What Level of Training Is Essential As A Minimum Standard? Why Do You Have That View?

36 stated a practical demonstration of the ATV under adult supervision on a flat paddock or race, progressing to different steepness of terrain, was essential as a minimum standard of training. They had this view because:

- It was the quickest and easiest way to teach functions of controls and principles of weight transfer and turning the ATV
- It created confidence and developed the co-ordination and balance necessary to operate the ATV
- It allowed the teacher to assess the level of skill competence attained.
- It bridged the gap between basic theory training and the reality of extra skills necessary to operate the ATV under different terrain conditions unique to that farm.
- Riders retained more information operating the ATV.

85 stated verbal instruction on the controls of the ATV, the skills of weight transfer and turning, terrain dangers and hazards was essential as a minimum standard of training. They had this view because:

- It was the quickest and easiest way to teach functions of the controls, principles of weight transfer and turning, and terrain dangers and hazards.

- Exchange of communication promoted understanding of ATV principles and quickly corrected faults.

27 considered a formal outside training school or association as a minimum standard of training. They had this view because:

- The school would be accredited to a recognised standard.
- Individuals would receive the correct information and not develop bad habits passed on.

19 considered a formal licence, certificate of competence, or registration for trainers as a minimum standard of training. They had this view because:

- It proved the necessary skills required had been tested.

10 considered attending an authorised/recognised ATV supplier training course as a minimum standard of training. They had this view because:

- Users would receive the information pertinent to their brand of ATV.
- Individuals would receive the correct information and not develop bad habits.

8 considered specific training on the dangers of steep terrain as a minimum standard of training. They had this view because of:

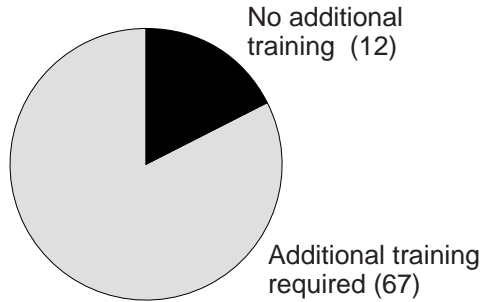
- The high risk of roll-over injury.

The remaining 21 responses stated various training essentials as a minimum standard:

- Read the operator's manual.
- Be able to demonstrate co-ordination and control.

- Confidence building, 1-2 months.
- Depends on mechanical aptitude.
- Experience training under supervision for up to 12 months.
- No training necessary as ATVs are just another piece of farm machinery.
- Use common sense / judgment.
- ACT/ ITO training farm cadets course.
- Polytechnic course.
- Massey Handbook *Active Riding*.

What Additional Training Is Required For ATVs Fitted With Implements?



91 felt additional training was required on how the weight of an implement affects the stability of an ATV's centre of gravity and the ATV's steering capabilities.

29 felt additional training was required on how to load and not overload an implement and the effect of jack-knifing a towed implement.

26 felt additional training was required on the stability of the implement and the ATV on steep terrain.

17 felt additional training was required on braking the ATV with a towed implement.

12 felt additional information was required on reversing an ATV with an implement.

6 felt additional training was required on how weight transfer of the body affects the ATV's steering when towing an implement.

The remaining 17 responses felt various additional training was required:

- How liquid moving in a spray tank affects the stability of an ATV
- Training similar to a tractor.
- No skylarking.
- Dual wheels should be fitted to ATVs towing implements on hill country.
- Follow instructions in owner's manual.
- Set speed restrictions.
- More practice.
- How the width of a boom sprayer affects the stability of an ATV
- That ATVs were never designed to tow implements.

What Suggestions Do You Have For Improving Training?

23 suggested a formal training school certified to a relevant standard should be established.

14 suggested video training on the aspects of safe use of ATVs.

6 suggested a formal outside training school should be established.

5 suggested the ATV supplier should be responsible for training and matching the right brand of ATV to the terrain conditions of its intended use.

5 suggested attending a polytechnic course to obtain training.

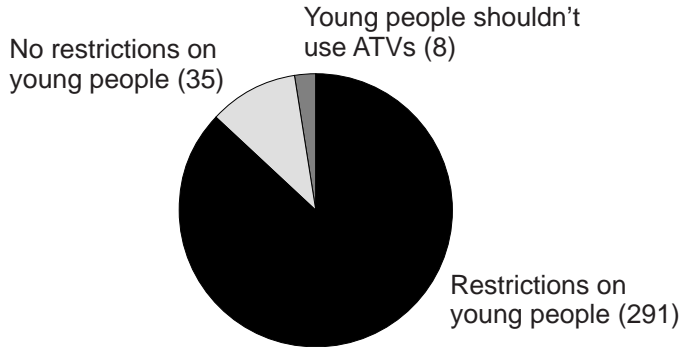
5 suggested field days like MPTEC should provide training.

The remaining 17 responses felt various suggestions for training like:

- Publish photos of accidents.
- ATV supplier to explain to the purchaser that an ATV is not a toy.
- Set speed restrictions.
- Training demonstrations at field days.
- ACC courses.
- Young Farmers Club field days.

- Include the publication *ATV Skills* as part of the manufacturer's owner's manual.
- OSH training days.
- ITO farm cadet scheme.
- Maintenance operator's manual.
- Community-based farm discussion groups.

What Restrictions, If Any, Should Be Put On Young People Using ATVs?



107 stated that young people using ATVs should be supervised until they are adequately trained and have adequate ability to control the ATV. Young people should be under parental supervision and not be left unsupervised.

39 stated that physical size and strength of the young person and the size of the ATV were limiting factors to the safe use of the ATV

36 stated that a young person's attitude and ability needed to be assessed prior to allowing them on an ATV

35 stated that training was required for young people using ATVs in the form of a skills course.

26 stated that it was most important that a young person using an ATV was able to touch the seat controls and foot pedals together to be able to control the ATV safely.

25 stated that special restrictions should be placed on young people using ATVs, but did not indicate what the speed restriction should be.

22 stated ATVs should be restricted to young people 16 years of age and over.

15 stated ATVs should be restricted to young people 15 years of age and over.

14 stated ATVs should be restricted to young people 14 years of age and over.

9 stated ATVs should be restricted to young people 13 years of age and over.

56 stated ATVs should be restricted to young people 12 years of age and over.

19 stated ATVs should be restricted to young people 10 years of age and over.

8 stated ATVs should be restricted to young people 8 years of age and over.

9 stated that there should be a minimum age for ATV use, but did not indicate what that age should be.

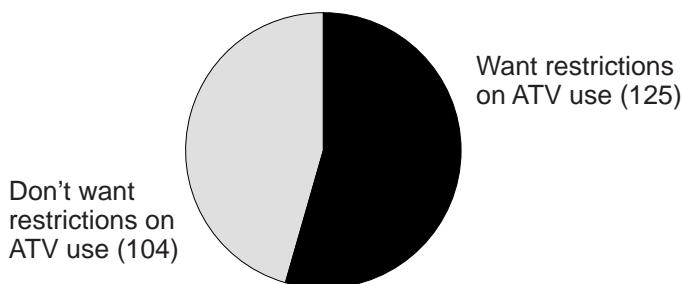
13 stated that young people using ATVs must use helmets.

12 stated young people should be trained on flat ground and kept off steep country or hills.

6 stated that young people should not carry passengers.

5 stated that young people should not use implements on ATVs.

What Restrictions Should There Be On The Use Of ATVs In General?



125 stated they wanted restrictions on the use of ATVs.

104 stated they did not want any restrictions on the use of ATVs.

58 wanted speed restrictions on ATVs, but did not suggest a speed.

16 wanted throttle controls to be governed to a minimum speed.

12 wanted speed restrictions linked to the age and ability of the ATV operator.

6 wanted a speed limit on ATVs of 50 kilometers/hour.

11 wanted a speed limit on ATVs of 30 kilometers/hour.

6 wanted a speed limit below 20 kilometers/hour.

What Common Errors Are Made By ATV Operators?

110 stated that speed was a common error — rushing and trying to do too much too quickly.

108 stated that driving too fast for the conditions. Speed on steep and rough ground without adequate assessment of conditions was a common error.

56 stated riding on steep terrain or hill sides beyond the capabilities of the ATV or operator was a common error.

45 stated misjudging the ATV's capabilities and limitations was a common error.

43 stated overconfidence was a common mistake made.

43 stated overloading, uneven loads and loads carried on slopes was a common error.

31 stated turning ATVs too sharply, or turning too sharp on slopes, was a common error.

26 stated lack of knowledge, skill, ability and experience lead to errors occurring.

14 stated complacency and a lack of concentration was a common error.

11 stated failing to maintain ATVs was a common error.

What Is The Solution To Common Errors Made By ATV Operators?

118 stated that operators of ATVs need to be trained on the safe use of an ATV Particular mention was made of skills courses covering steep and hilly terrain.

46 stated being aware of the limitations of an ATV and having knowledge of the potential hazards and consequences was a solution.

25 stated a speed limit for ATVs, or lower speed in general was a solution.

13 stated supervision of operators to reinforce correct behaviour and to explain risks and consequence was a solution.

13 stated information on risks would be a solution.

What Conditions Cause The Greatest Risk When Operating An ATV?

142 stated that the operator's lack of knowledge, skill, awareness and training caused the greatest risk. The operator's attitude was also a contributing factor.

118 stated that steep, rough terrain and broken ground was the greatest risk.

85 stated that wet conditions such as slippery grass, mud, snow and ice were the greatest risks.

27 stated lack of knowledge and ability to read the conditions as the greatest risk.

17 stated speed was the greatest risk.

10 stated not knowing the ATV's limitations was the greatest risk.

8 stated maintenance and the use of correct tyres was the greatest risk.

7 stated the overloading of ATVs was the greatest risk.

What Are The Solutions To Control The Greatest Risk?

99 suggested training courses to increase the operator's knowledge, awareness and skill levels.

37 stated that understanding the limitations of the ATV, given the conditions, was a solution.

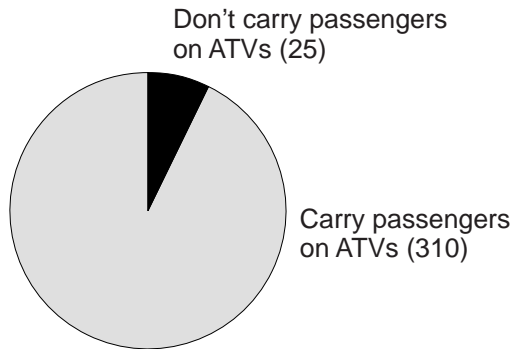
28 stated that the operator needs to slow down and ride to the conditions, plan ahead and know the terrain.

25 stated the use of common sense.

12 stated operators that were inexperienced should be supervised.

8 suggested fitting roll-bars or safety frames to ATVs as a solution.

What Are The Limiting Factors When Carrying Passengers On ATVs?



310 stated they carried passengers and made suggestions on the limiting factors.

25 stated that passengers should not be carried on ATVs.

121 stated that an assessment of the steepness of the terrain and an understanding of the ATV's limitations was necessary prior to carrying passengers.

81 stated passengers should only be carried on flat ground, races, roads, or easy country.

62 stated that reduced speed or slow speed should be maintained while passengers were being carried.

34 stated that operators should know the local conditions and have adequate experience and an ability to assess conditions before carrying passengers.

31 stated that passengers should not be carried on steep country.

30 stated that only one passenger should be carried.

15 stated that passengers should sit directly behind the operator.

10 stated that implements should not be used while carrying passengers.

8 said children should not be allowed to carry passengers.

Are You Aware Of Accidents Involving ATVs And Of Steps That Can Be Taken To Reduce The Likelihood Of Accidents?

147 were aware of accidents and gave details of the events.

143 suggested steps for reducing the likelihood of accidents occurring.

52 suggested a reduction in speed and driving to the conditions.

31 suggested increased training, knowledge and experience would reduce accidents.

21 said that roll-bars or safety frames should be fitted.

15 said training for ATV operators would reduce accidents.

13 said avoiding steep slopes on ATVs would reduce accidents.

12 said avoiding the overloading of ATVs would reduce accidents.

11 said keeping ATVs well maintained and brakes and tyres in good working condition would reduce accidents.

51 said they had rolled or flipped ATVs on hills or slopes.
9 of those also involved the jack-knifing of a trailer.

12 stated they had hit objects such as trees, posts, etc.

8 had run into wire or tapes across races or roads.

7 had hit or been hit by stock.

Could The Effects Of Accidents Have Been Minimised By Personal Protective Equipment Or Safety Devices?

95 stated that safety devices would have reduced the effects of the accident.

80 stated that personal protective equipment would have reduced the effects of the accident.

95 stated that ATVs should be fitted with roll-bars or safety frames.

47 stated that good footwear, safety footwear or gumboots should be worn on ATVs.

45 stated that helmets should be worn on ATVs.

40 stated that they did not want to wear a helmet.

16 stated that personal protective equipment such as gloves, eye protection, overalls and ear muffs should be worn on ATVs.

What Else Could Be Done To Prevent ATV Accidents?

39 stated that better training, education, information and skills development are necessary to reduce accidents.

19 stated that ATVs should be fitted with roll-bars or safety frames.

17 stated that ATV speed needs to be reduced to suit the conditions.

11 stated that ATV operators need to know their own, and the ATVs limitations, and be aware of local conditions.

11 stated that ATVs need a high standard of maintenance, particularly brakes and tyres.

7 stated that a person's attitude needs to be carefully assessed before they are allowed to use an ATV.

In What Situations Should Personal Protective Equipment Be Worn?

90 said that strong footwear (not gumboots) needs to be worn when riding ATVs.

61 said that helmets should be worn when travelling on the road, either short or long distances.

35 stated that head protection mostly (with other PPE) should be worn when riding on difficult or steep terrain.

30 stated that they did not think it was practical to wear PPE.

29 felt that the dangers lay in recreational or racing ATV use, and that those people should wear PPE, not the farmer.

21 did think that helmets should be worn as a general rule, or some sort of head protection (excluding a sunhat).

20 thought it useful to wear gloves in cold weather.

What Is The Best Way To Encourage ATV Users To Use PPE?

43 stated that the best way of getting ATV riders to wear protective equipment was by way of school seminars, education, and/or training courses.

34 stated that PPE videos, and/or written information such as a handbook, should be supplied with the purchase of the bike.

31 stated that the wearing of personal protective equipment should be mandatory or law enforceable.

15 stated that for everyone to wear it, the gear must be comfortable, easy to wear, lightweight and yet provide warmth in winter.

14 stated that TV promotions and advertising would help to get riders to wear PPE.

10 thought it would be worthwhile to have a contract between the employer and employee stating conditions of work.

Should There Be An Industry Standard For ATVs, And What Form Should It Take?

92 stated that the document should be a code of practice relating to the specifics of farming and /or recreational users, either approved or not approved.

52 were keen on a video, either to support written information, or to be produced solely (as in the BNZ series). Many stated that the video should be provided with the bike at time of sale.

50 stated that it should be in a booklet form with photos and diagrams, and should be concise, clear and simple to read.

41 would prefer user guides, or a set of guidelines with the bike.

19 stated that it should be a pocket-sized booklet for ease of use, and could be kept with the bike.

13 would like to see a poster series showing safety features, safe riding and PPE.

What Information Should Be Included In The Document?

70 stated that they would like to see a book with both general safety and maintenance procedures. A further 39 stated that they would like safe operating instructions.

62 would like general instructions on how to use ATVs and what the general training standards should be.

26 would like stories about actual accidents and case histories, with 10 wanting injury photos.

19 wanted to see techniques for covering terrain. A further 19 wanted specifics on stability and balance; 14 on loads and ROPS.

17 wanted to see some sort of age restriction, however this was not usually stated.

15 wanted photos, diagrams and captions within the standard, and 16 wanted a list of training providers.

Do You Have Any Additional Comments?

218 would like to comment on the first draft of the standard of the combined Federated Farmers and OSH publication.

A few people felt that 3-wheeler ATVs were dangerous and should be banned. Some stated that bikes should be approved (by the MOT) for road use.

Some felt there should be a distinction between the farm use bikes and the recreational users, as the same standards should not apply, i.e. they should be stricter for racing ATVs.

A few people stated that booklets should be given away or sold with the bike at purchase.