



Mortality rates in bobby calves 2008 to 2016

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Definitions

Calf	A bovine animal that has not had milk (or milk replacer) permanently removed from its diet.
Young calf	A bovine animal that is up to 14 days of age and has been separated from its mother.
Bobby Calf	Calves surplus to farm requirements that are typically sent to slaughter aged between 4 – 14 days. A subset of calves and young calves.
Slink	A young calf that dies of natural causes or is killed on-farm, and is typically sold for processing into by-products (primarily leather).
Lairage	A place where cattle or sheep may be rested on the way to market or slaughter. Often used to describe holding facilities at a processing plant.
Mortality	The number of calves, as recorded by MPI Verification Services veterinarians that died or were condemned due to injury or welfare issues during transport or lairage. Subdivided into four categories; dead on arrival (DOA), condemned on arrival (COA), dead in yards (DIY), or condemned in yards (CIY). Widely used as a measurable proxy for calf welfare.

Bobby Calf Transport Forum (BCTF)

Set up in 2007/8 with members from the Meat Industry Association, Road Transport Forum and regulatory bodies to address concerns around the transport of young calves.

Farm to Processors Animal Welfare Forum (FTPWF):

The Forum developed from the BCTF in 2010 with wider industry membership, to act as the formal Government and industry forum to discuss welfare issues. Developed best practice guidelines and provided education on animal welfare.

Safeguarding our Animals, Safeguarding our Reputation Programme (SASR)

Initiated in 2010, a programme to encourage partnerships between government and industry to achieve voluntary compliance with animal welfare legislation and codes of welfare.

Bobby Calf Action Group (BCAG)

Set up in November 2015 in response to publicity highlighting cruel and illegal practices associated with bobby calf handling. BCAG is led by representatives from MPI, DairyNZ, Dairy Companies Association of New Zealand, Meat Industry Association, Federated Farmers, New Zealand Petfood Manufacturers Association, Road Transport Forum, and New Zealand Veterinary Association.

Purpose

The paper reports on initiatives that have been taken to improve the welfare of young calves and the impact these initiatives have had on the mortality rate of young calves prior to slaughter.

This includes the impact of industry-led initiatives and the Animal Welfare (Calves) Regulations 2016 on calf welfare and mortality rates in the 2016 spring calving season.

Executive summary

The 2016 spring calving season saw a marked decrease in young calf mortality, with the mortality rate more than halving from 0.25% in 2015 to 0.12% in 2016. This report covers measures to improve calf welfare since 2008.

New Zealand farmers produce more calves than are required for dairy herd replacements or can be absorbed by the beef industry. These calves are often referred to as ‘bobby calves’ and are typically sent for slaughter between 4 and 14 days of age. In 2016, just under 2,000,000 bobby calves were processed.

In the industry, calf mortality is widely used as a quantifiable proxy for welfare. Calf mortality refers to the number of bobby calves that die or are condemned for welfare reasons between farm and slaughter.

In 2007 the Government and industry developed a number of initiatives based on education and voluntary compliance to address high mortality rates amongst young calves.

In 2008, the calf mortality rate was 0.68%. Education and a range of voluntary measures brought this mortality level down to 0.25% by 2015, although the rate of annual decrease had slowed.

Despite this improvement, some processors were still reporting higher levels of calf mortality. In late 2015 allegations of calf mistreatment across the supply chain were highlighted in the media. This followed the release of footage obtained by animal activist groups showing ill-treatment of bobby calves in transit and at slaughter premises. While a number of the more serious behaviours seen in the footage were prosecuted under the Animal Welfare Act 1999, enforceable standards through regulations were needed to enable effective action to be taken against some of those whose behaviour was less overtly cruel, but where poor practices were still causing significant animal suffering. Examples include poor handling techniques in loading calves and managing calves both on farm and at processing plants.

The Animal Welfare (Calves) Regulations 2016 were developed to target specific areas of non-compliance or known risks to animal welfare. Four of the seven new regulations took effect partway through the spring calving season, on 1 August 2016. They are:

- Fitness for transport
- Transport duration
- Transport across the Cook Strait
- The use of blunt force trauma to kill calves

The 2016 spring calving season saw a marked improvement in young calf mortality. The mortality rate of young calves more than halved from 0.25% in 2015 to 0.12% in 2016.

One of these regulations primarily affected the transport industry, which was apprehensive about the impact on day-to-day livestock haulage operations. In practice, transport operators generally managed the introduction of the regulations successfully.

In addition to the industry processing calves for human consumption, in 2016 three plants processed a further 31,000 young calves for pet food. Figures supplied by industry suggest calf mortality also declined sharply in 2016 to a level below that recorded at plants processing calves for human consumption.

It is likely that the improvements in calf mortality during 2016 were brought about by a combination of the introduction of new regulations, a continued drive from ongoing industry and MPI initiatives to improve practices in line with animal welfare standards, and favourable weather conditions in winter/spring 2016. As calf mortality is influenced by a range of factors MPI will continue to monitor the impact of these regulations.

Three further regulations take effect in 2017 and are expected to bring further changes to calf welfare. These regulations impose a maximum time off feed before slaughter of 24 hours and a requirement to slaughter as soon as possible after arrival at slaughter premises, require loading and unloading facilities be provided and used when transporting young calves, and require shelter to be provided for calves at all points between farm and slaughter.

In addition, industry participants are continuing with their focussed efforts to improve the welfare of young calves. These initiatives are co-ordinated through a variety of forums as outlined below in this report.

Part A – Mortality in young calves 2008 - 2015

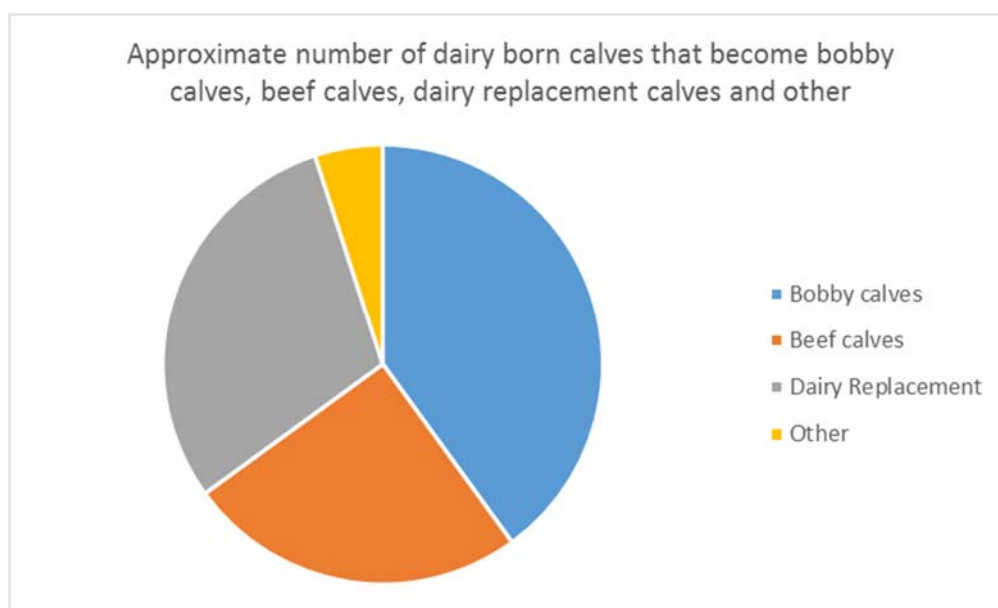
Overview - Calves in the New Zealand dairy industry

Dairy is New Zealand's largest goods export industry. In the 2015/16 season there were 5 million lactating dairy cows in New Zealand¹ and each would have given birth to a calf in order to produce milk.

Dairy calves can be raised as dairy herd replacements, breeding bulls, or as beef cattle. Typically around 20-25% of heifer calves are raised as replacements for dairy herds, and are reared on farm or by specialist calf-rearers. About 20-30% of calves are kept for beef raising, and a small number as dairy bulls. Calves not kept for beef or breeding may be sent for slaughter for meat for human consumption or for pet food (bobby calves). The number of calves raised for each purpose fluctuates yearly based on weather events, relative dairy and beef prices, and whether the relevant industry is experiencing growth or contraction.

A small proportion of calves are either killed on farm, or die of natural causes. The dead calves, often referred to as slinks, can be disposed of on farm, or be sold to processors for leather and rendering products (such as tallow, meat and bone meal).

While proportions fluctuate year to year the chart below gives an indication of the fate of calves born to dairy cows and heifers.

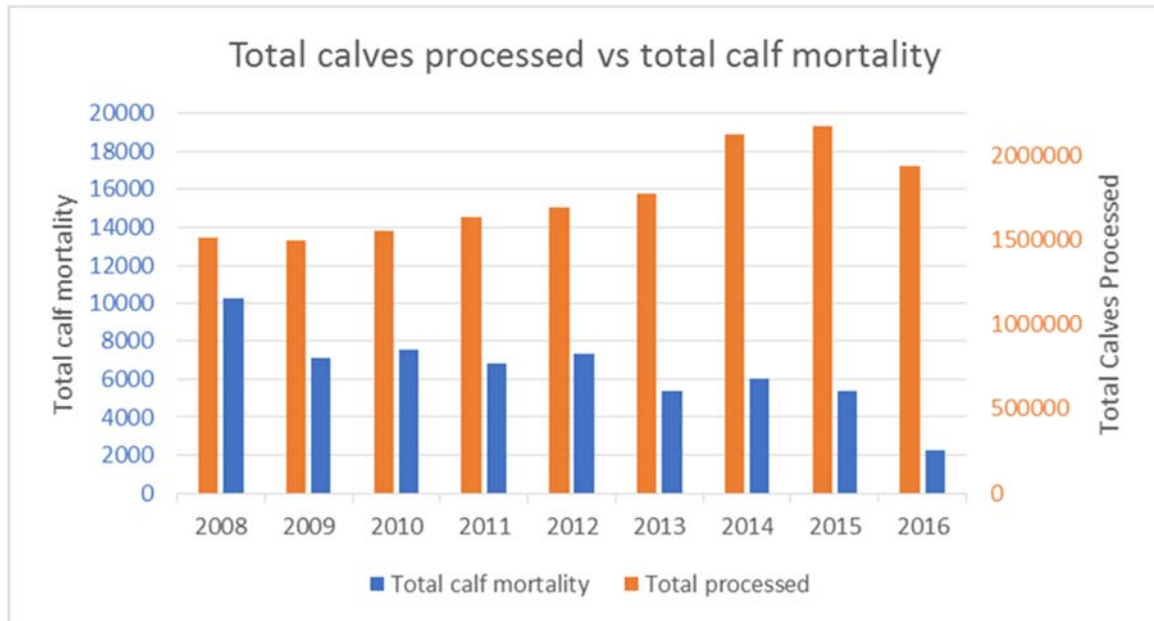


MPI statistics collected from meat and pet food processing facilities estimated the number of young calves that were processed in the 2016 season to be just under 2 million calves. This increased from 1.5 million calves in 2008 to a peak of almost 2.2 million calves in 2015.

¹ New Zealand Dairy Statistics 2016, DairyNZ & LIC

The figures in this report relate primarily to the processing of calves for human consumption. A much smaller industry also exists processing calves for pet food. In 2016 this industry processed 31,000 calves, or about 1.6% of the national total. Unless otherwise specified, discussion of processing plants in this report relates to those operating for human consumption rather than pet food.

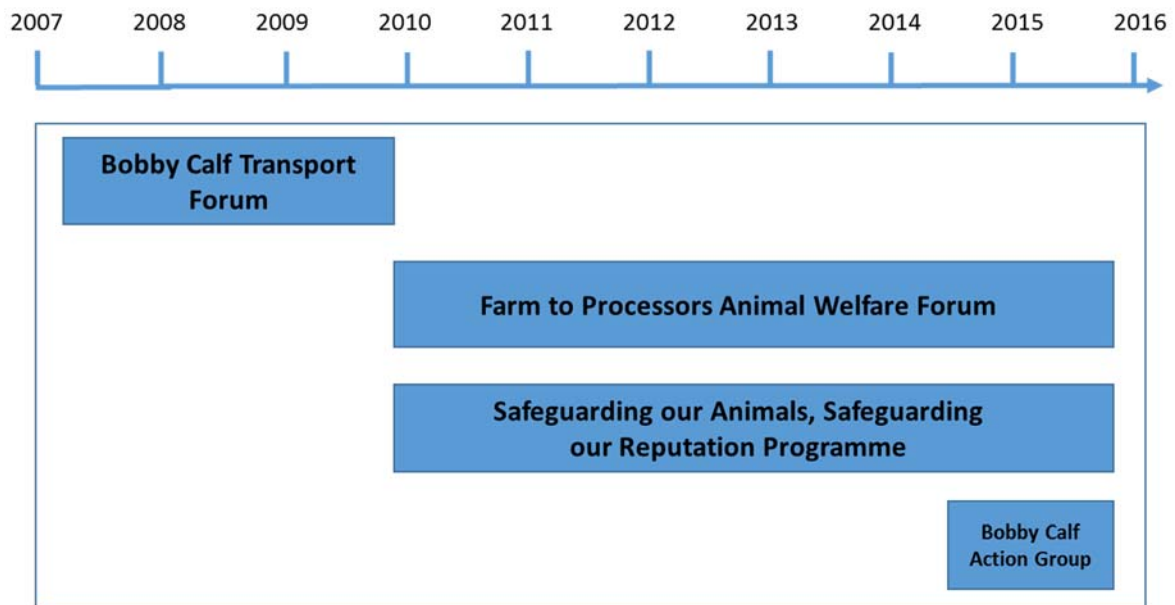
The collection of calf mortality data at meat processing premises commenced in 2008 alongside these initiatives, and since then a substantial reduction in the mortality rates of young calves prior to slaughter has been observed. The graph below illustrates this trend.



While overall the number of calves that are being processed has been increasing, the total calf mortality rate has continued to decrease from a high of 0.68% in 2008 to a low of 0.25% in 2015.

Initiatives and responses to calf welfare concerns

A number of groups have been involved in lifting the standards of calf welfare throughout the last 9 years and are illustrated in the following timeline. For clarity, the industry and Government groups who have contributed to improving calf welfare are explained below this.



Timeline of groups working to improve calf welfare 2007 to present

Bobby Calf Transport Forum

In 2007 representatives from the Meat Industry Association, Road Transport Forum and regulatory authorities, referred to as the “Bobby Calf Transport Forum”, met to discuss the welfare of young calves. Mortality rates of calves in transport or lairage to meat processing premises began being recorded in 2008 to measure improvements in calf welfare across the supply chain on a year by year basis.

Farm to Processors Animal Welfare Forum

The Bobby Calf Transport Forum was broadened to include other organisations over time and became known as the “Farm to Processor Animal Welfare Forum” (FTPAWF). In 2010 the FTPAWF became the formal government and industry forum to discuss animal welfare issues, when Minister Carter established the “Safeguarding our Animals, Safeguarding our Reputation” programme.

The approach taken by the Forum has been largely educational and focussed on “willing compliance” to achieve improvements in calf welfare and a reduction in calf mortality during the period of transport and lairage prior to slaughter. Some activities that have been driven by the FTPAWF, and its governance body of Chief Executives, include:

- Disseminating information on best practice to farmers, transporters and processors
- Ensuring farmers, processors and transporters clearly understand their responsibilities regarding animal welfare
- Updating organisations’ guidelines in line with best practice

Safeguarding our Animals, Safeguarding our Reputation Programme (Safeguarding programme)

The Safeguarding programme develops resources to communicate best practice and regulatory requirements to industry, and disseminates this information through workshops, speaking at events and meeting with specific stakeholder groups. The bobby calf programme has been one of the major pieces of work of the Safeguarding programme since its inception.

In the run up to the 2015 calving season, the MPI Safeguarding team continued to deliver actions involving extensive engagement with industry groups on a number of issues such as:

- Fitness for transport and correct preparation of calves prior to transport
- The prohibition of blunt force trauma
- Awareness of codes of welfare and minimum standards within them

The Safeguarding programme engages with industry to ensure that Government is working collaboratively with them, which aids in increasing welfare through awareness and education.

In addition, the Safeguarding programme is coordinating a research project by Massey University that is investigating reasons for bobby calf mortality during transport and in lairage, and is exploring welfare indicators that can be used in addition to mortality rate.

While a significant reduction in calf mortality was seen from 2008 to 2014, improvements through voluntary compliance were not consistent across the industry, with some processing facilities reporting higher mortality rates than others.

Bobby Calf Action Group convened in 2015

Allegations of calf mistreatment across the supply chain were highlighted in the media in late 2015. A Bobby Calf Action Group (BCAG) was formed at the end of 2015 to accelerate and add to existing measures aimed at ensuring everyone involved with bobby calves applies best practice in their handling and care. The BCAG is made up of DairyNZ, Dairy Companies Association of New Zealand, Meat Industry Association, Federated Farmers, New Zealand Petfood Manufacturers Association, Road Transport Forum, New Zealand Veterinary Association and the Ministry for Primary Industries.

The group developed the Bobby Calf Action Plan to ensure that activities were shared and coordinated across the whole sector. The plan has 5 components

- (i) Leadership and Co-ordination
- (ii) Provide advice to MPI on development of regulations
- (iii) Compliance, Verification and Assurance
- (iv) Communications
- (v) Science.

BCAG actions focus on areas such as:

- further education about young calf fitness for transport;
- encouraging communication between transporters, farmers and processors; and
- providing good practice information to farmers about acceptable facilities and shelter for young calves.

Key activities that have resulted from the BCAG

Some examples of activities that have resulted from the BCAG include:

- Industry groups such as DairyNZ developing resources to support farmers including online information, pamphlets, posters, and tools to assist with the monitoring of on-farm calf management, and the pickup and transportation
- Training workshops developed by DairyNZ and delivered by vet clinics focussing on providing practical training on the care of calves, preparation and selection for transport
- Reviewing and updating supply agreements and industry group codes of practice to reflect higher welfare standards
- Increased communication and consistent messaging across the whole of sector to ensure educational material and expectations are being disseminated to individuals
- Worked with MPI on development of the Animal Welfare (Calves) Regulations 2016 under the Animal Welfare Act 1999.

Correlation between initiatives and mortality rates

MPI development of mortality standards

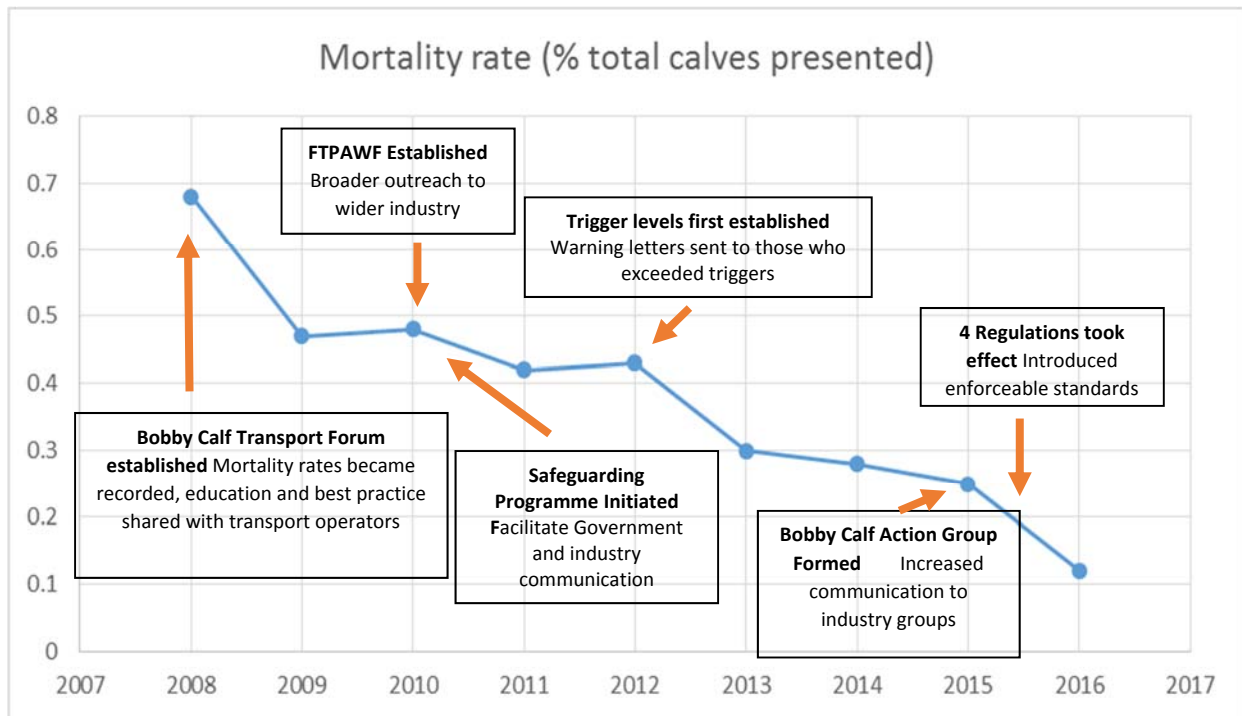
In tandem with these joint industry-government groups, MPI has developed standards to improve the monitoring of animal welfare. As an example, in 2008 Verification Services developed an animal welfare procedure specifically for bobby calves in consultation with the Bobby Calf Transport Forum. This procedure was developed to ensure a consistent approach by Verification Services veterinarians at meat processing facilities when responding to mortalities in bobby calves presented for slaughter. From 2012 this procedure included mortality “triggers” for suppliers, transporters and processors. These triggers identified a point at which the number of dead calves per consignment (supplier), transport load (transporter) or a day’s scheduled number to be processed, was exceeded and what response was expected.

If trigger levels were exceeded a response was initiated and a warning letter or corrective action request sent to the supplier, transporter or processor by the MPI veterinarian. The letters are encourage improvements in calf welfare by making it clear to each group when there was a welfare concern seen and holding them accountable for it.

Trends in mortality rate at meat processing premises

The overall trend in mortality rate for calves at meat processing premises, as seen in the graph below, has been declining steadily since 2008, thanks to ongoing industry change supported by these groups.

Education and voluntary compliance initiatives were successful in driving the mortality rate down significantly until 2013, when progress slowed. The reduction in young calf mortality rates between 2013 and 2015 was relatively small.



Graph 1 - Declining mortality rates of young calves since 2008

While the majority of players in the supply chain had good animal welfare standards by 2015, some resistance was still seen in certain areas. With a lack of enforceable rules, a number of premises were seen to still have comparatively high mortality rates. At the same time, MPI as the regulator had less regulatory tools with which to drive behaviour change.

Part B - Developing Regulations to respond to remaining welfare concerns

Although progress was made through the FTPAWF, BCAG and Safeguarding programme, between 2013 and 2015 the rate of improvement in calf mortality through non-regulatory intervention had slowed. When the Animal Welfare Act 1999 was amended in 2015, it became possible to develop regulations to target those who had not responded to voluntary measures.

Animal Welfare Act 1999

The Animal Welfare Act 1999 (the Act) sets out fundamental obligations relating to the care of and conduct towards animals in New Zealand. The Act contains offences and penalties that address significant acts of cruelty, neglect or ill treatment that are enforceable through a full-scale criminal prosecution and which can result in significant fines and/or sentences of imprisonment.

The Act provides for basic minimum standards or best practice guidelines for the care of specific species of animals or particular activities to be set out in Codes of Welfare. Codes of welfare are developed by the National Animal Welfare Advisory Committee (NAWAC). NAWAC provides independent and expert advice to the Minister on a range of animal welfare matters, including the development of codes of welfare. Minimum standards in codes of welfare do not have associated offences or penalties and cannot be directly enforced.

Young calves are covered by the codes of welfare for dairy cattle (2014), commercial Slaughter (2010), transport within New Zealand (2011), and sheep and beef cattle (2010).

In 2015 the Act was amended to enable specific minimum standards to be elevated into regulations with directly associated offence and penalty provisions. This means that some of the minimum standards set out in the codes can now be made directly enforceable.

Following this change, the first regulations to be developed and passed relating to care and conduct were the Animal Welfare (Calves) Regulations 2016.

Development of the Animal Welfare (Calves) Regulations 2016

Throughout 2016 MPI developed and consulted on a range of animal welfare regulations, including seven regulations dealing with young calves. The proposals aimed to take standards of good practice in the industry and make them statutory requirements across industry. The new regulations span the whole supply chain and have an effect on farmers, transporters, saleyards and processors.

Some of the regulations reflect existing minimum standards in the current codes of welfare, but are now directly enforceable. The minimum standards within codes of welfare reflect good practice, scientific knowledge and available technology at the time when they were developed.

Some of the regulations introduce requirements that go further than minimum standards, either by being more specific than the current minimum standard or updating requirements to a higher standard. All seven regulations represent standards that are already being achieved by many practitioners and which are recognised in the industry as current good practice.

The Animal Welfare (Calves) Regulations 2016 are outlined on the following page.

Four of the regulations took effect from 1 August 2016, partway through the 2016 spring calving season. They:

- Prohibit the use of blunt force trauma to kill any calf, unless in an emergency
- Prohibit the transport of young calves by sea across Cook Strait
- Limit the duration of transport for young calves to 12 hours
- Require calves be fit for transport (display certain physical characteristics) and be at least 4 days old before transport.

Three regulations will take effect in 2017, allowing time for farmers and processors to make any necessary changes to their business systems or infrastructure. These require that:

- Young calves must be slaughtered as soon as possible after arrival at the slaughter premises or be fed if not slaughtered within 24 hours of the last feed on farm. If calves are unwilling and unable to feed, they must be euthanised or slaughtered immediately – took effect February 2017
- Suitable shelter must be provided for young calves before and during transport, and at points of sale and slaughter – taking effect August 2017
- Loading and unloading facilities must be provided and used when young calves are transported for sale or slaughter – taking effect August 2017

The full text of the regulations can be found at www.legislation.govt.nz.

Impact on transport industry

Farmers only deal with their own calves each season, and processors have specialised facilities and staff. Transport operators handle calves from many sources in a short season and have little control over the condition of calves at the time of pick-up. MPI and other participants in the Bobby Calf Action Group have worked closely with the transport industry to provide resources to enable transport operators to meet their legal requirements.

The transport industry responded well to the new regulations. The number of unfit calves being left behind by transport operators increased significantly, which has contributed to the drop in mortality rates across the season overall. Transport operators provided training to drivers on identifying unfit calves, and this training clearly paid off in terms of drivers' confidence and competence in rejecting calves that were unfit to travel.

Verification and auditing

Verification vets at meat slaughter premises

MPI employs over 200 vets at meat processing premises who are warranted Animal Welfare Inspectors under the Act, and part of their role involves animal welfare compliance at processing premises. An ante-mortem inspection is undertaken on calves to establish both the fitness for slaughter and the state of welfare of the calves on arrival. Calves may be condemned for immediate euthanasia on arrival, or later on in the yards, if they have compromised welfare. In addition, calves at some petfood plants and saleyards are inspected as part of other verification programmes.

Prior to the 2016 bobby calf season an autopsy of representative numbers of dead calves was an option as part of the incident investigation by the MPI Verification Services veterinarian. For the 2016 bobby calf season the Verification Services procedure was amended to require an autopsy to be conducted on every calf that died during transport to, or at slaughter premises for human consumption (i.e. dead on arrival, condemned on arrival, dead in yards, condemned in yards).

This was related largely to the implementation from 1 August 2016 of calf regulation 6 – fitness for transport which enabled the issuing of infringement notices to persons in charge of calves. An autopsy can, in many cases, indicate the cause of death, whether the calf was sick or injured prior to transport, or whether preventative measures could have been taken to mitigate the risk of harm to the calf during transport or while in lairage.

As such, information from autopsies may indicate whether the death could be reasonably attributed to a specific person in charge, and can also be used as evidence to support the issue of an infringement notice or prosecution under the regulations. It can also be used to target educational activities where they are most needed.

Results from 2016 indicate that the majority of calves dying were condemned by veterinarians rather than being found dead. On average, calves are transported a little over 5 hours, with some journeys extending up to 16 hours. Calves were held in lairage on average for 14 hours, though up to 28 hours has been recorded. Note that extended lairage times are expected to be addressed through the implementation of regulations coming into force from 1 February 2017.

The three most common signs of disease/defect noted at the inspection of live calves prior to euthanasia were calves being weak, recumbent, and/or thin. The three most common signs of disease/defect noted during autopsies were enteritis (inflamed gut), inflamed umbilicus and scour. These outcomes will be discussed with farmers, transporters and meat companies with a view to identifying causes and education to reduce the problems.

Verification and mortality reporting at petfood processing facilities

Petfood processing facilities are bound by the same animal welfare regulations that meat processing facilities must follow.

Petfood processing facilities do not have a full-time presence of MPI Verification Services vets monitoring calves arriving at the premises. Human meat consumption premises require this full time oversight to fulfil market access requirements for food safety. Regular audits of petfood processors are completed under the Animal Products Act.

Following the release of video footage in 2015, some of which was captured at petfood processing facilities, the petfood industry agreed on voluntary recording and reporting of mortality figures of calves arriving at petfood premises in the 2016 season to the Petfood Manufacturers Association. These figures were reported to MPI Verification Services, who were also made aware of non-compliance with regulations through regular audits. Statistics were also recorded on numbers of calves processed at petfood slaughter premises.

This information sharing agreement will be continued in 2017, and has been strengthened by the signing of a Memorandum of Understanding between MPI and the petfood industry.

On farm verification programme

MPI has an on-farm and sale yards verification programme, involving visits to selected farms and sale yards by veterinarians from MPI Verification Services. This meets European Union requirements for verification of the Animal Status Declaration (ASD) when livestock are processed for export to the European Union, and also provides an opportunity to examine on-farm animal management practices.

1200 visits are to be completed in 2017, of which 300 are focussed specifically on the dairy sector. Dairy farm visits are principally conducted by a team of vets with experience in the dairy sector. A number of visits to dairy farms will be targeted to those dairy farms where there have been issues identified with the welfare of dairy calves and/or dairy cows sent for slaughter.

The on-farm visits involve verification of compliance with the statements on the ASD, including whether the supplier is meeting the Animal Products Act 1999 requirements and animal welfare systems and practices. If the farm is non-compliant, the supplier will be notified and given an opportunity to respond. If the non-compliance is not resolved, the matter will be escalated, which may prevent the farm from supplying processors for the European market.

At the same time as the on-farm verification visit, verifiers may exercise their inspection powers under the Animal Welfare Act. If there is evidence of a breach of the Animal Welfare Act, including the Calf Regulations, further action may be taken, including possible referral of the case to MPI's Compliance team for investigation.

Compliance regime

The majority of calves covered by the regulations come from commercial farms. Compliance therefore is undertaken primarily by animal welfare inspectors employed by MPI in response to a complaint. There are a very small number of (young) calves on lifestyle blocks where inspection in response to complaints is more often undertaken by warranted animal welfare inspectors employed by the SPCA.

The new regulations allow for infringement notices to be issued under the Animal Welfare Act 1999 or prosecutions to be taken under the regulations:

Infringements

The agreed response to an offence against regulation 6 in the 2016 season was for a warning letter to be sent to an owner or person in charge of a calf (which could include the transporter) to inform them that they had not been meeting the requirements as set out in the regulations. If a warning letter had already been sent, and a person contravened the regulation again, an infringement notice was issued, or if the severity warranted it the case was referred for investigation and possible prosecution.

In the spring 2016 calving season the majority of breaches were of regulation 6 – relating to requirements around fitness for transport, an infringement offence with a fee of \$500.

Prosecutable offences

The remaining three regulations that took effect last season have prosecutable offences attached to them. Any incidence that contravenes these regulations is referred to MPI compliance for consideration for prosecution.

Any animal welfare case that is of a sufficiently severe nature or involves a large number of animals is still able to be recommended for a prosecution under the Animal Welfare Act 1999. Prosecution under the Act means that on sentencing more significant penalties are available, including bigger fines, sentences of imprisonment or orders disqualifying an offender from owning animals.

Part C - Results from the implementation of these regulations

Compliance with the regulations this season

Infringements

The major compliance focus for the 2016 season has been on regulation 6 which requires calves to be at least 4 days of age and physically fit before being transported.

Since 1 August, this season saw 23 referrals from veterinarians at slaughter premises for further investigation and possible infringement. These were where transporters or farmers had presented for transport, or transported young calves on more than one occasion that were not fit for transport, or were injured in transit, and resulted in the calves dying or being condemned prior to slaughter.

Number of infringements issued since 1 August 2016

	Warning letters	Infringements
Farmers	208	2
Transporters	127	10
Total	335	12

In total, ten infringement notices of \$500 were issued to transport operators for repeat offending. These offences were for transporting calves that were not physically fit to be transported. In all cases the transport companies had received a warning letter for the first occasion a breach was detected in the 2016 spring season. Because transport companies move multiple loads of calves during a season, they have a higher probability of committing a second breach after receiving a warning letter.

One dairy farmer received two infringement notices for transporting calves that were less than four days old and transporting scouring calves. The farmer had received a warning for a similar breach of regulation 6 earlier in the bobby calf season.

There are 12,000 dairy farms in New Zealand. The number of farmers that have received warning letters and infringements in the 2016 season is proportionally low.

The Road Transport Forum estimates that there are approximately 180 livestock transport companies in New Zealand. Given that 1.9 million calves were transported this season the number of warning letters and infringements issued to transport operators is relatively low.

Prosecutable offences

Only three cases of non-compliance have been seen with the remaining regulations. Issues that have been picked up relate to two cases of blunt force trauma being used to euthanise calves, and one instance where transport time was longer than 12 hours.

Number of prosecutions	Blunt force trauma	Transport over 12 hours	Transport across Cook Strait
Transporters	-	1 warning letter issued	-
Farmers	1 case being investigated	-	-
Processors	-	-	-

In the case involving a breach of the maximum duration for transport requirements mechanical failure outside the driver and company's control was involved. MPI animal welfare inspectors spoke to those involved and a warning letter was issued.

As a result of an on-farm inspection by a Verification Services veterinarian, six bobby calves were found to have been euthanized using blunt force trauma.

In this case it can be proven that several blows were used to kill the bobby calves which would have caused them significant pain and distress. It may be appropriate to charge pursuant to the Animal Welfare Act 1999 rather than the Young Calf Regulations 2016, and a decision on this is pending.

A complaint was received from a member of the public in August 2016 in regard to how young calves were being raised. Upon inspection by an Animal Welfare Inspector, 6 recently dead calves were found and 13 young calves were found in an emaciated condition. Charges have been laid pursuant to the Animal Welfare Act 1999.

[Mortality results from 2016 season](#)

Throughout the 2016 calendar year, industry representatives and MPI worked across the supply chain to implement a number of non-regulatory initiatives intended to increase awareness of appropriate management and handling practices for young calves. Four of the regulations took effect from 1 August 2016, part-way through the spring calving season for most parts of the country.

Results from the spring 2016 season

The 2016 calf season saw a further improvement in calf welfare as indicated by calf mortality. The season's average calf mortality for all premises combined for 2016 was 0.12%. The table below shows that this season has seen a fifty percent reduction in mortality rates from the 2015 season, and represents a significant improvement, both from last season's result of 0.25% but also from the initial mortality rates of 0.68% first recorded in 2008.

Number of calves processed and mortality rate comparison 2015 and 2016 calving season

	2008 Season	2015 Season	2016 Season
Total number of calves	1,515,189	2,171,995	1,935,054
Mortality rate	0.68%	0.25%	0.12%
Number of calves dead or condemned prior to slaughter	10,275	5,390	2,255

Mortality at pet food plants in 2016

Unlike plants processing meat for human consumption, MPI does not have a permanent veterinary presence at petfood processing plants. The petfood industry agreed in 2016 to supply MPI with data on mortality collected by each of the three petfood processing plants.

These plants report a decline in mortality in 2016 to a level of 0.03%, which is lower than the mortality rate recorded at plants processing for human consumption. MPI notes that the information is collected by different means, and therefore may not be directly comparable.

The pet food industry notes that they typically process much smaller numbers of calves, and calves are slaughtered very soon after arrival at processing plants. Time to slaughter is a significant factor in calf mortality.

VARIATION BETWEEN PREMISES IN CALF MORTALITY

Although the positive result of the 2016 spring calving season is in part likely to be reflective of the impact of regulations and the efforts of industry during the 2016 calving season, it is important to note that a mild winter and spring meant calves faced fewer environmental stresses in most parts of the country. While not necessarily affecting the percentage mortality, the number of calves processed overall was lower than 2015, reflecting a decrease in dairy cow numbers, and potentially high prices for weaned calves leading to a greater number sent for beef rearing rather than to slaughter as bobby calves.

Individual premises

An increasing proportion of premises are recording low calf mortality rates.

	Mortality rate of 0.2% and below	Mortality rate of 0.1% and below
2014 Season	39%	13%
2015 Season	50%	23%
2016 Season	77%	57%

Isolated instances of ongoing poor performance

Whilst all premises have shown a reduction in mortality rates since the 2015 calving season, a number of premises have persistently higher than average mortality rates. Often these premises exceeded mortality rates of 0.20%, and in some cases reached mortality rates as high as 0.30%.

Premises that continue to exhibit higher rates of mortality are typically those who routinely hold calves overnight in lairage and process them on the day following the calves' arrival at the slaughter premises, rather than on the day of arrival.

New regulation 10 came into effect on 1 February 2017, and requires calves must:

- be slaughtered as soon as possible after arrival at the slaughter premises; and
- be fed if not slaughtered within 24 hours of the last feed on farm; or
- if unwilling or unable to feed, be euthanised or slaughtered without delay.

MPI expects that this regulation will address the practice of routinely holding calves overnight, so that mortality rates at those processing plants will come into line with the standards being met elsewhere in the processing industry.

Conclusion

A combination of industry and Government initiatives have contributed to significantly reducing the mortality rate for young calves prior to slaughter. Over the past 8 years the whole industry has worked together to improve the welfare standards of young calves. This has been seen through the establishment of the Farm to Processors Animal Welfare Forum, Safeguarding Programme and more recently the Bobby Calf Action Group.

The development of regulations built on this work by providing MPI with the tools to take direct action without having to rely solely on education or a prosecution under the Act. While this must be taken in the context of the other conditions of the season, including mild weather, the regulations have contributed to improvements in calf welfare. Subject to weather conditions in 2017, it is expected that young calf mortality rates will continue to drop further in the 2017 season following the implementation of the complete set of calf regulations.

Next Steps

The remaining three regulations take effect in 2017. Regulation 10 pertaining to the maximum time between final calf feeding and slaughter took effect on 1 February 2017, while the remaining two regulations regarding shelter and loading facilities will take effect from 1 August 2017.

MPI has agreed a compliance and verification plan for the implementation of all 7 calf regulations in 2017. MPI will be doing further work on the animal welfare operating model and underlying policy framework to support future MPI animal welfare activity including resolving MPI's role in proactive vs reactive animal welfare activities and cost recovery implications. It will also continue to coordinate the research project on calf mortality reasons and welfare indicators.

MPI will continue to work alongside key industry groups to ensure that farmers, transporters and processors know what is required of them to meet these new Regulations.

In the following seasons, MPI will continue to monitor the implementation and effectiveness of the Regulations, and will review whether any further or alternate action is required.

A further report summarising the above and the 2017 calving season will be produced in 2018.