



Mortality rate in young calves in the 2017 spring calving season

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Executive summary

This report details the impact of initiatives, including the introduction of animal welfare regulations, on young calf mortality rates in the 2017 season. For the second consecutive season, combined industry and MPI-led initiatives have resulted in significant reductions in calf mortality rates. In each of the past two spring seasons, mortality rates have halved.

Young calves (also known as bobby calves) are vulnerable animals. The New Zealand dairy industry produces more calves than can be absorbed by the dairy sector as replacements, or by the beef sector for rearing. Surplus calves are often transported and slaughtered for meat and other animal products from 4 days of age.

Since 2008 MPI veterinarians at processing premises have recorded mortality rates of young calves as the best current proxy for young calf welfare. Mortality rates are calculated from the number of calves dying, or being euthanised for welfare reasons (referred to as condemnation), during transport to, upon arrival, and in lairage¹ at processing premises.

Because of concerns for the vulnerability of young calves, both the Ministry for Primary Industries (MPI) and industry groups have worked to promote best practice and high welfare standards in the dairy industry. Up to 2015 work was largely based around education and voluntary compliance using the minimum standards in the codes of welfare. This resulted in the mortality rates of calves reducing from 0.68% in 2008, to 0.25% in 2015.

From 2015 industry and MPI have developed additional initiatives to further improve welfare outcomes for calves from farm to slaughter. These initiatives include:

- research into identifying risk factors for calf mortality and indicators for calf welfare as an alternative to mortality rate;
- communicating best practice and ensure everyone clearly understood their animal welfare responsibilities;
- developing resources and tools to support calf management across the supply chain; and,
- an amendment to the Animal Welfare Act 1999 (the Act) enabling regulations to be made.

Regulations are directly enforceable, and so provided effective tools for addressing incidences of low to medium level offending. The first animal welfare regulations to be developed were the Animal Welfare (Calves) Regulations 2016 (calf regulations). These regulations targeted specific areas of concern across the whole supply chain from calves on farm up until they are processed for slaughter.

The calf regulations were implemented over a 2 year period. The first 4 regulations took effect in August 2016 and helped to reduce the calf mortality rate to 0.12%.

The remaining regulations were implemented in February and August 2017. Following the implementation of the full suite of regulations, the mortality rate reduced to 0.06% in 2017, the lowest rate yet recorded.

The commitment of people across the entire supply chain to both communicate and implement good animal welfare practices, supported by clear regulations, has resulted in a substantive improvement in the welfare of calves since 2008.

This report details the results of the 2017 season.

¹ Areas for holding livestock prior to slaughter.

Part A – Industry and MPI have been working on improving calf welfare since 2008

Ensuring high standards of welfare for calves is recognised as a priority and at the heart of good farming practices. It is the collective responsibility of both MPI and industry.

Together, MPI and industry groups have been working to lift the standards of calf welfare since 2008. Joint initiatives began with the Bobby Calf Transport Forum in 2008, and have since evolved to include the Farm to Processors Animal Welfare Forum, the MPI Safeguarding Programme, the Bobby Calf Action Group and the Bobby Calf Working Group (BCWG)². For more detail on the make-up of these groups, and the actions they undertook prior to the 2017 spring calving season, refer to the report titled *Mortality rates in bobby calves 2008 to 2016* at www.mpi.govt.nz/calves.

Surplus young calves in the dairy industry (commonly called bobby calves) are typically transported and slaughtered for meat from 4 days of age. The welfare of these calves is measured through the number of calves that die or are condemned due to welfare reasons upon arrival, or prior to slaughter, at processing premises. This number is referred to throughout this report as the mortality rate, and unless otherwise stated, relates to calves processed for human consumption purposes (referred to as meat processing premises), rather than petfood (referred to as petfood processors).

Typically around 95% of bobby calves that are slaughtered are processed at meat processing premises, with the remainder at petfood processors. The numbers in this report refer only to calves processed in the spring calving seasons. It does not include the small number of calves processed in the autumn season as the bulk of all young calves are born and processed between June and November.

MPI has collected mortality data at meat processing premises since 2008 to measure the improvements in calf welfare across the supply chain, year by year. The overall mortality rate includes all calves that fall into the following four categories: dead on arrival, condemned on arrival, dead in yards or condemned in yards.

Although only a proxy measure of calf welfare, the consistent recording of the mortality data allows the large scale trends to be tracked. MPI is currently supporting operational research into more sophisticated measures of calf welfare, addressed later in this report. At present, however, the mortality rate of calves in transport to, or in lairage at, meat processing premises is the primary proxy measure of calf welfare used.

In November 2015, a campaign by advocacy groups revealed a number of cases of serious mistreatment of calves in the dairy industry. The campaign aired on national television in New Zealand, and was used as the basis for an international campaign associating New Zealand dairy farming with cruelty. A number of successful criminal prosecutions were undertaken as a result of MPI's investigation into footage shown in the campaign. However, MPI recognised there was a lack of compliance tools to deal more rapidly with lesser instances of poor handling and mistreatment.

² The Bobby Calf Working Group is chaired by the Meat Industry Association, and includes membership from MPI, DairyNZ, the Dairy Companies Association of New Zealand, Federated Farmers and the Road Transport Forum.

Part B – Regulations were developed to complement existing industry and MPI initiatives

In 2016, regulations were developed to address low to medium level offending

The care and welfare of young calves is covered by the Animal Welfare Act 1999 (the Act) and relevant codes of welfare. Codes of welfare contain minimum standards pertaining to young calves but these are not directly enforceable.

In 2015 the Act was amended to provide the ability to create directly enforceable regulations for low to medium level offending.

In 2016 MPI created the first suite of directly enforceable regulations under the Act; the Animal Welfare (Calves) Regulations 2016. These calf regulations were designed to complement the codes of welfare, education programmes, supply chain system improvements, workshops and awareness campaigns that were already contributing to improved calf welfare.

MPI consulted with the public, industry and other groups to develop regulations that addressed areas of low to medium level offending across the supply chain - on farm, throughout transport and at processing premises. The regulations introduced an infringement and lower-level prosecution framework to drive behaviour change.

The majority of the regulations apply to young calves (defined as a bovine up to 14 days old that has been separated from its mother), with the exception of the prohibition on killing a calf using blunt force, which applies to any calf.

These regulations are summarised below:

- Blunt Force Trauma Regulation - calves must not be killed by blunt force to the head except in an emergency situation where there are no other alternatives for humane destruction;
- Fitness for Transport Regulation - when a young calf is transported for sale or slaughter it must:
 - be at least four full days of age,
 - be free of any illness, injuries or disabilities,
 - be alert and able to stand and move freely, and
 - have firm hooves and a shrivelled navel cord;
- Maximum Duration of Transport Regulation - a young calf must not be transported for more than 12 hours from farm to its final destination;
- Loading and Unloading Facilities Regulation - loading and unloading facilities must be provided and used when loading calves onto or off of stock trucks for the purpose of sale or slaughter;
- Shelter Requirements Regulation- appropriate shelter must be provided for calves before and during transportation, and at points of sale or slaughter;
- Maximum Time Off Feed Regulation - calves are to be slaughtered as soon as possible after arrival at the processing premises, and within 24 hours of the last feed on farm. If the calf is unable to be killed within 24 hour, regulation 10 allows for calves to be fed in lairage at slaughter premises. If the calf is unable or unwilling to feed, it must be humanely euthanised or slaughtered without delay; and
- Transport Across the Cook Strait Regulation - young calves must not be transported by sea across the Cook Strait.

The associated penalties for regulations and their commencement dates are outlined in the table below.

	Offence	Commencement date
Prohibition on killing calves by blunt force to the head	<i>Prosecutable offence</i> A person who contravenes this regulation is liable on conviction, - a) for an individual, to a fine not exceeding \$3,000 b) for a body corporate, to a fine not exceeding \$15,000	1 August 2016
Fitness for transport	<i>Infringement offence</i> Infringement fee of \$500. An infringement can be issued for each calf unlawfully transported.	1 August 2016
Maximum duration of transport	<i>Prosecutable offence</i> A person who contravenes this regulation is liable on conviction, - a) for an individual, to a fine not exceeding \$5,000 b) for a body corporate, to a fine not exceeding \$25,000	1 August 2016
Requirements for loading and unloading facilities	<i>Penalty for not having facilities – infringement offence</i> Infringement fee of \$500 <i>Penalty for not using facilities – Prosecutable offence</i> A person who does not use the facilities is liable on conviction, - a) for an individual, to a fine not exceeding \$2,000 b) for a body corporate, to a fine not exceeding \$10,000	1 August 2017
Shelter requirements before and during transport, and at points of sale or slaughter	<i>Prosecutable offence</i> A person who contravenes this regulation is liable on conviction, - a) for an individual, to a fine not exceeding \$2,000 b) for a body corporate, to a fine not exceeding \$10,000	1 August 2017
Maximum time off feed prior to slaughter	<i>Prosecutable offence</i> A person who contravenes this regulation is liable on conviction, - a) for an individual, to a fine not exceeding \$5,000 b) for a body corporate, to a fine not exceeding \$25,000	1 February 2017
Prohibition of transport by sea across the Cook Strait	<i>Prosecutable offence</i> A person who contravenes this regulation is liable on conviction, -	1 August 2016

	a) for an individual, to a fine not exceeding \$5,000 b) for a body corporate, to a fine not exceeding \$25,000	
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You can view the full detail of the Animal Welfare (Calves) Regulations 2016 on the New Zealand legislation website or on the MPI website at www.mpi.govt.nz/calves.

Regulations that took effect in 2016 and their impact on mortality rates

Four of the Animal Welfare (Calves) Regulations 2016 took effect on 1 August 2016:

- Blunt Force Trauma;
- Fitness for Transport;
- Maximum Duration of Transport; and
- Transport Across the Cook Strait.

Industry groups worked alongside MPI to ensure that information on the new regulations was disseminated across the supply chain, and that suppliers³, transporters and processors understood their obligations under the regulations.

Overall, there was impressive uptake of the regulations by the whole industry. A noticeable improvement in the quality of the calves being transported was seen, part of which can be attributed to transporters being vigilant in rejecting calves at the farm gate that were not considered fit for transport.

At the close of the 2016 spring calving season, the mortality rate of young calves was down to 0.12%. More detail about the initiatives from 2008 to 2015 and the 2016 spring calving season can be found in the report titled *Mortality rates in bobby calves 2008 to 2016*.

Part C – The remaining regulations took effect in 2017

Three remaining regulations took effect in 2017:

- Loading and Unloading Facilities;
- Shelter Requirements; and
- Maximum Time off Feed.

Subsequent implementation of these three remaining regulations allowed suppliers, transporters and processing premises enough time to get their business systems, supply agreements and infrastructure ready in time for the regulations to take effect. Implementation of these three regulations relied on industry and MPI working closely together.

Maximum time off feed prior to slaughter

This regulation requires that a young calf must be slaughtered as soon as possible after arrival at the slaughter premises, and within 24 hours of the last feed on farm. It applies to all processors of calves, whether the calves are destined for human consumption or petfood. The regulation requires a system to be in place that, if followed, will ensure compliance with the regulation.

³ Suppliers are all people who may send young calves to slaughter as bobby calves. This may include farmers, and persons in charge of calves at a saleyards or rearing facilities

The responsibility for having a system in place to ensure that the requirements of the regulation are met falls on the processor, however communication between suppliers, transporters and processors is essential.

The Meat Industry Association developed a system to ensure processors met the requirements of this regulation for calves slaughtered at processing premises. The system requires communication between all players across the supply chain to ensure that times of last feed and pick up times are recorded on dockets for each farm consignment and passed to the processor. All 29 processors implemented this system.

Requirements for loading and unloading facilities

This regulation requires that facilities must be made available to allow the calf to walk onto and off the stock truck by its own action, and to minimise risk of the calf slipping, falling or otherwise injuring itself. This applies in situations where young calves are going to be loaded onto or unloaded from a stock transport vehicle, including on farm, at a saleyard, and at a processing premises.

The wording of this regulation permits individuals to meet the requirements in a way that best suits their particular circumstances. Guidance for appropriate loading facilities was made available on the DairyNZ website, and codes of welfare contain further information.

Under this regulation, responsibility for the provision of loading and unloading facilities does not apply to the transporter. However, the use of unloading and loading facilities does apply to transporters.

It also requires that transporters, and others involved in loading and unloading young calves for transport, must take all reasonable and practicable steps to ensure that young calves are not loaded onto or unloaded from a stock transport vehicle other than through the use of such facilities. The transport sector agreed not to collect calves if appropriate facilities were not present and the Bobby Calf Working Group developed messaging to this effect.

Shelter requirements before and during transport, and at points of sale or slaughter

This regulation requires that shelter must be provided that:

- is ventilated;
- provides protection from adverse weather;
- enables the young calf to stand up and lie down in a natural posture – so ensuring stocking density and roof height are chosen accordingly; and
- faeces and urine must not accumulate to the extent that may pose a threat to the health or welfare of the calf.

This regulation applies to an owner or person in charge where young calves are being held:

- before being transported off farm;
- at saleyards;
- at processing premises; and,
- applies to the transporter when the calves are on a vehicle used to transport them off farm or from a sales yard.

Similarly to the loading facilities requirement, DairyNZ published guidance material for shelter on farm which can be found on the DairyNZ website.

MPI worked with transport operators and processing premises throughout the season to ensure that the new requirements were clear and could be met. While no one particular design was endorsed by MPI, guidance was provided on a case by case basis when a supplier, transport operator, or processor was unsure of how to meet the requirements.

Engagement by the Bobby Calf Working Group, industry and MPI helped to spread the message of the new regulations in 2017

A range of activities and initiatives were coordinated through the Bobby Calf Working Group (BCWG). MPI's education programme, *Safeguarding our Animals, Safeguarding our Reputation*, also targeted activities in line with calf regulations. Various sectors and groups also employed their own educational and communications initiatives.

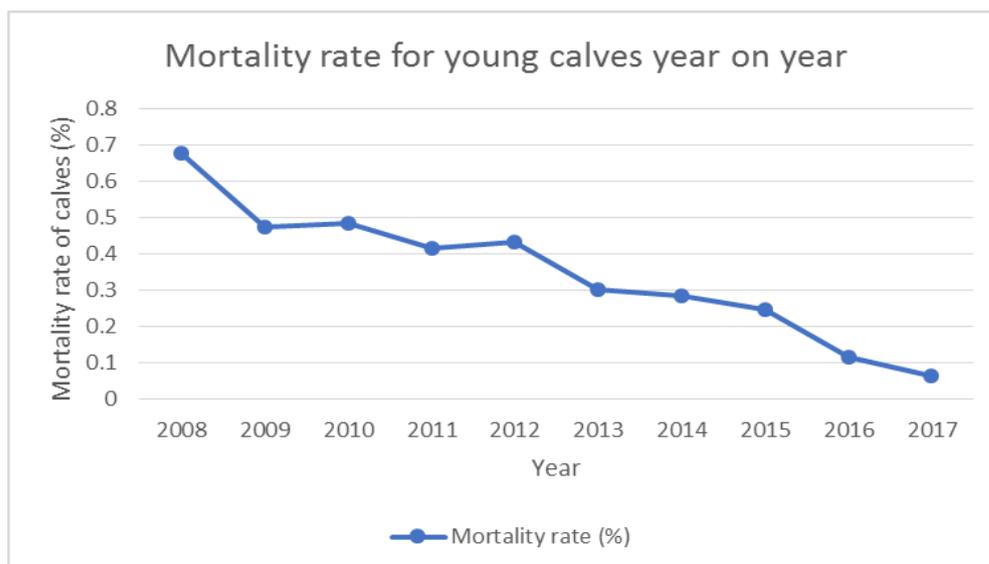
Key activities and overall outputs included:

- Industry-led events for farmers, transporters, processors and others, including Federated Farmers meetings, DairyNZ training sessions, and regional meetings;
- MIA-led project to develop an app for communication along the calf supply chain;
- Educational flyers for farmers and online guidance material;
- Dedicated MPI web page for calves (www.mpi.govt.nz/calves);
- A programme of MPI attendance at field days, events and meetings around the country to spread the message of the new requirements, and allow individuals to ask questions regarding the regulation;
- Guidance documents covering calf handling, loading, selection for transport, and euthanasia;
- Four videos for transporters on the young calf regulations. The videos cover the importance of good calf welfare, fitness for transport, loading facilities, and handling calves (see www.mpi.govt.nz/calfvideos);
- Fit for transport phone app updated for calf requirements; and
- Media articles and sector-specific internal communications.

Part D – Monitoring implementation of the regulations and decrease in mortality following implementation of the full suite of regulations

Mortality rate decreased in the 2017 season

Data on mortality rates has been collected since 2008, and a reduction in young calf mortality continues year on year as the graph below demonstrates. Through industry initiatives, and now regulations, this mortality rate has now reached its lowest level yet, 0.06% (approximately 1,100 calves of 1.77 million processed).



This mortality rate equates to a proportionally small number of calves, approximately 1,100 calves out of 1.77 million processed over the season. Of the young calves that were processed, approximately 1,773,809 were processed at meat processing premises. An additional 34,510 were processed for petfood.

Calves processed at meat processing premises

	2008 season	2015 season	2016 season	2017 season
Total number of calves	1,515,189	2,171,995	1,935,054	1,773,809
Mortality rate	0.68%	0.25%	0.12%	0.06%
Number of calves dead or condemned prior to slaughter	10,275	5,390	2,255	1,123
Number of calves dead or condemned per 10,000 calves	68	25	12	6

Across the 29 individual premises processing young calves, mortality rates ranged from 0.01% to 0.45%. Only 7 of these premises were processing at mortality rates higher than 0.10%, and 22 of these premises were processing with mortality rates less than 0.10%. Of the premises with higher mortality rates, 3 premises reported mortality of 0.20% or higher. MPI is working with the processors who are experiencing higher than average mortality rates to identify where changes can be made in their practices to further reduce calf mortality.

In the 2017 season, mortality in calves dead or condemned on arrival at processing premises reduced by 33% from the 2016 season, as calves generally arrived in a better condition. Mortality of calves dying or being condemned while in lairage at processing premises decreased by 68% from the 2016 season. This can be explained by a combination of calves arriving in better condition, and the requirement under the Maximum Time off Feed Regulation to process calves as soon as possible following arrival at a processing premises. This has resulted in a trend in the industry of calves being processed on the day of arrival.

The decrease in mortality rates between the 2016 and 2017 spring calving seasons reflects the proactive response of industry groups to ensure regulatory requirements are met. Reductions are also attributable to the higher quality of calves being processed, and an increase in monitoring and compliance action by MPI.

Improvements have been realised not only in the measured mortality rate of calves, but also in the general condition and welfare of calves destined for slaughter.

Mortality at petfood processors

The mortality rate at petfood processing facilities was notably lower than the meat processing premises, and sat at 0.034% average for the season. This reflects the smaller number of calves processed for petfood (only 34,510 processed), and the fact that calves are typically processed very soon after arrival at the plant. This mortality rate stayed stable between the 2016 and 2017 spring seasons.

This mortality rate may also reflect the recent legislative change that allowed petfood companies to slaughter calves on farm. Two petfood processors are known to have slaughtered approximately 8,000 of these calves on farm. This change meant fewer calves would therefore need to go through the process of transport and lairage at petfood processing premises.

Fewer calves were processed as bobby calves this season

Compared to 2016, fewer calves were processed as bobby calves in the 2017 spring calving season. MPI looked into what might have caused this reduction, and discovered a measurable decrease in the size of the national dairy herd that led to fewer calves being born in 2017, and therefore fewer calves to be processed as bobby calves.

This, coupled with the high prices at sale for feeder calves going into the beef rearing industry, and the increasing trend of suppliers switching to winter milking, contributed to the lower number of calves processed as bobby calves in the spring calving season.

Compliance with the regulations this season has been good

Mortality rates at processing premises have been the primary measure of animal welfare for the bobby calf industry since 2008. Higher mortality rates can be caused by a combination of factors that the 7 calf regulations were put in place to address. Feedback from MPI veterinarians and inspectors, as well as the transport and processing industries, indicates that the health and welfare of calves selected for transport and slaughter has improved significantly since the regulations were implemented.

Compliance with calf regulations is monitored jointly by MPI veterinarians from Verification Services through their presence at processing premises, and by animal welfare inspectors from MPI Compliance. Concerns about calf welfare can be reported through a complaint to the MPI 0800 number or, if related to a specific incident, through the On Farm Verification programme, the Follow the Trucks programme, or at slaughter premises. More details on these programmes can be found on page 14.

If there is evidence of an offence under the regulations or the Act, MPI will consider a range of options for dealing with offending. These may include providing education and assistance, issuing

formal warnings, issuing a compliance notice, or infringing or prosecuting under the regulations or the Act. The approach to issuing infringements and prosecutions is outlined below.

MPI veterinarians from Verification Services at meat processing premises for human consumption

MPI employs more than 200 veterinarians at meat processing premises who ensure food safety, and monitor animal welfare compliance on site. Calves that arrive at a meat processing premises are assessed by MPI verification services veterinarians at inspection, prior to slaughter. All calves that are unfit for transport or dead or condemned on arrival, or dead or condemned in the lairage, are assessed to determine the cause of death or condemnation (including autopsy).

Where the evidence gathered indicates non-compliance, MPI can issue an infringement and/or undertake further investigation for possible prosecution under the Act. Any investigation may include the farm owner, sharemilker, person in charge who signed the calf declaration, and/or the transporter.

Since 2008 MPI Verification Services has developed a procedure for dealing with unfit calves arriving at slaughter premises. These procedures ensure a consistent approach by processors when they assess calves on arrival at meat processing premises, and promote consistent messages to calf suppliers and transporters.

In conjunction with the industry, procedures are reviewed at the end of each calf season and as part of scheduled industry forums. The procedure will be reviewed again prior to the 2018 season to ensure it is fit for purpose.

Petfood processing premises

Petfood processing facilities do not have a full-time MPI veterinarian presence to monitor the welfare of calves, however these facilities are regularly audited under the Animal Products Act 1999. Part of this audit includes animal welfare compliance.

Earlier in 2017, MPI signed a memorandum of understanding with the petfood industry to provide data on mortality rates for young calves. This strengthened the agreement that was set up in the 2016 season to supply data to MPI on mortality rates, and allows for mortality at these plants to be monitored.

Infringement offences

Infringement offences result in a fee but no criminal conviction.

Two of the regulations have infringement offences attached to them: 6 (fitness for transport) and 8 (loading and unloading facilities).

Infringements issued

In total, 155 infringements were issued in the 2017 spring calving season, all of which related to breaches of the Fitness for Transport Regulation.

	2016 spring season	2017 spring season
Suppliers	2	130
Transporters	10	25
TOTAL	12	155

Under the Fitness for Transport Regulation, 130 infringements were issued to suppliers, and 25 infringements were issued to 12 transport operators. One of these infringements was issued for a defective calf that had been transported to a saleyard.

This number is significantly higher than the number of infringements issued in the 2016 season, due primarily to a change in the enforcement approach of the regulations, whereby a supplier could be infringed without warning. In 2016, in response to an initial breach of this regulation, a warning letter was issued to the supplier and/or the transporter. In 2017 this approach was amended, with the effect being that no warning letters were sent to suppliers. Warning letters continued to be sent to transporters, but if a second breach occurred, transporters would be subject to an infringement notice. A supplier could be infringed in the first instance if a breach of this regulation was detected.

This approach was taken because suppliers have more contact time with calves, and handle fewer calves than transporters. Transporters only see calves while loading and have limited time to make a decision regarding whether a calf is fit for transport or not. It was therefore agreed that a warning was still appropriate for transporters, but not suppliers.

The most common diseases/defects that resulted in infringements and warning letters under the Fitness for Transport Regulation were:

- contracted tendons,
- blindness in both eyes, and
- indicators that suggest calves were less than 4 days old.

These outcomes will be discussed with suppliers, transporters and meat processors with a view to identifying causes and delivering education to reduce the problems.

Prosecutable offences

Prosecutable offences under the regulations are more serious than an infringement offence and may result in a criminal conviction. A fine can be imposed by the court up to the maximum amount stated in the regulations, however there is no imprisonment associated with the regulatory offences. For this reason, prosecutable offences under the regulation are not designed to address the most serious animal welfare offences.

Animal welfare cases that are of a severe nature or involve multiple animals may still be considered for a prosecution under the Animal Welfare Act 1999, which carries more significant financial penalties and the potential for imprisonment or disqualification from owning animals.

Six of the regulations have prosecutable offences attached to them:

- Blunt Force Trauma Regulation;
- Maximum Duration of Transport Regulation;
- Loading and Unloading Facilities Regulation;
- Shelter Requirements Regulation;
- Maximum Time off Feed Regulation; and
- Transport Across the Cook Strait Regulation.

No prosecutions were undertaken under the regulations in the 2017 spring calving season. This demonstrates a high level of compliance and uptake by industry of the new requirements.

Monitoring activities are undertaken by MPI to monitor compliance with the regulations. A number of programmes are run by MPI to monitor the impact of, and compliance with, the regulations. These are explained below, and include:

- On farm and saleyards monitoring and verification programmes;
- A proactive 'Follow the Trucks' programme implemented by MPI in collaboration with the transport industry; and
- Monitoring and verification of humane destruction and compliance with the Blunt Force Trauma Regulation at calf slink⁴ processors.

On farm and saleyards verification programme

MPI runs an On Farm Verification programme (OFV) where 1,200 farms are audited per year. The 2017 OFV programme included monitoring compliance with the calf regulations. Over 300 audits were completed on dairy farms, 123 of these occurring when calves were present on-farm. A number of these dairy farm audits targeted farms where issues – for example, unexplained calf mortality -- were identified at the processing premises. On-farm findings indicate that calf management (feeding, shelter and selection for transport) has steadily improved, and in 2017 no cases were referred to compliance for prosecution under the regulations.

The OFV also includes monitoring of the calf regulations at saleyards, and a further targeted programme to monitor compliance by petfood processors.

In total, 37 saleyards were visited under the OFV. No significant issues were identified, although some trailers were deemed not to have adequate cover. The weather was good at the time and the people in charge of the animals were advised of the requirements. In addition to assessing fitness for transport, MPI provided educational material to suppliers whose trailers were not considered to have adequate shelter for calves.

In addition to the saleyards visited under the OFV programme, Animal Welfare Inspectors conducted 18 unannounced inspections of saleyards. As a result of these inspections, one supplier received an Infringement Notice for transporting an unfit calf to a saleyard in breach of the Fitness for Transport Regulation.

Follow the Trucks programme

MPI ran a proactive programme this season targeted specifically at the introduction of the three calf regulations that came into force in 2017 (loading and unloading facilities, shelter requirements, and maximum time off feed) and the fitness of calves presented for transport. This programme involved MPI vets and animal welfare inspectors accompanying transport operators and slink operators when picking up calves on farm.

The programme covered requirements for loading facilities, the provision of shelter, information provided by the supplier to meat processor, and obligations under the Maximum Time off Feed Regulation. The condition of the calves presented for transport was also inspected. It was largely

⁴ A slink is a young calf that dies of natural causes or is killed on-farm, and is typically sold for processing into by-products (primarily leather and pelts).

educational and focussed on having an MPI presence on farm to support the implementation of the regulations. No regulation infringements were issued from this programme. Two breaches for loading facilities regulations were dealt with by issuing Compliance Notices⁵ to suppliers, directing them to halt the transport of calves until the facilities were adequate. The notices were removed after the facilities were made compliant.

The programme was well received by industry and the majority of suppliers and transporters. It resulted in more than 400 dairy farms being visited, including a number of visits with a slink truck to monitor facilities on farm and to gain information about the reasons for the death of calves, including death from euthanasia by accepted methods. The programme is likely to be repeated next year.

MPI has also audited compliance with the Blunt Force Trauma Regulation at 14 slink processing facilities. This audit has been conducted for 4 years and the 2017 audit report provides information on animals that have been euthanised or have died of natural causes i.e. disease/exposure. The 2017 report shows a very high level of compliance with this regulation and the use of humane methods of euthanasia.

Investigations from complaints to MPI

In total, 8 instances were investigated where MPI became aware that suppliers were presenting a number of unfit calves. Following investigation, no evidence of calves being ill-treated on farm was observed. These suppliers, however, were provided with educational guidance about how to better managing the welfare of their calves.

Between July and November 2017, there were 26 public complaints called in to the MPI 0800 number regarding young calves (replacements and bobby calves). Following investigation, the majority of these complaints were unsubstantiated, or it was concluded that the breach was minor, and subsequently dealt with by education. No prosecutions were initiated.

All MPI compliance monitoring programmes and verification procedures will be reviewed in preparation for the 2018 season for all of the seven regulations taking into account the results from 2017 season.

Further work being done to identify causes of mortality in calves

MPI has commissioned research to identify causes and contributing factors to dairy calf morbidity⁶ and mortality; and, practical welfare indicators for use on farm and at lairage, as an alternative to mortality rates.

The research programme comprises two studies. The first was conducted in the spring calving season in 2016 and the second is scheduled to take place in the autumn calving season in 2018.

Preliminary analysis suggests the risk of mortality increases with time as the calving season progresses, and the duration of travel and time until processing at a slaughter plant; calves were at higher risk of mortality (death/condemnation) if the plant had a next-day slaughter schedule

⁵ These were introduced when the Animal Welfare Act was amended in 2015. Under Section 156A of the Act, Compliance Notices can be issued to require a person to do something in order to meet their obligations under the Act or regulations, or prohibits a person from doing something that contravenes the Act or regulations.

⁶ Disease in calves.

compared to a same-day slaughter schedule. These preliminary findings will be finalised in the full report due March 2018.

Potential indicators found to be prevalent in calves held in lairage include prolonged skin tenting (suggesting dehydration), faecal soiling, ocular discharge, nasal discharge, increased respiratory rate, lying, and oral behaviours such as manipulating an object or sucking on another calf.

Post mortem indications suggest that diarrhoea and/or enteritis may have been contributing factors in some dead or condemned calves. The most common reasons given by the vets for condemnation were weakness, recumbency, thin body condition and dehydration.

Dehydration is likely to be a significant factor causing debility or death in calves, and will be investigated further in the second year of the programme.

Industry implementation of the regulations

Overall, following implementation of the full suite of the regulations, there was a marked improvement in the welfare of calves in the 2017 season.

This improvement can be attributed to both the introduction of new regulations and the ongoing work of educational programmes, but can also be traced to increased cooperation and uptake of the regulations by the vast majority of the dairy sector across the supply chain.

For the most part, the health and quality of calves that were selected and presented by suppliers for transport was of a higher standard this season. Transporters were vigilant in ensuring calves that were not fit for transport were left behind at the farm gate rather than being transported and processed for slaughter.

In addition to this, supplier uptake of the regulation requirements around shelter, and loading and unloading facilities, was notable. There was initial concern in the industry as suppliers were worried that building these facilities would impose a substantial cost on their farming operations. Facilities were generally of a high standard, including those where suppliers had showed innovation in using and building on pre-existing infrastructure on farm to keep associated costs to a minimum.

Livestock companies and saleyards were also proactive in communicating the new requirements to their suppliers and upgrading yard facilities to meet shelter requirements.

Owners of processing premises worked hard to meet the requirement to process calves as soon as possible under the Maximum Time off Feed Regulation, and many have had to adjust their business processes in order to do so. The uptake of a nationwide system showed a high level of commitment across the supply chain to the system and to calf welfare outcomes.

Conclusions

The 2017 spring calving season was another example of the successful impact that joint industry and MPI initiatives and regulations can have on mortality rates and improved welfare outcomes for young calves in the New Zealand dairy sector. Regulations built on previous improvement in the industry by providing MPI with the tools to take direct action in addition to education, voluntary compliance or prosecutions under the Act.

Further halving the mortality rate has not only been achieved through the enforcement of the new regulations, but also through proactive steps by industry to implement changes, and develop systems and practices to ensure new requirements were met.

The young calf regulations are an example of how a collaborative approach between industry and MPI to develop and implement regulations can lead to tangible improvements in the welfare of animals.

Next Steps

The full suite of the Animal Welfare (Calves) Regulations 2016 have now been implemented.

MPI will continue to work with industry to enforce these regulations through the Bobby Calf Working Group, and to address any identified areas of concern in the industry.

The MPI compliance monitoring programmes and verification procedures will be reviewed in preparation for the 2018 season for all of the seven regulations, taking into account the results from 2017 season. MPI will continue to work with industry bodies to maintain the high levels of animal welfare achieved for calves over the past several years, with a view to continuing to improve results, and where appropriate use the regulatory tools now in place to achieve this objective.