United Fresh
New Zealand Incorporated

Complying with Weights and Measures Requirements

Updated Guidelines for New Zealand Fresh Produce Value Chain

This document was adapted for the Fresh Produce Industry by the United Fresh Technical Advisory Group, based on the guidance produced by Trading Standards at the Ministry of Business, Innovation & Employment (MBIE).

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Introduction

The New Zealand Fresh Produce Value Chain must comply with the requirements of the Weights and Measures Act 1987.

The challenge for the fresh produce industry is that each crop has its own unique post-harvest handling requirements. Time, temperature and general storage conditions can all contribute to weight-loss and product deterioration.

This guide is aimed at helping growers, packers, wholesalers and retailers by providing them with practical tips on how to meet the legal requirements under the Weights and Measures Act 1987.

Increasing amounts and types of produce are being processed and pre-packed into retail ready packs.

As soon as fresh produce is cut or diced, the respiration rate increases and potentially moisture loss can occur.

This has made the need for a practical industry specific guideline more important. Throughout the document, where possible, produce examples have been used to assist in understanding.

A checklist is included to assist in reviewing compliance management. In addition, several forms that may be of use have been developed.

GLOSSARY AND CRITICAL INTERPRETATIONS

Below are several terms that are important to understanding Weights and Measures requirements. These terms could be read differently in the fresh produce industry. We are therefore highlighting these as important to understand fully.

Term	Interpretation	Clarification
Accredited Person (AP)	Accredited Persons verify and certify weighing and measuring equipment.	https://trademeasurement.tradingstandards.govt.nz/for-business/equipment-used-for-weighing-and-measuring/visits-from-accredited-persons/
Accuracy Class	Weighing Devices are classified into groups according to the number of scaling divisions and the value of the scaling divisions. The Accuracy Classes are meant to determine the intended area of use for a particular scale.	Laboratory scales, postal scales, vehicle scales and produce scales all belong to different Accuracy Classes.
Catchweight Goods – pre-package marked with random nominal quantities	Goods that • are enclosed in a package • cannot be portioned to a pre-determined quantity because of their nature and; • are usually sold in varying quantities	These are goods pre-packaged and sold at varying quantities and must **not** be less than the stated quantity at any time. These goods cannot be checked by an Average Quantity System (AQS). A general example is a piece of steak in a meat tray which can vary in weight compared to the next piece of steak. Fresh produce examples are fresh ginger, or Jerusalem Artichokes packed on a tray at retail level. The irregular shape and size of these products means the retail packs can vary in weight, and consequently price. Under this definition most pre-packed fresh produce e.g. bagged apples could best be sold as catchweight; if these types of products are packed to a pre-determined constant quantity, they will generally be over packed to allow for variance in the weight of each item contained in the bag. An automated packing line generally packs to a pre-determined constant quantity, whereas a manually packed product in the rear store of a retail store is likely to be a catchweight.
Certificate of Accuracy	A document issued by an AP or Inspector of Weights and Measures to certify accuracy in respect of any weight, measure or weighing or measuring instrument.	Weighing or measuring equipment may be issued with a "certificate of accuracy" on an annual basis, after receiving a detailed examination and physical test by an AP or inspector. Maintaining a current "certificate of accuracy" for your equipment is voluntary. However, it may provide the owner of the equipment with a "defence" if the equipment is found to be "false or unjust". This defence is only available in situations where: • the equipment has a current "certificate of accuracy", and • the operator or owner of the equipment neither knew nor had reason to suspect or believe the equipment was false or unjust.

Term	Interpretation	Clarification
Desiccating Goods	Goods made up in a package that lose weight or volume solely through evaporation when the package is made up.	Desiccating goods status can only be applied to goods which are of the same kind and packaged to a pre-determined constant quantity. It **cannot** be applied to goods packaged at varying quantities or weight (catchweight products). A fresh produce example would be a 3 kg bag of potatoes.
Net Quantity	The amount in weight, volume or number of a product.	Pre-packed goods must be sold by net quantity. That means the weight of all packaging must be excluded from the quantity stated on the packaging. Pre-packed goods that are packed to a pre-determined constant quantity are checked by Trading Standards Officers using the Average Quantity System (AQS) to ensure compliance with weights and measures legislation. AQS applies to packaged goods that are of the same kind and the same stated quantity e.g. 500 g packs of butter. Trading Standards Officers will test "lots" (or batches) of packages – that is a group of packages they select when they visit. Goods that are not packed to the same stated quantity e.g. joints of meat or products pre-packed in the rear store of a retail shop are not covered by AQS. These types of packages are known as 'catchweight goods' and will be tested individually.
Pre-packaged	Pre-packaged refers to a package containing goods, packed without the presence of the purchaser, in a pre-determined constant quantity.	A fresh produce example could be a bag of ready to eat salad packed at the processors facility that is marked with a constant net quantity.
Trading Standards Officer	Trading Standards Officers, also known as Inspectors of Weights and Measures, work under a certificate of appointment.	Trading Standards Officers can conduct random inspections of goods that are to be sold within New Zealand and equipment that is deemed in use for trade. On request a Trading Standards Officer can also verify new or repaired equipment or issue a certificate of accuracy for equipment already in use for trade.

Does this guide apply to you?

If you import, pack, or sell packaged goods then it is your responsibility to ensure your goods meet the requirements of the Weights and Measures Act 1987 (the Act). You are responsible for the accuracy and marking of packages that are imported, produced, packed or sold in New Zealand; therefore, all systems and equipment must comply with the requirements of the weights and measures legislation.

WEIGHTS AND MEASURES LEGISLATION

The Act and associated Regulations set out the requirements for selling goods by quantity (weight, measure or number). Trading Standards is an operational unit within the Ministry of Business, Innovation & Employment. Trading Standards Officers are referred to as 'Inspectors of Weights and Measures' in the Act and enforce the requirements of the Act.

Weights and Measures Act 1987:
http://www.legislation.govt.nz/act/public/1987/0015/latest/DLM102242.html?src=qs

Weights and Measures Regulations 1999:
http://www.legislation.govt.nz/regulation/public/1999/0373/latest/DLM301528.html?src=qs

RESPONSIBILITY OF A PACKER OR IMPORTER

Packers and importers of pre-packaged goods must:

- Make sure packages are correctly labelled
- Make sure packages contain the stated net quantity
- Have suitable and accurate measuring equipment
- Ensure catchweight goods contain no less than the stated net weight

If you are importing goods into New Zealand it is recommended that you request confirmation from the overseas packer that the product you are importing adheres to and meets New Zealand requirements. It is advisable that you perform your own checks on goods once they have arrived in New Zealand to confirm their quantity has not altered during transport.

Are your goods packaged?

The Act defines a package as anything in or by which goods are cased, covered, contained, or packed. A package includes both closed packing material and open packing material. For example, a closed bag of 3 kg potatoes or an open bag of 20 kg potatoes can both be classed as a packaged good.

'Pre-packaged' refers to a package containing goods, packed without the presence of the purchaser, in a pre-determined constant quantity. There are two categories of pre-packaged goods:

1. Goods that are of the same kind and of the same stated quantity.
   Example: a batch of 3 kg bags of potatoes, packed before being offered for sale to the purchaser.
2. Goods pre-packaged at varying quantities, commonly referred to as 'catchweight' goods. These goods cannot be checked using an average system and must not be

less than the stated quantity (weight, volume or count).
Examples: Some fruit and vegetables such as fresh ginger or Jerusalem Artichokes packed in the rear store of a retail outlet.

UNDERSTANDING DESICCATING GOODS

Some goods are classified as desiccating goods. Desiccating goods are generally packaged products that may lose weight or volume overtime through moisture loss. The Weights and Measures Act 1987 defines desiccating goods as:

Any goods made up in a package that lose weight or volume solely through evaporation when the package is made up. Please note that desiccating goods can only be applied to goods which are of the same kind and packaged to a pre-determined constant quantity.

Fresh produce is generally a desiccating good because it loses weight by evaporation. Managing the respiration rate of produce is important to ensure pre-packaged produce does not lose weight (and condition).
This is generally undertaken through effective temperature management and stock rotation.

TRADING STANDARDS

Trading Standards Officers regularly inspect goods which have been manufactured, packed or imported, both on a pro-active basis, and in response to consumer complaints.

Checks can be conducted at retail, manufacture, importation and storage sites or wherever sufficient packages are available. Spot checks can be undertaken without formal warning and you may be required to assist Trading Standards Officers with their requests, which may include providing access to goods and weighing or measuring equipment.

The purpose of the legislation is to ensure consumers are not disadvantaged and New Zealand's manufacturers and packers are packing correctly and not being disadvantaged themselves.

If your goods are checked by a Trading Standards Officer, a copy of the results will be given to the person in possession of the goods as soon as possible after the inspection. Some goods may require further testing depending on the nature of the goods, in which case an Officer may need to conduct this testing at the nearest Trading Standards laboratory.

Trading Standards Officers carry with them a range of health and safety resources and will follow any health and safety requirements you may have while conducting inspections at your premises.

The following document may be of assistance.

https://trademeasurement.tradingstandards.govt.nz/for-accredited-persons/health-and-safety-at-work-act-shared-duties-and-expectations/

When visiting retail and manufacturing sites, a Trading Standards Officer will:

- Test equipment to ensure it complies with the legislation and conditions listed in the Certificates of Approval
- Confirm Accredited Persons are following the conditions of their accreditation (surveillance audit/observation)
- Inspect catchweight goods
- Conduct sample assessment/reference tests under the Average Quantity System (AQS)
- Inspect and take copies of relevant documentation

Introduction to the Average Quantity System (AQS)

The AQS system is the methodology Trading Standards Officers use to complete quantity checks on a batch or a lot of goods, which have been packed to a pre-determined constant net quantity.

However, produce packers need to establish their own systems to ensure compliance. This may include sampling the final product after packing as well as checks on equipment accuracy.

Please note: Appendix 3 AQS Sampling Methodology is included for informational purposes.

WEIGHING OR MEASURING EQUIPMENT

Weighing or measuring equipment should be of an approved type and verified at the location it is being used for manually filling packages and/or carrying out quantity checks on packages.

Packers may have automatic packing or filling machines, which are not required to be approved under the legislation. However, it is recommended that these packers have approved and verified weighing or measuring equipment available for sample testing of the packaged goods. Robust processes and procedures need to be in place to ensure compliance with weights and measures requirements.

Weighing or measuring equipment, including checkweighers that have been issued with a Certificate of Approval, must comply with the conditions as stated within the approval.

For a full list of trade approved equipment, please see the type approvals register on the Trading Standards website.

https://trademeasurement.tradingstandards.govt.nz/for-business/equipment-used-for-weighing-and-measuring/search-the-approval-certificate-register/

Environmental conditions that can affect equipment

Environmental conditions to be considered where the equipment is used include:

- Temperature
- Water
- Dust/Dirt
- Vibration
- Air movement
- Pressure
- Chemicals
- Electrical Interference

Ensure all weighing and measuring equipment is used within the manufacturer's specification.

How sensitive should the weighing equipment be?

The scale division should be appropriate for the size of the package being weighed or measured. See the table below for recommended scale division for your weighing equipment.

Recommended maximum scale intervals		
Net weight range of package	**Recommended maximum scale intervals**	**Accuracy class applicable**
< 2 g	0.01 g	Class II
2 g – 5 g	0.02 g	Class II
5 g – 10 g	0.05 g	Class II
11 g – 50 g	0.1 g	Class II
51 g – 100 g	0.2 g	Class II
101 g – 250 g	0.5 g	Class II
251 g – 500 g	1 g	Class III
501 g – 1 kg	2 g	Class III
> 1 kg – 2.5 kg	5 g	Class III
> 2.5 kg – 5 kg	10 g	Class III
> 5 kg – 25 kg	20 g	Class III
> 25 kg – 50 kg	50 g	Class III
> 50 kg – 100 kg	100 g	Class III

Setting the control point on checkweighers

Trading Standards advise packers to set checkweighers to reject anything below the stated net quantity that they are packing to. Packers that knowingly set their checkweighers to accept products that are below their stated quantity may leave themselves open to prosecution for packing a non-conforming lot (batch) of goods.

LABELLING QUANTITY ON PACKAGED GOODS

These requirements apply whether the weight, measure or number is marked on the goods themselves, on the package in which the goods are packed, or on a label attached to the goods or package.

Products must be sold by metric measures
Products sold within New Zealand must be marked or labelled with one of the units of the metric system.

- Weight – Kilogram, gram or milligram
- Measure – Litre, decilitre, centilitre or millilitre
- Measures of length – Metres, centimetres or millimetres

Products must be sold by net quantity
Packaged goods must be sold by net quantity. That means all packaging must be excluded from the quantity charged.

Net Quantity = Gross Weight (goods + packaging) – Tare Weight (packaging)

Products must be sold by only one unit of measure
The most appropriate unit of weight, measure or number can be used on a package and decimals are to be used to express parts of any unit, for example; "1.5 kg" not "1½ kg".

Position, style and form of marking
The marking should be in a prominent position and near the name or description of the goods.

The marking should be written or printed in letters and figures at least 2 mm in height and in a colour that contrasts distinctly with the background.

However, if due to the size of the goods or the package in which the goods are packed, it is not possible to use letters and figures of at least 2 mm, the marking may be in smaller letters and figures, but sufficiently large enough to be clear and legible.

For fresh produce, marking must be in the form of one of the following examples:

Weight
Net weight 1.5 kg
Net 1.5 kg
1.5 kg

Examples of statements which are **not acceptable** include the following:

Common marking faults	Non-compliant	Compliant
Including a period or the letter 's' after the symbol	2 kg. or 2 kgs or 330 mls	2 kg
Using confusing or conflicting statements	Net weight inclusive of packaging 200 g	Net Weight 200 g
Using the incorrect case or abbreviation	200 G NET.WT.	Net Weight 200 g
Using the term 'approximate' in quantity statement	Contains approximately 3 kg	3 kg
Using the term 'when packed' in a Net quantity statement	Net Weight 3 kg when packed	Net Weight 3 kg
Using a size range	Contains between 150 g – 200 g	Net Weight 150 g

Please note: Using terms such as 'approximately' and 'when packed' will not give you a defence if your goods are determined to be short quantity.

Multiple units of measurement on a label
There must be only one unit of measurement used to indicate the net quantity statement on a package. The permitted units and accepted abbreviations are provided in the table below:

Unit	Permissible abbreviation
Weight	
Carat Metric	ct
Tonne	t
Kilogram	kg
Gram	g
Milligram	mg
Volume	
Litre	l or L
Decilitre	dl or dL
Centilitre	cl or cL
Millilitre	ml or mL
Length	
Metre	m
Centimetre	cm
Millimetre	mm

SPECIFIC REQUIREMENTS FOR PACKAGING FOOD ITEMS

Food must be marked with a statement of quantity in the form of either; net weight, net volume or number of the contents in a package, whichever is the most appropriate for the sale of the item concerned.

Exemptions

The following are exempt from the requirements to mark a statement of quantity;

- Packages of food ordinarily sold by number where there are not more than 8 single items contained in a transparent wrapping if the contents can be clearly seen and counted by the prospective purchaser
- Raw fruit or vegetables that, immediately after they are picked, are packed in a package intended for retail sale in units no greater than 500 g
- Any package of food requested by the purchaser and the purchaser is present when the seller weighs, counts or measure the package or when the purchaser is present when the seller packages the food and weighs, counts or measures the package
- Packages of food not intended for retail sale

Products that lose weight due to evaporation

Goods that lose weight or volume solely through evaporation after the package is made up are defined as 'desiccating goods' in the Act.

The Act provides a defence in the case of a package containing desiccating goods (Section 16A (4)). The defence applies if it can be proven that at any time on the day the goods were packed or at any time within a seven-day period of being packed, that the goods met all three requirements of AQS. There is a further

defence if it can be proven that after the seven-day period there are no inadequate packages in the sample (Third requirement in the AQS).

The two defences are only available for goods that desiccate. Trading Standards Officers may need to seek an expert opinion as to whether the goods are of a type that can be classed as desiccating.

Weight-loss checks, especially with products known for moisture loss should be completed as part of a packer's due diligence. When setting up a packing system, packages should be filled and set aside for 7 days in normal storage conditions. The package should be re-checked to determine the amount of weight-loss due to evaporation. The deficient amount should be added to the target fill weight. This process should be repeated until the packer is confident that the packages will remain within the permitted tolerances for 7 days.

This is clearly an issue for fresh produce as it continues to lose weight through transpiration after harvest and during storage and distribution. A monitoring system should be in place that can identify any packed produce that needs to meet weights and measures requirements. Some guidelines are provided in Appendix 2.

Please note: these are guidelines only due to the large number of variables in fresh produce handling and post-harvest management.

Information in relation to desiccating goods is available at:

https://trademeasurement.tradingstandards.govt.nz/for-business/packaging-andor-selling-goods-by-quantity/desiccating-goods-products-that-lose-weight-due-to-evaporation/

Under the Trans-Tasman Mutual Recognition Arrangement (TTMRA) any manufactured good that can be legally sold in Australia can be legally sold in New Zealand and vice versa.

Because of this arrangement there is an increased allowable deficiency for mushrooms, that have been imported into New Zealand from Australia. This is due to the mushrooms being classed as desiccating goods under Australian legislation.

Relevant legislation is here:
www.legislation.gov.au/Details/F2009L03479/

Note: Goods imported directly into New Zealand, excluding goods imported from Australia, must comply with the New Zealand Weights and Measures Act 1987.

IMPROVING CONTROL AND DEMONSTRATING LEGAL COMPLIANCE

Achieving good control over your system can reduce the amount of product 'overpack' while still ensuring packages meet the stated quantity. Some techniques and practices are suggested below that can be introduced into your production/packing processes to provide the necessary confidence.

These practices can also provide evidence if you need to rely on the defence within the Weights and Measures Act 1987 for the supply of a deficient package. Where a breach is discovered, the Weights and Measures Act 1987 provides a defence for packers if they can prove that the offence (a deficiency in any package) was committed without the defendant's knowledge and they took all reasonable precautions and used 'due diligence' to prevent the offence.

Examples of reasonable precautions and due diligence may be some or all the following:

Pre-packing equipment check

Prior to starting to pack or checkweight several steps are needed.

Regular level checks
Before every use, and at regular intervals, check the level bubble on your weighing equipment to confirm the equipment is level. Equipment can be inaccurate if not level.

Zero/tare check
The user must check that the indicator is reading zero or that the tare figure for the packaging displayed is correct before using the weighing equipment.

Using calibrated test mass/measure to perform daily/weekly checks
Carrying out daily/weekly physical checks on your in-service equipment will give you confidence that your equipment is operating within prescribed tolerances (for example, using a weight similar to the weight of the product being packed). These checks should be documented. Suitable test weights are available through your packaging equipment supplier.

Use of dummy packages
Where an inline checkweigher is being used to carry out weight checks on a production line, then dummy packages of varying weights can be passed through to confirm that the checkweigher is accepting and rejecting when expected to. This will provide you with confidence that the control limits set on the checkweigher are correct.

Recorded quantity checks
Create a sampling plan that is appropriate to your process. You need to develop a sampling plan based on an objective assessment of the risks. If results fall outside tolerance, then the process requires adjustment and previous packs within that batch need to be re-checked.

The sampling plan needs to be tailored to your process including:

- An assessment of the potential risks that may occur
- Volumes of product packed
- Equipment quality
- Level of automation
- Staff training and competency
- Product quality and length of storage (product weight during storage)
- Ensure effective traceability by batch or lot number
- Ensure there is proof that checking is undertaken (records)
- Documents are maintained to demonstrate the relevant points above

The number of products sampled is relative to multiple variables, which need to be considered i.e. type/reliability of equipment, type of product, products packed per hour, total products in the batch, other controls in place etc.

Example of a Quantity Check Sheet:

Product		**Date/time**	
Packing line details (online)			
Weighing equipment (offline or separate from the packing line)			
Gross weight		**Stated weight on package**	
Tare weight			
Difference (excluding packaging)			
Action	**Stop/re-check/adjust**		
Checker			
Batch number(s)			

Calibration certificates for weighing/ measuring equipment
Ensure equipment is verified and has an up to date Certificate of Accuracy. Maintaining a valid certificate may give you a defence if a breach of the Act is discovered by a Trading Standards Officer.

Contract an Accredited Person to regularly check the condition and performance of your equipment. A list of Accredited Persons can be found on the Trading Standards website:

https://trademeasurement.tradingstandards.govt.nz/find-an-accredited-person/

Staff training and records
Provide training to all members of staff that are involved in the packing process, so they are fully aware of their roles and responsibilities. For example, all members of staff should know the difference between net quantity and gross quantity. These records should be documented.

Documented procedures
Documenting your procedures and following them demonstrates "due diligence". Procedures should regularly be reviewed to ensure they are suitable.

Storage conditions
Ensure the storage conditions both at your premises and at retail do not adversely affect the quantity of the goods.

Customer feedback
Proactive: Being proactive demonstrates a willingness to comply. Encourage your customers to communicate any concerns they may have, and can be an important early-warning system if equipment is out of calibration or faulty.

Reactive: Investigate and follow up on customer complaints from individuals and retailers. If your customer raises an issue, have a system of recording this information including the corrective actions undertaken.

WHAT TO DO ABOUT SHORT QUANTITY PACKAGES

If you become aware that your goods are short of the stated quantity, you need to take action to resolve the issue. Quarantine the affected packages and clearly mark them as to their status. This is to prevent their accidental distribution or sale. Once the affected batch or 'lot' has been identified, there a few steps you should follow to make sure you are not breaking the law.

The steps you need to follow are:

- Identify the cause and solutions
- Sort the quarantined packages
- Choose whether to relabel the package with the correct weight, or re-pack or top up the package

Identifying the causes and solutions of short quantity packages

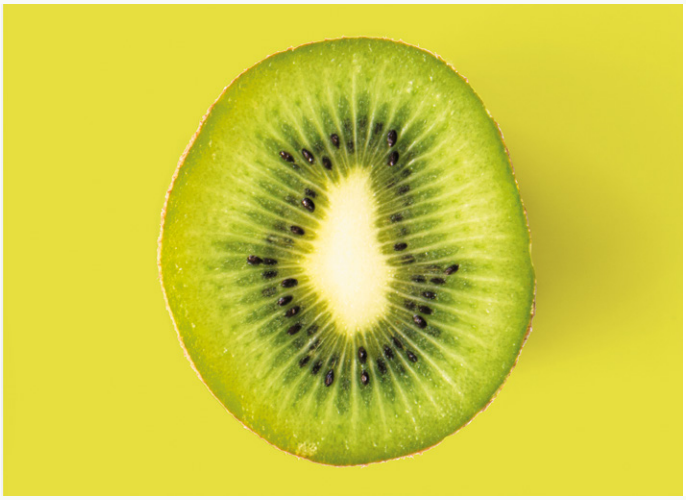
The first step in making sure your goods comply is to find and isolate the cause of the problem. Generally, the source of a packaging problem can be traced to either:

- Unsuitable equipment
- Operator behaviour

As a responsible packer, you should review your procedures and processes including the suitability of any current quality assurance sampling plans you may be using. You will need to identify and adjust or organise a repair of the faulty equipment by an Accredited Person.

If the issue is behavioural, you may need to re-train staff or more closely supervise the individuals that are responsible for quality/quantity control. In either case, any remedial action should be taken before normal packing process resumes. Any further training is recorded as per the above staff training and records section.

MBIE has a website at which you can find more information on this here:



https://trademeasurement.tradingstandards.govt.nz/for-accredited-persons/non-compliance/root-cause-analysis/.

Sorting quarantined packages

If a batch of packages has been identified to contain short quantity packages, you should immediately quarantine the affected batch. You should consider identifying packages which are excessively deficient and remove them from the batch as this will improve your lot's chances of complying with the AQS.

Once you have removed underweight products from the batch, you should then re-check a sample of the remaining packages to confirm that the batch meets all AQS requirements (as a minimum standard).

Re-labelling the packages with the correct weight

In some situations, the easiest method of ensuring your batch or lot of packages comply is to re-label all packages within the affected batch or lot with a lesser stated net quantity.

Importers will benefit from this method if it is cost prohibitive to send them back to the factory or it is beyond your capability to re-package the goods. Caution is advised when using this method as the altered net quantity label must still meet all the requirements listed within the labelling section of this document. Furthermore, it is advisable that you check with your customers to confirm this will not affect their own requirements.

Re-packing or topping up

Re-packing or topping up deficient packages is an acceptable method of altering your batch to make it comply. You should top up the deficient packages to ensure that they contain the stated net quantity.

Once you have adjusted the deficient packages you should then re-check a sample of the altered batch to confirm that it meets all requirements.

Notifying the supply chain

If it has been identified that short quantity goods have been distributed, you should contact those outlets and advise them to check their stock and remove any affected items from sale.

OFFENCES UNDER THE WEIGHTS AND MEASURES ACT 1987 & WEIGHTS AND MEASURES REGULATIONS 1999

For the true wording of the offences please refer to the legislation.

The weight, measure or number of goods in the package is less than that stated on the package or label. **Section 16A (An infringement notice fee of $500 or Fine not exceeding $10,000)**.
Using for trade, or possessing for use for trade, any weight, measure, or weighing or measuring instrument that is not stamped with prescribed verification mark. **Section 21 (An infringement notice fee of $200 or Fine not exceeding $10,000) – unless exempt under Section 22**.
A weight, measure or weighing or measuring equipment, which is in use for trade, is found to be false or unjust. . **Section 24 (An infringement notice fee of $500 or Fine not exceeding $10,000)**.
Preventing a Trading Standards Officer from exercising his/her powers. **Section 32 (b) (Fine not exceeding $10,000 for an individual or $30,000 for a body corporate)**.
Obstructing or delaying a Trading Standards Officer from carrying out his/her duties without a reasonable excuse. **Section 32 (c) (Fine not exceeding $10,000 for an individual or $30,000 for a body corporate)**.
Failing or refusing to comply with any requirement of a Trading Standards Officer under the Act without lawful excuse. **Section 32 (d) (Fine not exceeding $10,000 for an individual or $30,000 for a body corporate)**.
Packages of goods are not marked with their net weight or measure in accordance with the Regulations. **Regulation 80 (An infringement notice fee of $200 or Fine not exceeding $2000)**.

The Trading Standards website has more information and details available:

https://trademeasurement.tradingstandards.govt.nz/about-us/powers-offences-and-our-enforcement-strategy/.

APPENDICES

Appendix 1 Checklist of Responsibilities for Meeting Weights and Measures

Suggestions for the Fresh Produce Supply Chain		
	Topic	**Produce Business Entity Review**
A	**Risk Assessment** Has a risk assessment of the weights and measures processes been undertaken?	
B	**Responsibility** Does a senior manager in the organisation have the authority and responsibility for ensuring compliance?	
C	**Automated (on line) weighing systems that may not be calibrated by an Accredited Person.** Is there a suitable checkweight process and a point of reference? Is there proof that the automated weighing system is monitored and checked?	
1	**Manual Checkweighing Processes** Is the equipment approved and verified? Where there is a mix of processes including re-packing, is the approved and verified equipment being used in an appropriate manner. By this we mean is the equipment you are using during re-packing appropriate to the products checked?	
2	**Multiple Product Packaging** Are the scales used when packing multiple and varied products, suitable for the intended use? e.g. are bagged salads and watermelons weighed on the same scales?	
3	**Checkweight** A certified Checkweight is advised to be on-site. Checkweight size and accuracy is appropriate to the package weight. Obtain the Checkweight from your scales provider.	
4	**Scales Calibration** Scales should be externally calibrated on a regular basis. If you have many sets of scales weighing a similar product, you could consider retaining one reference scale, and then using checkweights to confirm the accuracy of the other scales. An Accredited Person (weights and measures) must understand the work. The equipment must be approved and suitable for the purpose.	

	Topic	Produce Business Entity Review
5	**Held Stock** Have in place a process of checking any product that has been held longer than usual, or where the conditions have resulted in excess product respiration. Have in place records of any re-checks or weights. If you have an electronic stocktake process, flag any retail or pre-pack that might need to be checked. Pre-programme high respiration crops into the system. This process will need to be more rigorous over hotter summer days when weight-loss will increase. If your stocktake system is manual, pay attention to older stock and good rotation practices. Make sure the checks and outcomes are recorded. Make sure there is a system of reporting so that appropriate action can be taken.	
6	**Library Sample** It is recommended that a Library Sample (1 bag) is retained of the packed lot and held until the typical sales period/shelf-life of the product is reached. This especially relates to packages labelled with retail ready information. Packers of the produce should hold samples.	
7	**Packers and Re-packers** Need to comply with the Primary weighing requirements, especially catchweight measurement. An overpack needs to be established that reflects the likely weight-loss during distribution and sale. This weight-loss may be different in cold and hot conditions.	
8	**Records** A suitable system of weighing and recording is in place. Retain records for any product that is re-packed or labelled.	
9	**Re-checking Stored Produce** It is recommended that a system of re-checking packaged produce weights is in place for product that has been stored for a period after packing, to ensure compliance. High respiration pre-packed products which can lose weight quickly should be highlighted in your stocktake system for extra attention. Examples are: Courgettes, asparagus, bean sprouts, peas, beans, figs, strawberries and raspberries. However, all fresh produce loses moisture through respiration especially if the holding temperatures are too high. Good stock holding practices are critical to reducing moisture loss.	

	Topic	Produce Business Entity Review
10	**Reference Scales** Do you use reference scales? What controls and parameters are there around their use?	
11	**Re-pack Guidelines** If a product is being re-packed for quality/storage/ underweight reasons, it may be advisable to undertake a moisture loss and quality assessment to ascertain if the line is deteriorating and poses further risk. Product that needs to be re-packed due to quality issues may have a higher respiration rate that presents further risk.	
12	**Retail Labelling** If the product is retail labelled on your premises, the minimum requirements are documented, managed and checked as part of the system. If you receive retail labelled products, your agreement with the supplier needs to include the need for accuracy and a system for checking.	
13	**System** Have a system of weighing and recording in place.	
14	**Retailers** Check the weight of pre-packaged lines on receipt at the DC or rear-store if there is a concern. Pre-packed product that is unsold may need re-checking after a period. This depends on the nature of the crop and storage conditions. Slow moving pre-packed lines and products that are near the end of their natural lifespan or season should be checked e.g. apples that have been held in storage for months prior to packing and distribution.	
15	**Weight Measuring and Numbering** Remember that quantity under the Weights and Measures Act means the weight or measure on the package, in which the goods are packed, or on a label attached to the goods or package. So, if a piece of produce is removed from a pre-packed punnet or bag, consider whether this will affect the quantity (count or weight) in the package.	
16	**Wholesalers** If a product is re-packed on-site, see above. If a product has been stored for any length of time, consider whether a weight check needs to be undertaken.	
17	**Written Agreement** Have in place a written agreement with packers or suppliers that retail ready product of a defined quality/ quantity has been checkweighed and that those records are available on request.	

Date reviewed:	
Reviewers:	
Actions identified:	
Actions completed:	
Signed off: **Date:** **Name and signature:**	

APPENDICES

Appendix 2 Moisture Loss

Verification of moisture loss
Verification of moisture loss should be undertaken if there are concerns about how a pre-packed product destined for retail sale is performing.

There are two ways products lose moisture, primarily through evaporation (fresh produce) or absorption into packing materials. We will concentrate on moisture loss through evaporation.

You may also need to monitor products under more than one set of conditions – "room temperature conditions or under refrigeration conditions" depending on how the product is typically handled or stored during distribution and retail.

For products which lose moisture primarily through evaporation, gross weights can usually be recorded at regular intervals on a data table, until the expiration date or typical distribution period has occurred.

At the end of the test period, the tare weight can be determined and deducted from each recorded gross weight.

Start with at least 5 samples per each set of conditions. Increase this number if the results are variable until you have sufficient data to account for variance.

The formula below will calculate the moisture loss as a percentage. Variations in weight-loss can be calculated with the following formula:

$$\frac{\textit{Change in weight (original net weight – net weight)}}{\textit{Original weight}} \text{*100} = \textit{Percent Moisture Loss}$$

It is recommended that moisture loss worksheets be retained by your QA/QC team, to assist them in selecting reasonable moisture loss values for calculating packing weights.

Moisture loss check results

Product:

Batch reference:

Reason for checking:

Original net weight:

Date	Temperature (°C)	Net weight	Weight-loss	% Weight-loss	Checked by	Comments/ actions taken

Comments:

Date:

Reviewer:

Signature:

APPENDICES

Appendix 3 AQS Sampling Methodology

AQS sampling methodology is the bare minimum a packer should comply with. The use of AQS methodology to achieve compliance with weights and measures requirements could expose a company to the risk of non- compliance. As a packer you should pack to a minimum net weight with a tolerance for weight-loss rather than risking underweight packages. The following section is included for completeness purposes.

The AQS is a sampling methodology for Trading Standards Officers to use when assessing whether a batch, or lot, is compliant with the Weights and Measures Act 1987 by assessing a statistical sample of that batch or lot. A sample plan, developed by the packer to meet AQS, should be designed to ensure any sample taken from the lot will meet the three requirements of AQS.

The AQS is how Officers assess whether pre-packaged goods comply with the Weights and Measures Act 1987. It takes into account the natural variances involved throughout the packing process. The Weights and Measures Act 1987 provides a sampling plan and criteria for Officers to use to check that a defined lot of pre-packaged goods meet the requirements of the AQS.

The AQS model in the legislation is **not** a statistical model for packers to pack to. Packers should develop their own statistical model (sampling plans) for the sole purpose of ensuring that production runs of packaged goods meet the quantity statement as shown on the individual package. Packers who use the AQS criteria in their production processes as prescribed in the Weights and Measures legislation run the risk of packing short weight, measure or number products.

In order to ensure compliance, packers must either measure the contents of each package or check the contents by sampling. Packers and importers' sampling plans must be sufficiently rigorous to provide confidence that the three requirements of AQS have been satisfied.

The AQS applies a tolerance to the sample known as a 'tolerable deficiency'. This is stated in Regulation 84C and is dependent on the actual net contents of the package under test. Packages are therefore permitted to be equal to, or greater than, the stated quantity minus the tolerable deficiency specified in the regulations.

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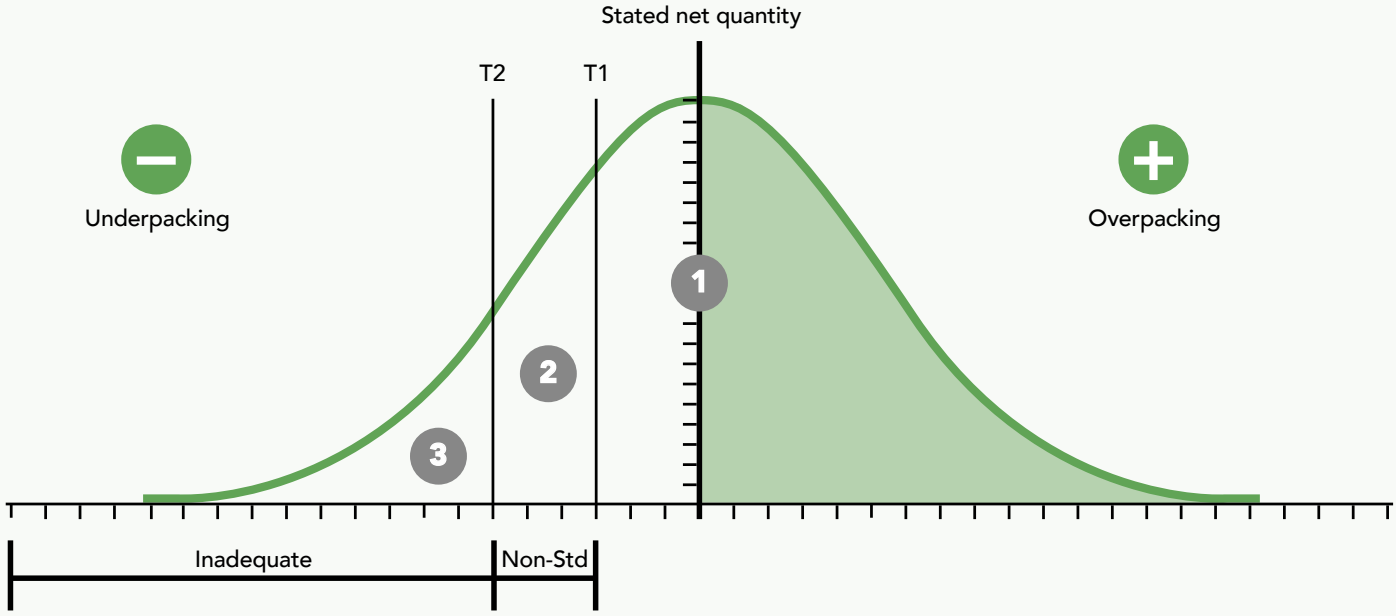
There are three requirements a sample of packages taken from a batch must meet to comply with the AQS:

- The average quantity of a sample **must not** be less than the stated quantity marked on the packages.
- Allowance is made for a small number of packages to contain less than the quantity stated on the package. These packages are referred to as 'non-standard packages', where the deficiency is more than the tolerable deficiency, known as (**T1**), but not more than twice the tolerable deficiency, known as (**T2**).
- No individual package is allowed a deficiency greater than twice the allowed tolerable deficiency. These packages are referred to as 'inadequate – packages' (**T2**).

For further information, go to https://trademeasurement.tradingstandards.govt.nz/for-business/packaging-andor-selling-goods-by-quantity/the-average-quantity-system-aqs/.



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