



FNQ

# FOOD INCUBATOR

CREATE | INNOVATE | ACCELERATE

## MODULE 5

*Manufacturing Your Product*

## On successful completion of this module you will be able to:

- Apply food processing theories into practice.
- Use basic food tests and food preparation techniques in food production.
- Use basic food tests and food preparation techniques in food production.

The combination of your packaging and your labelling provides a medium for your advertising message, and is one of the greatest influences on a consumer's decision to buy. It also has a direct impact on your costs and the quality of your product. Packaging is as important as the product within.

In this section you will learn:

- The ideal food package
- Packaging sources
- Design and materials
- Food labelling

## PRODUCT DESCRIPTION

Your first step is to write a clear description of your product. This should include:

- A general description of the product
- Sensory properties (e.g., taste and smell)
- Ingredients (including food allergens)
- Texture
- Shelf life
- Packaging

Your product may need to meet specific regulations (see Section 4.5: Food Safety Regulations and Other Government Regulations) and may require you to make changes to be compliant.

What is it going to cost you to make this product? You will find out the exact cost per unit when you do your test production, but you should understand your theoretical ingredient, packaging and manufacturing costs to see if this idea is economically feasible (see Section 4.1: Manufacturing Your Product to learn about Product Costing Models).

## GOAL OF PROTOTYPE TESTING

Your goal here is to develop a recipe and a process that results in all the properties you described for your product. You will do this by actually making the product on a small scale, then testing it with a view to develop into a full-scale production.

Things to watch for in this step:

- A simple homemade recipe may not work in a commercial-sized batch. Some ingredients may not behave the same way, or will be too expensive. Be prepared to change.

- What manufacturing method works best? Try different processes to see how they change the end product.
- What type of packaging works best? Test several samples to ensure they seal correctly and stand up to handling (see Section 4.6: Food Packaging and Labelling).
- How does your product work in typical-use situations? How will it hold up in shipping and storage? What happens to it when it is frozen, chilled, and cooked?
- What is the cost-per-unit of your product, and how much will you need to charge for it so you can make a profit? Go back to your business plan; does your research reveal how much consumers are willing to spend on a product like yours? See Section 5.2: Pricing Your Product for information on tracking costs per unit.

## POTENTIAL TAX CREDITS

Keep track of all the costs and expenses you pay to develop and test your product. Many of these may be eligible for tax credits or tax refunds, such as the Scientific Research and Experimental Development (SR&ED) tax incentive program (<http://www.cra-arc.gc.ca/sred/>).

When you're making two jars of jam on top of your stove, it's simple to understand your recipe. There's sugar, berries, and pectin. You don't even have to weigh anything out.

When you add habanero peppers at a 1:1 ratio, you may get more heat than you bargained for.

## **BUT, WHAT HAPPENS WHEN TWO JARS BECOMES TWO HUNDRED JARS**

A lot. Many food products take a completely different shape when they're scaled up. You might need more sugar to decrease the acidity of your products. You might need more blueberries to get the same intense flavour you had with two jars.

Scaling your recipe isn't easy as multiplying.

Here are a couple of products you might want to watch out for when you start to scale your recipe:

### **Produce**

Using the same ratio of habanero peppers in your salsa is going to dramatically affect the heat in your products. If you keep a 1:1 ratio, you're going to start breathing fire out of your mouth. Make sure to scale down your pepper ratio 10% or so. The same goes for any produce.

### **Spices**

Not all spices are created equally. Some sources are stronger than the others. For example, cinnamon, nutmeg, garlic powder, and black pepper all have varying degrees of strength depending on the amount you use and the brand. Adding too much of one spice could make it over-powering, so start with small batches before you fill the whole oven with over-cinnamoned (like that word?) granola.

### **Frozen/Fresh Ingredients**

This one may seem obvious, but if you're switching from a fresh product to frozen because of better pricing or ease-of-use in larger productions, do a test-run first. Many frozen products increase the water content of your product. This means what used to be a thick & creamy paste is now watery and run-down. If you're using fresh ingredients, you should continue – even if fresh ingredients are more expensive.

Bottom line? Ingredients are temperamental. And you won't know it until you make bigger batches. Your goal is to get the same flavour profile with 200 jars you got with two. It takes a ton of trial and error, but it's worth it. Going into production assuming a 1:1 ratio means lots of money down the drain.

Producing your products on a much larger scale is not easy.

Watch how ingredients scale. Taste-test with family and friends to see which variation comes out on top – and make sure your product is profitable with the new process.

# Doing Your Product Testing

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There are two main ways to do your prototype development:

- Do it all yourself by developing your own commercial recipe and renting or buying your own development facility
- Hire a product development facility that will do all the work for you

You may be able to develop your own prototype by experimenting with your home recipe in your own facility. Prototype development is usually done on a very small scale and it may require multiple “kitchen batches” and formulations before you get it right.

If and when you hire outside help, be very specific about what you want them to do so you pay only for what you need. Product development fees have been known to exceed \$20,000. Check your business and financial plans; how much money did you allocate for product development? See Section 3: Financing Your Food and Beverage Business for information on financing options and funding to help develop your product.

## HIRING A PRODUCT DEVELOPMENT FACILITY

Product development facilities include laboratories, research stations, and pilot plants. These experts will take your home recipe, develop it into a commercial formula, and suggest which manufacturing method works best. Labs and testing services can analyse your product to check its nutrition content, conduct sensory testing to measure user acceptance and liking, evaluate different packaging and its effect on shelf life and more.

Search the internet to find a product development lab, talk to your network contacts or see Appendix A for a list of potential labs.

Once you have decided to work with a product development facility, write up a contract with them that includes:

- Detailed project description and work outline
- Reporting procedures and time schedules
- Cost estimate and key milestones/ payment schedule
- Materials, supplies and services
- Special terms and conditions
- Work location
- Confidentiality (see Protecting Your Idea later in this section)

## TESTING THE COMPETITION

You can also evaluate and benchmark against your competitors’ products so you will know their key ingredients, ingredient quantities, how their packaging works (including its costs) and more. You may not want to duplicate their product, but you may be able to learn some valuable lessons from them.

At the end of the prototype development and testing, you will have detailed product specification documents so that you are ready for scaled up production.

# Numbers You Need To Keep Track Of While Producing Your Product

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When you manufacture a food product commercially, there are certain numbers you have to keep track of in case you get a lawsuit or a have to facilitate a product recall. Not to mention, it's good business practice.

## BATCH CODES

When you make the first batch of your recipe, you have to assign it a batch code. That helps you figure out when you made the product. There are a few ways to start batch coding. Many small producers use the Julian Calendar method, which states the year ("14" for 2014) followed by the day of the year ("002" for January 2nd). That makes your batch code 14002.

You could also make up your own system.

Large manufacturers have a mix of letters and numbers (lord knows what it means) printed on the side of the cap or the seam of the plastic package. You could use batch #1, batch #2, like JoJo's Sriracha does. Whatever method you use, the batch code needs to go on your finished product.

## EXPIRATION OR BEST-BY DATES

Expiration dates are important because they let your customer know when your product is about to go bad (even though it "technically" might not - it could just lose flavour). Expiration dates are set using shelf life testing (if you want to pay for it -- I would if your product is perishable and you know the shelf life is short.).

For example, the shelf life on many shelf-stable condiments is 2 years, whereas fresh-baked cookies are maybe a week or two. And spice blends is an astounding 7 years.

Your expiration date is also important because it's used to gauge the life of your product on the shelf. It's used by distributors who, typically, reject a product if it doesn't have 75% of it's shelf life remaining when it hits the warehouse.

## THE BATCH CODE AND EXPIRATION DATE NEED TO GO ON YOUR PACKAGING.

You can use a pricing gun, like the one above, or you can pick up a date coder/embosser for your packaging (the more expensive alternative). But, if you're interested, here's a link to one.

## QUANTITY PRODUCED

This one is pretty obvious. How many units of your product did you make? That way, you know how many units were affected by a recall - and how many units you have on hand. This is also important when you're calculating the cost of your food product. If you pay employees (or yourself) by the hour, your labor rate per unit fluctuates.

## TEMPERATURE

Depending on your food product, you'll need to keep track of all your temperature checks in a temperature log. For example our scheduled process requires us to maintain a fill temperature of more than 185 degrees. A co-packer needs to measure this at several points during the manufacturing process. If it's not hot enough, they will need to wait to fill the jars.

## PH & WATER ACTIVITY

I'm pretty sure you have no intention of killing any of your customers, right? Right. That's why you have to keep track of your pH if you're producing an acidified food product - like sauces, condiments, etc. If you're making baked goods commercially, you may be required to track water activity, too. A food science lab can help you determine what measurements you need to make - and stay below or above.

Although this may sound elementary, you've got to keep track of these numbers. A lot of kitchens use a binder with a new page for each product produced - that's the easiest way - and all you have to do.

While I'm on the topic of legality, there's another kind of legal precaution you should be thinking about -- the protection of your company's assets and intellectual property.



COLD  
BREW

MOCHA COFFEE

COLD  
BREW

BLACK COFFEE

CO  
BR

ORIGIN

During development and testing, you will have made changes to your recipe, process and packaging. You should also have addressed all regulatory concerns and gained any approvals required

All of these details will now be put together into product specification documents complete with the associated food safety certification plan. The product specification documents should include:

- Formulation document
- Procedure (or blending) document
- Specification document

The **formulation document** should be written with weights or measures and include:

- A list of ingredients and quantities together with unique codes for identification/traceability purposes of each ingredient as well as how ingredients should be grouped together to follow the logical blending or filling sequence
- A standard blending unit (e.g., 100kg) can be easily scaled up to fit the blending equipment

The **Procedure Document** should outline how to actually make the product including:

- The exact blending/manufacturing sequence including any requirements (e.g., blanch to a pick-up of 1.8 x the dry weight)
- Hygiene requirements of equipment prior to manufacture and packing
- Preprocess handling including heat treatments and the maximum down-time delays the product can safely withstand in case of line breakdowns or buildups
- Special manufacturing line prerequisites, such as the level of disinfection and pressure required in the water used in container washing, metal detection, sieving requirements

for sauces and brines, in-process protocols for visual inspection of raw material defect levels, and container checks for seaming/sealing and manufacturing coding and, where applicable, labelling, and tray and shrink wrapping quality checks

- All container coding such as best before coding and stock control identification requirements
- Processing parameters, quality of steam and its treatments, time/temperature treatments
- Cooling water pressure/disinfection requirements. If the water is not from a municipal supply it should be checked for chemical and microbiological purity
- Labelling, tray and shrink wrapping marketing identification protocols
- Pallet selection and storage protocols
- Transportation handling requirements especially key packaging components

The **Specification Document** should outline pre and post process requirements for your product including:

- Any health benefit claims your product makes along with validation by a recognized validation agency/auditor; these tests should be independently carried out and a record of them kept in the product specification documentation
- Quality checks including physical, chemical, microbiological, volumetric and organoleptic testing, and how often they should be done during the manufacturing process as well as the post (final) process product

## PRODUCT SPECIFICATION

Developing your product specification is when things start to move from "concept" to reality. Often this is where products run into difficulty.

At this point in the process you will know the precise nature of the product your consumers want. Your job here is to find a way to produce that viably.

There is quite a bit to think about in terms of your product specification. You will need to include the technical and financial aspects here to understand what is needed and how much investment is required.

Ask yourself the following questions:

1. What is the precise recipe or product formulation?
2. How will I source those ingredients (remember you will need them in bulk)?
3. Where will I produce the product?
4. How will the product be stored?
5. How will the product be distributed?
6. How will the product be packaged?
7. What is the product shelf life?
8. How much will all of this cost?
9. How much do I want to sell for?

## SENSORY TESTING

Once a prototype of the product has been developed - and you're sure you can produce, pack and distribute the product viably - you should absolutely test the product with consumers.

Sensory or product testing is the most common form of consumer insight that is required at this stage. This type of research involves taste testing (blind and visual) and often involves the benchmarking against the competitive set.

At this point you may have a range of different product specification or recipes to compare against one another. Often different versions are tested to identify the "winning" product spec that appeals to

consumers the most.

The key is to take time to test your product with consumers using a research partner who understands sensory testing. This partner who is trained in Qualitative Research methods can assist you in speaking to large number of potential consumers to really understand if your product stacks up. At the viability stage it's all about being robust and understanding the numbers - so a large sample of consumers should be tested.

## FEASIBILITY TESTING

The next step is to scale up your formulation to test out your product in a commercial plant using your formula, procedure and specification documents. This requires running just enough product to test how the ingredients react, blend and/or fill using commercial equipment and under production requirements. This step can be expensive but is a necessary step before moving to full scale production. Lessons learned in feasibility testing can save you from expensive mistakes in full production.

A key step at the end of feasibility testing is to evaluate your product's shelf life and food safety. It may be important to use the expertise of a food testing laboratory to ensure this is done properly.

# FINISHED PRODUCT SPECIFICATION - TED'S PIES

## General Information

Product Title			
Production Address			
Company Telephone/Email/Fax			
Contacts:	Accounts		
	Technical		
	Emergency/Recall		
Packaging format			
Net Quantity		Minimum or Average Weight	

## Ingredients and Allergens

Legal name / Descriptive name			
Ingredients (List all ingredients in recipe, include additives (with E number). Provide ingredients for any multi-component ingredients)	Quantity in Recipe	% in Recipe	
	In descending order at time of manufacture		
List any processing aids used:			
Current Ingredient Declaration			



(include QUID and emphasised Allergens)			
<b>Allergens present in: Ingredients, additives &amp; processing aids</b>	<b>Contains (YES/NO)</b>	<b>Risk of Allergen Cross-contamination/ or May Contain (comments)</b>	
Cereals containing Gluten namely wheat, rye, barley, oats and hybridised strains			
Peanuts/peanut derivatives			
Nuts (almond, hazelnut, walnut, cashew, pecan, Brazil, pistachio, Macadamia) and derivatives			
Sesame seeds/sesame seed derivatives			
Crustacean/crustacean derivatives			
Molluscs/molluscs derivatives			
Fish/fish derivatives			
Egg/egg derivatives			
Milk/milk derivatives			
Soybeans/soybean derivatives			
Celery/celery derivatives			
Mustard/mustard derivatives			
Lupin/lupin derivatives			
Sulphites (declare if over 10mg/kg in whole product )			
<b>Suitability</b>			
Suitable for Vegetarians	YES/NO		
Suitable for Vegans	YES/NO		
Contains Genetically Modified Organisms/Materials	YES/NO		
<b>Nutrition</b>			
<b>Source of Nutritional Information</b> e.g. analysis / calculation / reference source			
	Per 100g/ml as sold		
Energy kJ			
Energy kcal			
Fat (g)			
Saturates (g)			
Carbohydrates (g)			
Sugar (g)			
Fibre (g) (optional)			
Protein (g)			
Salt (g)			
<b>Product Handling</b>			
<b>Durability Type</b> (circle as appropriate)	<b>Use By</b>	<b>Best Before</b>	<b>Best Before End</b>
<b>Shelf-life unopened</b>		<b>Shelf-life once open</b>	
<b>Storage Conditions</b> (circle as appropriate)	<b>Ambient</b>	<b>Chilled</b>	<b>Frozen</b>
<b>'Frozen On' date</b> (for frozen meat/meat preparations/fishery products)		<b>Traceability / Lot Code Format Used</b>	

Instructions for Use, if relevant			
<b>Additional Requirements</b>			
Alcoholic Strength by Volume (ABV) (if contains >1.2% by volume)			
Origin / Place Of Provenance if required			
Packaged in a protective atmosphere		YES/ NO	
Product-specific Requirements e.g. cocoa solids			
Health Mark			
Warnings			
<b>Quality or Safety Parameters</b>		(measurable parameters of significance for quality or safety e.g. pH, acidity)	
Parameter	Target	Tolerance +/-	Frequency of test
<b>Microbiological Testing</b>			
(examples: include only those organisms tested on the product)	Target	Maximum	Frequency of test
TVC (Aerobic) cfu/g			
Yeast & Mould cfu/g			
Coliform or Enterobacteriaceae cfu/g			
E.coli cfu/g			
Salmonella spp in 50g	ABSENT	ABSENT	
Listeria monocytogenes in 50g	ABSENT	ABSENT	
Listeria spp			
Staphylococcus aureus cfu/g			
Other			

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# Protecting Your Idea

You put a lot of time, effort, and money into your product by this point so you do not want someone else to steal your idea.

The Canadian Intellectual Property Office (<http://www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/Home>) provides information on getting trademarks, patents, and copyright protections. Note that patents can be very expensive, and may not be worth the money, especially when a competitor can so easily change a process and claim to have a different product as a result.

You should also make all product development service providers (like your lab) sign a confidentiality agreement. This is a legally binding contract, where one or both of the parties agree that information exchanged between them will not be shared with outsiders.

A business lawyer can help draft a confidentiality agreement for you or review a template that a service provider may offer. Check the website for the Law Society of Upper Canada to find a business lawyer (<http://www.lsuc.on.ca/with.aspx?id=905>).

## PART 5

### What Are the Key Elements of Food Packaging & Labelling

All packaged foods sold in Australia must comply with the labelling requirements stated within the Food Standards Code. These requirements have been adopted into food law by all states and territories in Australia, ensuring that food labelling regulations are consistent across Australia. The Code can be accessed via the Food Standards Australia New Zealand website.

Food labels are required by law to carry essential information so that consumers are informed of the nature and properties of foods prior to purchase -- this includes statements about the presence of allergenic ingredients that could lead to life-threatening allergic reactions in susceptible persons if the labelling information is not accurate. Some information may also voluntarily be offered on food labels by food businesses, giving consumers greater information to make informed purchasing choices.

Food businesses must also ensure that they are not potentially misleading or deceiving consumers with any claims that are made on food labels (whether intentional or not).

As food labelling requirements may differ around the world, businesses that are importing food for sale in Australia need to ensure that these foods comply with Australian labelling regulations before selling the food.

# KEY MESSAGES

- All packaged foods sold in Australia must comply with the labelling requirements of the Australia New Zealand Food Standards Code, which applies in Queensland through the Food Act 1984.
- Food labels must carry essential information, so that consumers are informed of the nature and properties of foods before they buy.
- Food businesses must ensure that they do not mislead or deceive consumers with any claims made on food labels.
- Food importers must also comply with Australian labelling laws.

## The Ideal Food Package

Packaging protects your product from physical damage and chemical or microbiological contamination. The package is also one of the greatest influences on a consumer's decision to try your product.

A good package:

- Meets all current legal requirements
- Is compatible with food
- Protects against contamination from the environment
- Controls the product's environment and condition
- Can help extend the product's shelf life
- Resists mechanical damage
- Is sanitary, tamper-proof and attractive
- Is convenient, inexpensive and lightweight
- Stands up to the demands of shipping and display
- Can be easily handled in the store
- Is environmentally sound
- Functions as a preparation and/or serving vessel
- Sells itself
- Identifies the product
- Supplies the required information

The type of food package you choose may not meet all of these criteria. It is up to you to decide which are most important for your particular application and which can be compromised.

Packaging can also have an impact on your costs. Depending upon its weight, it can increase your shipping costs. And in some jurisdictions you can be held responsible for managing the end-of-life of your package to minimize its impact on the environment. This is called product stewardship.

### FACTORS TO CONSIDER REGARDING DESIGN

Here are some of the considerations you should take into account when you are developing your product design:

- Target market
- Image or “personality” of the product based on the tastes and preferences of your target market e.g., bold, elegant, practical, sophisticated, fun
- Important features of your product to the audience (if too much information is presented, the design will be cluttered)
- Location of where your product will be sold and the associated distributor’s regulatory requirements for the package, including labelling

## METALS

Metals provide excellent protection to foods, because no moisture or gas transmission can take place. Metals are:

- Inexpensive
- Non-toxic
- Strong
- Coated or plated so that they do not react with the food

Cans are the primary type of food packaging produced from metals. They allow you to cook the food inside the sealed can.

The main metals used to make cans are steel and aluminum. Steel cannot be placed in direct contact with food or it will rust. As a result, steel must be coated with tin, chromium, or various polymers for acidic foods.

Aluminum, on the other hand, will not corrode when it is exposed to food. However, it is sensitive to chloride ions and acid in foods.

In many cases, cans are lined to prevent reactions. Bisphenol A (BPA) has been used in food can liners and is being phased out.

- Placement of the product in relation to other products, particularly competitors
- Colours and the meaning they convey in each cultural setting
- The appearance of the package on the shelf
- Symbols and shapes and the information they can convey

## MATERIALS

You can choose from a number of packaging materials. Each has its advantages and disadvantages.

## GLASS

One of the main benefits of using glass over other types of food packaging is that it is non-reactive with virtually all foods. As well, it totally contains the product, because it is impervious to moisture and gases.

Like metal, glass allows you to cook the food inside the container. It is also good from a marketing perspective because it is transparent, thus allowing the consumer to see the contents.

Glass is recyclable and is often re-used by some food processors. The drawback of glass as a food packaging material is that it is extremely fragile and very heavy, which adds to distribution costs. Many large food distributors are working hard to reduce the amount of glass packaging in the products they sell.

The standard glass for food packaging is soda-lime glass. It can be formed into unique shapes and sizes. It can also be coloured for an attractive appearance or to screen out light that could cause unwanted changes in the product.

## CAN SIZES

Metal cans come in a large variety of sizes, ranging in both height and diameter. Sizing is based on the American system, so it is read in inches. Two sets of numbers are given, the first set being the diameter and the second being the height. Within the set, the first number is stated in inches and the second is stated as 16ths of an inch.

## CAN TYPES

You can purchase either three-piece or two-piece cans. Because two-piece cans have only one seam, they are superior with respect to integrity and appearance. Unfortunately, they are more expensive, and only small sizes are available.

## PAPER

Food packages made from paper can be formed into simple or elaborate designs because paper is flexible and easy to work with.

Paper is also, light weight, generally inexpensive, and has an excellent surface for printing.

The structural integrity of paper is limited, meaning it become weaker when wet. As a result, paper is restricted to certain applications when used alone. To overcome this problem, paper is often coated with polymers or lined with foils. Types of paper packaging include:

- Bags and pouches
- Folding cartons
- Corrugated boxes

## PLASTIC

Plastics are ideal for food packaging because they are resistant to breakage, relatively inexpensive, corrosion resistant, lightweight and waterproof.

Plastics can be produced easily in complex shapes, and they also possess a wide range of colours, or remain transparent.

Although plastics have come a long way since their introduction into the food industry, there still remain some drawbacks to using them for food packaging. For example:

- They can bend, crush or crack easily
- Some possess little heat resistance
- They pick up dust easily
- Some of them ore complex laminates can be very expensive

Plastics also don't have the excellent barrier properties of glass and metals, so they allow gases to pass in and out of the package. Plastics differ in how effective they are as barriers to the various important gases (e.g., oxygen, carbon dioxide and water vapour). Selecting the right plastic packaging requires knowledge of how sensitive the product is to loss or absorption of these gases.

# Food Labelling

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High quality labelling, like packaging, requires research, planning and consultation from a variety of sources. As well, package and label design must be integrated. It is important that they both send the same message to the consumer.

## LABEL DESIGN

Before you create a label, you should have your product specification available and know:

- The regions where your product will eventually be sold, and through which distribution channels
- Information your customers would find helpful
- Colours and promotional appeals that are suitable for your audience
- How labels will be applied
- Labelling material suitable for the product environment (does it need to be freezer-proof? Shipping-proof? Smudge-proof?)
- Labelling budget per unit
- Regulatory requirements for the product

Once you have enough information to address the above, you can approach a label designer. You can design the label yourself. See Protecting Your Idea in Section 4: Developing Your Product Prototype for more information on how to copyright your label wording and artwork.

Your ultimate goal is to produce a label that is educational and user-friendly. It should also adequately market your product within legal specifications. And, of course, your label needs to be an integrated part of your strategic marketing approach.

## LABEL SPECIFICATIONS

Be aware of the following:

- Eco-labelling (or Environmentally Friendly

- Labelling) falls under separate guidelines in Australia.
- Before you finalise the printing of labels, all the work should be proofread several times. Also, if you are unhappy with the design work, ask the designer or printer for changes.
- Printers normally create print plates for label printing. Ask the printer if you can keep the plates when the job is completed. This will permit you to change printing companies without incurring the additional cost of creating a second plate.
- There is usually a minimum order amount when purchasing labels or packages. Determining this amount before you order will help you to avoid over-purchasing to meet the minimum.
- The cost advantages of bulk printing may be undone by the need to dispose of unused labels if you require a change. Keep this in mind when you order labels.

## PRODUCT BAR CODES

Once you have created your product, the next step is to put a barcode on it. This is important, as retailers are much more willing to stock products that have barcodes.

**Getting a Barcode** is a reasonably straight forward process. It generally involves simply purchasing a barcode online and incorporate the barcode images into your product packaging.

The first step is to decide which kind of barcode you need. Most retail products use EAN-13 barcodes, these are used on all retail products except for books and magazines, and are used in all countries except for the USA where UPC-A Barcodes are more common.

#### **Incorporating the barcode onto your product.**

Once you purchase a barcode through our site we will email you through your barcode with the images as attached files. You can then simply incorporate whichever image file format you like best into the product packaging. When a retailer receives your barcodes for the first time they will scan your barcode and input your product information at that stage. From that point onwards every time your barcode is scanned your product information will appear.

If your product packaging has already been printed, you can print sticky labels to be manually stuck onto your product. Please see our barcode labels page here.

**Other stuff you may need.** Barcode verification is sometimes required by larger retailers. Please see our barcode acceptance page to establish whether this is something you will require. If you have a barcode (that you didn't buy in our barcode packages) you may wish to consider barcode registration. Food Products sold in Australia need to be labelled according to the Food Standard Marks. Please see the Australian Government Country of Origin Labelling information



## THE GREAT LABELLING DEBATE

The push by manufacturers and the Australian Government to promote Australian products has been evident since the 1930s. The logo (launched in 1986), is known as the 'Australian Made, Australian Grown' (AMAG) logo, as seen within the accompanying image (Australian Made 2014b).

The logo is registered with the Federal Government; therefore its usage must comply with strict Codes of Practice. There are five variants to the AMAG logo. 'Australian Made' products are those that have been manufactured in Australia, with 50% of the cost attributed to Australian materials or production. 'Australian Grown' products are those that all of its ingredients are grown within Australia, or nearly all processing is conducted in the country. 'Product of Australia' logos are used on products abide to the same guidelines used in 'Australian Grown' products, but it can be applied to locally manufactured products. 'Australian Seafood' logos abide to the same guidelines as 'Product of Australia' products, but it applies to seafood harvesting. Lastly, 'Australian' labelled products are only used on exported products, and must satisfy one criteria aforementioned (Australian Made 2014a).

All food products (imported or otherwise) must abide by legislation to display their country of origin. Under the 'Australia New Zealand Food Standards Code', the packaging must identify where the food was made, produced or grown; or state where the food was manufactured and packaged and whether it contains local or imported ingredients (ComLaw 2013).

Country of origin legislation ensures that the consumer is provided with a background of the product, granting them the knowledge to make a confident purchase.



## 1 Nutrition information panel

This panel shows the average amount of energy, protein, fat, saturated fat, carbohydrate, sugars and sodium in a serve and in 100 g (or 100 ml) of the food. The amount of any other nutrient or substance about which a nutrition content or health claim is made must also be shown (e.g. the amount of calcium must be shown if a claim about calcium is made).

## 2 Percentage labelling

Food labels must show the percentage of the key or characterising ingredients or components in the food. This allows similar foods to be compared. The characterising ingredient for this strawberry yoghurt is strawberry and the ingredient list states that it contains 7% strawberries.

## 4 Information for people with food allergies or intolerances

Some food ingredients and substances can cause severe allergic reactions and must be declared when present in a food. These ingredients are peanuts, tree nuts (e.g. cashews, almonds, and walnuts), crustacea, fish, milk, eggs, sesame, soybeans, wheat and lupin. Sulphites (if added at 10 mg or more per kg of food) and cereals containing gluten (e.g. wheat, oats, barley, rye and spelt) also need to be declared.

## 12 Nutrition and health claims

Nutrition content claims are claims about the content of certain nutrients or substances in a food, (e.g. 'contains calcium'). Health claims refer to a relationship between a food and health. There are rules for when nutrition content or health claims are made on food labels.

## 3 Food identification

To help identify a food, food labels must show:

- the name of the food
- the name and business address in Australia or New Zealand of the supplier of the food
- the lot identification of the food.

The name or description of the food must reflect its true nature (e.g. strawberry yoghurt must contain strawberries). If the yoghurt contained strawberry flavouring rather than real fruit, then the name would need to indicate that it is strawberry-flavoured yoghurt.

## 5 Date marking

Foods that should be eaten before a certain date for health or safety reasons must be labelled with a use-by date. Otherwise a best-before date is required if the food has a shelf life of less than two years. Although it may be safe to eat a food after its best-before date, it may have lost quality and some nutritional value.

## 11 Country of origin

Australia and New Zealand have different country of origin labelling requirements.

In Australia, the country of origin of packaged and some unpackaged foods must be stated on the label. Read more about country of origin labelling on the Australian Competition and Consumer Commission website at [www.accc.gov.au](http://www.accc.gov.au)

In New Zealand, country of origin labelling is required on wine only. Further information is available on the Ministry for Primary Industries website at [www.mpi.govt.nz](http://www.mpi.govt.nz)

## 6 Ingredient list

Ingredients must be listed in descending order (by ingoing weight). So if an ingredient is listed near the start of the list, then the food contains more of this ingredient than others lower down the list.

## 7 Labels must tell the truth

Under Australian and New Zealand consumer laws, labels must not be false, misleading or deceptive. Suppliers must also label foods with accurate weights and measures information. The National Measurement Institute in Australia ([www.measurement.gov.au](http://www.measurement.gov.au)) and the Ministry of Consumer Affairs in New Zealand ([www.consumerprotection.govt.nz](http://www.consumerprotection.govt.nz)) ensure that correct weight and measurement information is used on food labels.

## 10 Legibility requirements

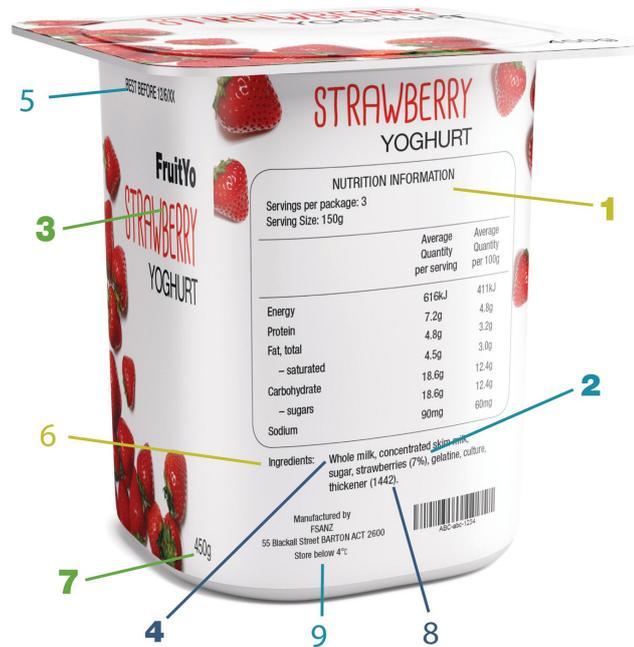
Any labelling requirements must be in English, be legible and prominent so as to contrast distinctly with the background on the label.

## 9 Directions for use and storage

Where specific storage conditions are required for a food to keep until its best-before or use-by date, those conditions must be included on the label. If the food must be used in accordance with certain directions for health or safety reasons, those directions must be included on the label.

## 8 Food additives

Food additives must be identified in the ingredient list, usually by their class name (e.g. 'thickener' or 'colour') followed by the food additive name or number. A thickener has been used in this yoghurt and it is labelled as 'thickener (1442)'. A full list of food additive names and numbers is available from [www.foodstandards.gov.au](http://www.foodstandards.gov.au)



# CASE STUDY

## Weis

Weis is one of those truly iconic Australian brands for over 18 years. Bringing this legendary Queensland brand to market has evolved during its lifespan and has included extending the brand's reach from the classic "Weis Bar" into take-home desserts, developing new products and showcase exotic new flavour profiles, and, in recent times refining and crafting a fresh new logo from a simple concept and the bones of the original badge.



## A Weis Bar — in a Tub

When Weis wanted to make the transition to a true take-home dessert — in a one litre tub, it was recommended to avoid the off-the-shelf packs solutions already available. Convinced that greater brand presence could be delivered in their own unique design, Weis designed a completely new shape of tub.



Working with the unusual and slightly retro logo shape as a starting point, Weis developed a three-dimensional one litre trapezoid. With broad shoulders and a small footprint this new tub punches above its weight in shelf standout — sharp and detailed in-mould printing only adding to its appeal.

## A Taste for the Finer Things



With a reputation for real fruit and real ingredients, Weis was ripe to launch a series of exotic sorbet flavours aimed squarely at the adult (read: cocktail) market. With some market intel that showed that the existing sorbet flavours were popular as mixers or bases for party drinks Weis decided to more boldly target that audience...

without alienating the take-home-dessert buyer. The design of the new “Exotics” tubs was based on the existing Sorbet range. The colours were darkened, made more intense — and extravagant, explosive photomontage images were created, each one splashing up out of a different shaped cocktail glass, hinting at their potential.

## A New Logo for an Old Friend

Weis has always had a singular presence with its angular and retro styled logo. Since its inception in 1957, there have been various subtle shifts in execution of the logo, but never a radical departure — for good reason. The strong recognition and subsequent equity afforded by the Weis logo could not be lost in any rework. Weis worked on a concept for the refresh — include the iconic “cream strip” from the classic Weis Bar and soften the logo in the process. A new logo design carefully mirrored the proportions and forms of the red and white in the existing brand — deliberately putting loyal customers at ease — whilst moving the typography and badge away from hard-edged and angular, instead crafting fresh, soft, more playful shapes. The new Weis logo feels like an old friend, it doesn't seem too different, it can still be seen and recognised, but it's new look will carry it well into the 21st century.

