

## Lupin – what next for food manufacturers?

On 25 May this year, the Australia New Zealand Food Standards Code (the Code) was amended to add lupin to the list of nine other allergens that must be declared on food labels.

Under Standard 1.2.3 (Information requirements – warning statements, advisory statements and declarations) lupin is required to be declared where it is present as an ingredient, compound ingredient, additive or processing aid.

The Code is silent, as it is for other allergens, on labelling for lupin due to unintentional presence, for example, from cross contact through the supply chain and manufacturing.

### How long do we have?

You have until 26 May 2018 to update product information and declarations.

All products, including existing ones out on shelves, will need to comply with the new labelling requirements for declaring lupin by 26 May 2018.



### Where will I find lupin?

Lupin is one of Australia's most important crops with Western Australia growing approximately 85% of the world's sweet lupin supply.

Lupins act as a natural fertilizer, introducing nitrogen into the soil. They have traditionally been grown as a rotational crop with wheat and oilseed such as canola.

#### *Direct ingredients*

Lupins are a legume similar to chickpeas and lentils and are generally used in cereal based products such as breads and

bread mixes, muffins, mueslis and pasta.

Lupins contain approximately 40% protein and can be used to produce protein isolates which have functional properties that can influence the structure and texture of foods and may be used in applications for bakery, milk, meat and pasta products.

Lupin present as an ingredient or protein isolate should be labelled to indicate the presence of lupin on a product data specification or Product Information Form (PIF)<sup>™</sup>.

#### *Cross contact*

In addition to lupin present in a food due to direct, intentional addition, lupins may also be present, even under conditions of Good Manufacturing Practice (GMP), due to cross contact with other materials. This could occur at any point along the food chain from primary production, ingredients and through the manufacturing process.



The potential presence of lupin via agricultural practices is an example of cross contact through agricultural co-mingling. It is important to understand that while lupins are grown as a rotational crop with wheat or canola, the size of a lupin bean is quite different to that of a wheat grain or canola seed. The cleaning processes that wheat and canola seed undergo prior to further processing are likely to remove the lupin bean. In addition, the majority of lupins grown in Australia are grown in WA – important to consider when doing a risk assessment.

The Allergen Bureau has an FAQ on their website with information on labelling a product or commodity which is subject to agricultural co-mingling – click [here](#) to access.

#### *Imported ingredients and foods*

Imported foods must comply with Australian standards, including the new lupin labelling requirements. Importers are responsible for compliance, and like manufacturers will need to take steps to ensure products that contain lupin or lupin products as an ingredient, additive or processing aid or due to cross contact with other materials or environment are appropriately labelled. It may be important to consider the possibility of co-mingling of lupin in internationally sourced grains.

Lupins are required to be labelled as an allergen in the EU so EU food producers should have information about the presence of lupin readily available for their products.

#### **Analysis for Lupins – to test or not to test?**

There are a number of commercially available ELISA assays for the detection of lupin – and like all immunoassay based methods there are a number of factors to consider when choosing a method - including processing impact on the product, sensitivity, specificity, robustness and repeatability. An important factor in lupin detection is the specificity of the assay. It is also important that the method can detect a broad range of Lupin species including *Lupinus angustifolius* (Australian sweet lupin) which is the crop most frequently grown in Australia. There are several lupin lateral flow assays available for Clean-in-Place (CIP) samples and environmental monitoring. When using lateral flow assays it is important to understand the instructions for the appropriate use of these devices.

Providing details, regarding the nature and origin of any samples, to your laboratory is critical to enabling the analyst to choose the correct kit. This should include the origin of any grains in the sample submitted and if any other legumes are present.

In general, the best approach to the sampling of large volume agricultural raw materials to screen for potential cross contact is best done by taking multiple samples from the material, as distribution of any allergen from cross contact is unlikely to be homogenous, these samples should be analysed as individual samples and not analysed as a composite. Where analysis of finished product is considered, it should be done on the basis of robust risk assessment, with the sample number being reflective of the degree of risk.

#### **What should I do?**

1. Check your PIFs for the presence of lupin as an ingredient or cross contact.

You don't need to check every PIF – think about the types of ingredients or products that have a cereal base or potentially contain a protein isolate, for example.



2. Conduct a VITAL<sup>®</sup> risk assessment.

There may be a risk of cross contact from agricultural practices in wheat and canola products. For imported ingredients and products, it would be advisable to ask about the potential for lupin cross contact.

3. Decide if labelling is required for lupin as an ingredient or as a cross contact allergen.

The potential for cross contact is often addressed using precautionary allergen labelling (e.g. **May be Present: XXX**) - after the application of a risk assessment process such as the Voluntary Incidental Trace Allergen Labelling (VITAL) Program.

#### **Tools to assist**

*AFGC Product Information Form (PIF™)*

Lupin has been included in the Product Information Form since 2012. This requirement has been carried across to PIF V6.0 which is due to be launched on 17 July 2017 at the AIFST Convention in Sydney.

Further details on PIF V6.0, the launch and training are available on the [AFGC website](#).

*The VITAL<sup>®</sup> Program*

The Allergen Bureau added lupin to the 'ANZ legislation' in VITAL<sup>®</sup> Online on Monday 10 July 2017. Important actions must be taken for recipes created using this legislation.

For more information on this change click [here](#). The Reference Dose of lupin is 4 mg lupin protein. There is more information on Reference Doses available on the Allergen Bureau website [here](#).

#### **Where to get help**

[AFGC Food Industry Guide to Allergen Management and Labelling](#)

[Allergen Bureau](#)

[FSANZ](#)

FSANZ has produced a [poster](#) food businesses on mandatory allergen labelling.

[Australasian Society of Clinical Immunology and Allergy](#)

#### **For information**

[Food Allergen Portal](#)

[National Allergy Strategy](#)

The AFGC is working with Allergy & Anaphylaxis Australia (A & AA) and Australasian Society of Clinical Immunology and Allergy (ASCIA) to support the implementation of a National Allergy Strategy across all aspects of allergen awareness, management and treatment.