

# **Consideration by the ACNFP of Baru Nut as a traditional food from a third country**

## **Background**

At the 167<sup>th</sup> meeting of the Advisory Committee on Novel Foods and Processes (ACNFP), a notification dossier for roasted Baru nut (*Dipteryx alata Vogel*) as a traditional food from a third country was considered.

The applicant is requesting authorisation within Great Britain (GB) market for the product as roasted whole nut, peeled/unpeeled, salted/unsalted, with the general population as the target population.

The advice of the Committee to the Food Standards Agency is summarised below. Please note the Committee did not consider any potential health benefits from consuming the food as the sole focus of the novel food assessment is to ensure the food is safe, not misleading, and not putting consumers at a nutritional disadvantage.

## **The Committee's discussion**

### **Identity of the traditional food**

Baru nut is of the species *Dipteryx alata vogel*. It is contained within the fruit that grows on trees found in Brazil, Paraguay, Bolivia and Columbia. The nut has a firm outer film and is encased in a woody outer shell (endocarp). The composition of the nut is mainly carbohydrates, proteins, lipids, and minerals as well as secondary metabolites.

The members did not raise any concerns related to the identity of the traditional food.

## **Production Process**

The Committee raised data gaps in the information provided on the production process that could impact health risks. The method of collection and processing of the nuts and how this would be applied consistently was not well described.

However, some of the risks this could pose were considered less of a concern given that this is consistent with the approaches used for other nuts.

The Committee further explored the impact of production processes on aflatoxins, particularly given the product is stored and transported in plastic bags. Whilst aflatoxins are recognised as a risk by the applicant with testing performed on the sum of aflatoxins B1, B2, G1 and G2, the members would have had more confidence on their management if a better sampling plan was used in line with recognised international best practise for other nuts such as peanuts. Testing for individual mycotoxins should also be included in the testing protocols.

Whilst the applicant had recognised antifungal properties of polyphenols and gallic acid and their presence in the traditional food, the members argued that, without clear analysis of the levels present in peeled and unpeeled nuts, their effectiveness could not be determined.

High roasting temperatures was noted to be a potential issue due to formation of acrylamide. The members also noted that there are a range of process contaminants such as polyaromatic hydrocarbons that should have been considered within the production/roasting process. Analysis of these had not been undertaken. These substances would need to be managed in line with current best practice required in GB for process contaminants.

The storage temperature of 26°C for a month was also a concern that warranted discussion with the applicant especially where the storage conditions are not well managed/controlled with the potential presence of moisture and condensation. This could exacerbate any issue with microbial contamination and mycotoxins.

In conclusion, the data provided for the production process was deemed inadequate to complete a safety evaluation.

## **Compositional data**

The Committee commented that the compositional data as presented was generally difficult to follow, with large ranges and significant variations making interpretation of the data and any impact on safety difficult to identify. Not all the

tests were performed for all batches. It was noted that as a natural product, natural variation from year to year was to be expected and this was demonstrated in the data from different harvest years. The proposed solution would be to provide data from one harvest to give us information on the batch-to-batch variability.

It was commented that further compositional data would inform conclusions on the novel food. For example, understanding the composition of the skin to understand its contribution to the compositional profile. It was also suggested that analysis of the secondary metabolites based on compounds would be needed. This could be informed by compounds of safety relevance in botanically related plants.

Overall, a further compositional analysis would be required to reach a conclusion on safety for this section.

## **Specification**

No specific comments were raised.

## **Nutrition and Allergenicity**

The Committee noted the properties of the nut. Members advised that a better understanding of the carbohydrate/fibre fractions was needed for the peeled vs un-peeled nut, where this is to be consumed in both forms, due to the high fibre levels reported. They also noted a high range of macronutrients such as unsaturated fatty acids.

The members noted that there were no reports of allergic reactions to Baru nut in the traditional communities consuming the product. It was noted that levels of food allergy vary considerably between populations and as such this is unlikely to be predictive for the GB population.

The Committee commented that the data presented on allergenicity by the applicant suggested a potential for cross reactions to peanuts on the grounds that the nut is a legume. However, members thought that possible cross reactivity to other legumes such as lupin and soya may be more relevant given that they are botanically more closely related. As such the proposal to include a warning label for peanut allergic consumers not to consume the product was a concern on the grounds that it was inaccurate and could impact wider consumer confidence in precautionary allergy labelling. It was suggested that a bioinformatic analysis,

comparing the amino acid sequences of the Baru nut proteins to those of known allergens would be more informative of the potential for cross reactivity.

It was concluded that more information on nutrition and allergenicity would be required to make a conclusion on the risk of nutritional disadvantage and allergenicity of Baru nut.

## **Experience of continued use**

This novel food is found across countries in South America, specifically Brazil, Paraguay, Bolivia and Columbia. The members noted the applicant provided information showing Baru nut has been commercially produced in Brazil since 2001 with publications documenting consumption since 1987. However, they also noted that the traditional population who consume Baru nut is small, and therefore it is difficult to extrapolate their experience to other populations. This makes assessing and concluding on safety difficult.

Further information on how this is consumed, in what portion size and in what context would help inform the assessment, in particular, allowing identification of what lessons on the safe use of Baru nut could be extrapolated to the GB population.

## **Proposed conditions of use for the UK market**

It was noted that the proposed use is as used traditionally in South America – as a nut. Assessing this further was limited by the points on traditional use and its applicability to the GB population detailed in the previous section.

## **10-day Consultation**

The Secretariat posted the draft summary online for a 10-day consultation to allow members of the public to review the advice. The Secretariat received no comments from the public during the consultation period. Therefore, no further additional information to inform the ACNFP risk assessment was provided, and the advice remained as drafted.

## **Conclusion**

The Committee identified several areas of concern where further information and assessment would be required to provide reassurance that Baru nut could be

consumed safely by the GB population.

Several potential risks from various sections of the application needed to be explored further to provide reassurance that the product was adequately controlled. The main areas of uncertainty were around the production and composition of the product, potential allergenicity and the experience of continued use as a traditional food and whether this formed a basis for assessing the risk for consuming the product by the GB population.