

19 September 2001
04/02

INITIAL ASSESSMENT REPORT
(PRELIMINARY ASSESSMENT – SECTION 13)

APPLICATION A443

**IRRADIATION OF TROPICAL FRUITS - BREADFRUIT,
CARAMBOLA, CUSTARD APPLE, LITCHI, LONGAN, MANGO,
MANGOSTEEN, PAPAYA AND RAMBUTAN.**

SUMMARY

This is an initial assessment report only and based on available information provided by the Applicant. The assessment is designed to assist in identifying the affected parties, any alternative regulatory options, and the potential impacts of any regulatory or non-regulatory provisions. The information needed to make an assessment of this application will include information from public submissions. Public submissions are invited on this initial assessment report.

An application has been received from Surebeam Australia Pty Ltd to amend the *Food Standards Code* to permit the irradiation of tropical fruits (Breadfruit, Carambola, Custard Apple, Litchi, Longan, Mango, Mangosteen, Papaya and Rambutan) using machine sourced e-beams and x-rays as a phytosanitary treatment against fruit fly hosts and other critical quarantine pests.

Approval of irradiation for the above tropical fruits would provide an alternative treatment to existing techniques (such as chemical treatments) and facilitate access to New Zealand markets for Australian tropical fruit growers.

ANZFA's objectives in developing food regulatory measures and variations of food regulatory measures are, in descending priority order:

- the protection of public health and safety;
- the provision of adequate information relating to food to enable consumers to make informed choices; and
- the prevention of misleading or deceptive conduct.

In developing and varying such measures, ANZFA must also have regard to:

- the need for standards to be based on risk analysis using the best available scientific evidence;
- the promotion of consistency between domestic and international food standards;
- the desirability of an efficient and internationally competitive food industry; and
- the promotion of fair trading in food.

ANZFA will seek to fulfil these objectives in considering the proposed variation to the food regulatory measure that is the subject of this Application. In particular, ANZFA will focus on considering whether tropical fruits that are irradiated are completely safe for human consumption, whether there are any significant effects on vitamins and minerals due to irradiation and whether the technique is fully justified, efficacious and has the support of Australian and New Zealand Quarantine agencies.

ANZFA will consult widely on this application, will engage stakeholders with interest in the application, will thoroughly analyse the public submissions received, and will perform an extensive scientific evaluation of the safety, nutrition, technological need and efficacy of the irradiation process.

It should be noted that any approval granted under this application would apply to the relevant foods produced in Australia and New Zealand and the relevant foods imported by either country and would allow not only the Applicant but also any other approved irradiation facility to treat these particular foods with ionising radiation from gamma rays, X-rays from machine sources or electrons from machine sources as permitted by the Standard.

All products treated in this way will need to be labelled as having been treated with ionising radiation.

1. PROBLEM

Application and proposed food uses

An application has been received from Surebeam Australia Pty Ltd to amend Standard 1.5.3-Food Irradiation to permit the treatment of specified tropical fruits with machine sourced e beams or x-rays as a phytosanitary¹ measure. The basic aim of the Applicant is to seek permission to irradiate tropical fruits as detailed below in order to gain access to New Zealand markets for the sale of tropical fruits.

The requested amendment to the table to clause 4 of Standard 1.5.3 of the *Australia New Zealand Food Standards Code* (Volume 2 of the *Food Standards Code*) is as follows:

¹ Phytosanitary measure-a quarantine treatment that is applied in order to prevent the introduction and establishment of quarantine pests from one area to another.

Column 1	Column 2	Column 3
Food	Minimum and Maximum Dose (kGy)	Conditions
Fruits Breadfruit Carambola Custard Apple Longan Litchi Mango Mangosteen Papaya Rambutan.	Minimum dose: As specified by a relevant plant quarantine authority as a phytosanitary measure Maximum dose: 1 kGy	Fruit to be treated should be of good overall quality and reflect the results of Good Agricultural Practice (GAP) Recommended handling and storage procedures should be used prior to and after treatment

Any approval granted under this application would apply to the relevant foods produced in Australia and New Zealand and the relevant foods imported by either country. The foods would be required to meet the relevant Standards in Volume 2 of the *Food Standards Code*. Any approval granted under this application would allow not only the Applicant but also any other approved irradiation facility to treat these particular foods with ionising radiation from gamma rays, X-rays from machine sources or electrons from machine sources as permitted by the Standard.

Technological justification and efficacy of irradiation

The Applicant has stated in the application that; a range of phytosanitary treatments are currently available for use on tropical fruits:

- *Post harvest chemicals*-such as dimethoate, fenthion and methyl bromide. However, these treatments either do not meet New Zealand Quarantine requirements (New Zealand Ministry Agriculture and Fisheries) (NZMAF) or are under review for public health and safety reasons (eg occupational health or environmental concerns);
- *Heat Treatments*-hot air or hot water at specified temperature and time is currently approved for mango and papaya for some Australian interstate trade. However, heat treatments do not meet NZMAF requirements and product losses and costs are high under Australian conditions;
- *Cold treatment*-is not an economical measure because of product damage and high costs under Australian conditions;
- *Maturity standards*-ie relatively less mature or unripe fruit less attractive or 'non host' to critical quarantine pests is an option for papaya. However, the fruit is less mature and ripe, flavour is not well developed and the treatment does not meet NZMAF requirements; and
- *Unbroken skin*-for fruits such as litchi, longan, rambutan and mangosteen. However, this does not meet NZMAF requirements

Therefore, the basic aim of the Applicant is to have available an effective phytosanitary measure in order that Australian tropical fruit growers can market their fruit into New Zealand.

ANZFA requested advice from the Australian Quarantine Inspection Service (AQIS), New Zealand Ministry Agriculture and Forestry (NZMAF) and the Interstate Plant Health Regulation Working Group (IPHRWG) indicating that these regulatory bodies have considered the issue of efficacy of treatment for the specified pest/tropical fruit commodities identified in the application. In particular, that the maximum dose of 1 kGy will be an appropriate and efficacious dose for the technological need of treatment of quarantine pests.. These responses will be taken into account and in addition the relevant quarantine authorities will be consulted when assessing the merits of the application.

Public Health and safety

ANZFA requested from the Applicant detailed referencing and/or submission of the previous safety studies undertaken on fruits or tropical fruits that are proposed to be irradiated. These studies were supplied on 13 August 2001 and will be reviewed during the next assessment stage.

Dietary considerations

For the assessment of the nutritional significance of irradiating tropical fruits, extensive referencing and submission of evidence-based nutritional and dietary studies using e-beam and x-ray techniques were requested by ANZFA from the Applicant. ANZFA also sought specific referenced information on any potential nutrient reductions (for example sensitive vitamins and minerals) following the irradiation of tropical fruits.

This data was supplied on 13 August 2001 and will be reviewed during the next assessment stage.

ANZFA will use this information and other independent data to undertake a full consideration of any likely nutritional impacts of irradiating tropical fruits for Australian and New Zealand consumers.

Labelling

The Standard requires that a package of food that has been irradiated must be labelled with a statement that the food has been treated with ionising radiation. The Standard provides three examples of such statements. These are 'Treated with ionising radiation', 'Treated with ionising electrons' and 'Irradiated (name of food)'. It also contains requirements for labelling in relation to irradiated ingredients, and in relation to food not otherwise required to bear a label. The ANZFA document, *Irradiated Food- Information to Applicants*, states that the use of the international radura symbol is optional and, if used, should be in close proximity to the name of the food. However, the use of the symbol would be in addition to the statement that the food has been treated with ionising radiation.

Standard A17/Standard 1.5.3

Standard A17 of Volume 1 of the *Food Standards Code* came into effect on 2 September 1999. It was replicated in Volume 2 of the *Food Standards Code* as Standard 1.5.3.

The key provisions of the standards are:

- Prohibition on the irradiation of food, or ingredients or components of food, unless a specific permission is given. This consideration is on a case-by-case basis;
- Irradiation of food that is subject to a general permission to be irradiated is only permitted where it fulfils a technological need or is necessary for a purpose associated with food hygiene;
- Irradiation of food is not a substitute procedure for good manufacturing practices; and
- Permitted sources of ionising radiation are set out, as are requirements for the keeping of certain records in relation to the irradiation of food, and requirements for the labelling of food which has been irradiated.

Approval to Irradiate Tropical Fruits in other countries

Codex

The 1983 Codex General Standard for Irradiated foods sets a maximum overall dose of 10 kGy.

No specific foods are mentioned, although the standards states:

“The irradiation of food is justified only where it fulfils a technological need or where it serves a food hygiene purpose and should not be used as a substitute for good manufacturing practices”.

Other Countries

ANZFA requested the Applicant to provide information about which other countries use irradiation on tropical fruits, the dose range and types of quarantine pests this method will be used against.

The Applicant indicated to ANZFA that 7 countries, including the USA and UK, approve the use of irradiation as a phytosanitary treatment for all fruits. In addition, another 8 countries approve the use of irradiation as a phytosanitary treatment for some of the tropical fruits proposed to be irradiated in this application (Attachment 1).

The United States Department of Agriculture (USDA)

The USDA currently approves the use of irradiation on the following tropical fruits from Hawaii to the US mainland at a maximum dose of 0.25kGy for control of pests (Melon fly, Mediterranean fruit fly, Oriental fruit fly, Malaysian fruit fly):

- Abui
- Custard Apple
- Carambola
- Longan
- Lychee
- Papaya rambutan
- Sapodilla

Approvals are anticipated from the USDA to permit the treatment of breadfruit, jackfruit, mango and mangosteen. In May 2000, the USDA proposed a rule on irradiation that will establish a treatment of between 0.15-.250 kGy for 11 species of fruit fly and a treatment of 0.1 kGy for mango seed weevil regardless of host. A final ruling is anticipated in late 2001.

Concurrent Irradiation Application (A413)

ANZFA received an application on 3 May 2000 to amend Volume 1 and Volume 2 of the *Food Standards Code* to permit the irradiation of herbs, spices, nuts, oilseeds and teas. The application seeks to achieve certain technological and food safety requirements including (as described in the application) microbial decontamination, pest disinfestations and the prevention of sprouting and germination of weed seeds inadvertently present in the foods.

The Applicant seeks approval for the use of the technology on the specified products for both quarantine and non-quarantine (including food safety) treatments.

The application is currently being finalised by ANZFA with a view to making a recommendation to the Ministerial Council in September 2001.

Potential Regulatory Impacts

Approval to irradiate tropical fruits has the potential to impact on many sectors, namely, consumers, industry and governments.

The Applicant has presented an argument that the use of irradiation is a technologically justified and efficacious treatment and will provide access to New Zealand markets for Australian growers, as presently the current quarantine treatments do not meet NZMAF requirements. Therefore, there is presently a market failure that this application is seeking to remedy.

The Applicant states that this alternative phytosanitary treatment will increase competition in the marketplace, improve seasonal availability and increase price competition; reduce the use of chemicals on tropical fruits; and may improve flavour of fruits available to consumers via the harvesting of more mature fruits (compared to heat treatments or maturity standards where fruit must be harvested less mature).

Government regulatory agencies involved in approval for food irradiation, namely, ANZFA, AQIS, Biosecurity Australia and NFMAF will need to ensure that irradiation at the levels proposed, in relation to the selected tropical fruits, results in food that is safe and nutritionally adequate, and that the permitted dose is efficacious in meeting phytosanitary requirements.

2. OBJECTIVE

The objective of this initial assessment is to consider issues under section 13 of the *Australia New Zealand Food Authority Act 1991*, and in particular, to examine the safety and nutritional adequacy of irradiating tropical fruits for Australian and New Zealand consumers, whether a technological need exists and whether the technique is efficacious. Additionally, it is important to promote consistency with other international standards.

This may be achieved by amending the Table to Clause 4 in Standard 1.5.3 to include permission to irradiate selected tropical fruits for phytosanitary purposes.

3. OPTIONS

Options available are:

Option 1. Not to permit irradiation of tropical fruits and to rely on existing methods for phytosanitary purposes, although the Applicant has stated that the present methods are not accepted by NZMAF.

Option 2. Amend the Table to Clause 4 in Standard 1.5.3 to permit irradiation of selected tropical fruits as detailed above where there is a technological need and that the safety and nutritional adequacy of the fruits are not compromised by the process. Prescribed conditions would include adherence to Good Agricultural Practice and a maximum dose of 1kGy (without a minimum dose which would be determined by relevant quarantine agencies of Australia and New Zealand).

4. IMPACT ANALYSIS

Parties affected by the options outlined above include:

1. Those sectors of the food industry wishing to use irradiation as a phytosanitary treatment for tropical fruits and operators of irradiation facilities and exporters.
2. Consumers who may wish to purchase irradiated fruits in order to avoid chemical residues in fruit or conversely, consumers who wish to avoid purchase of irradiated foods.
3. Government agencies enforcing the food regulations.

5. CONSULTATION

ANZFA will consult with an Advisory Group established for a concurrent application (A413-Irradiation of herbs, spices, selected nuts and herbal teas), which is representative of a broad range of stakeholders with an interest in the present application.

The Advisory Group comprises of the following representation:

- Health Departments (WA, QLD, VIC, NSW, Commonwealth and New Zealand)
- Agriculture and quarantine agencies in Australia and New Zealand (Agriculture, Forestry and Fisheries Australia, AQIS and NZMAF)
- Australian Consumers Association
- New Zealand Consumers' Institute
- Australian Food and Grocery Council
- New Zealand Grocery Marketers Association Inc
- Radiation expert
- ANZFA

This Group will assist ANZFA in relation to development of the initial, draft and final assessments and consideration of submissions from the public consultation rounds.

The Initial Assessment Report is intended to seek early input on a range of specific issues known to be of interest to various stakeholders, to seek input on the likely regulatory impact at an early stage and to seek input from stakeholders on any other matter of interest to them in relation to the application.

All stakeholders that make a submission in relation to the application will be included on a mailing list to receive further ANZFA documents in relation to the application. If readers of this initial assessment report are aware of others who might have an interest in this application, they should bring this to their attention. Other interested parties as they come to the attention of ANZFA through becoming aware of the application, will also be added to the mailing list for public consultation.

At this stage ANZFA is seeking public comment in order to assist it in assessing this application. Comments that would be useful could cover:

- Scientific aspects of this application;
- Parties that might be affected by having this application approved or rejected;
- Arguments in support or opposition to irradiated tropical fruits;
- Potential costs to consumers, industry and government;

6. **CONSIDERATION OF ISSUES UNDER SECTION 13 OF THE AUSTRALIA NEW ZEALAND FOOD AUTHORITY ACT 1991**

This application does relate to a matter that may be developed as a food regulatory measure, or warrants a variation of a food regulatory measure, and is not so similar to a previous application that it ought not be accepted.

Costs and benefits arising from any food regulatory measure or other measures developed or varied as a result of this application, and the options are considered below. At this

stage of the assessment ANZFA considers that a regulatory measure (such as an amendment to Standard 1.5.3-Food Irradiation) would be a more appropriate mechanism for regulation of irradiated foods than another measure (eg Code of Practice).

ANZFA seeks comments on the following:

*What are the potential costs or benefits of this application to you as a stakeholder?
Do the benefits outweigh the costs?*

What are the costs or benefits for consumers in relation to public health and safety, consumer information and labelling, costs, savings, food quality etc?

What are the costs or benefits for business- compliance, reporting, costs, savings, alternative technologies, improved food safety and quality, trade etc?

What are the costs or benefits for government – administration, enforcement, public health and safety etc?

The following is an initial assessment by ANZFA of the costs and benefits of both regulatory options. This is based on the information provided by the Applicant and some of the previous experience ANZFA has gained from the concurrent application A413-to permit the irradiation of herbs, spices and selected nuts. Your comments are also invited on the costs and benefits identified for the options below.

Option 1

Benefits

Consumers

- Consumers who prefer not to consume irradiated foods, potentially due to the belief that such foods are unsafe and/or nutritionally inadequate, will be able to avoid irradiated tropical fruit.

Industry

- No benefit to industry; as the current techniques do not meet New Zealand phytosanitary requirements and some (eg chemical methods) may not be available to tropical fruit growers in the future.

Governments

- There are no benefits perceived in not permitting an additional phytosanitary measure unless the scientific assessment concludes that there is no technological need or that the food is unsafe or nutritionally compromised following irradiation.

Costs

Consumers

- No apparent cost to New Zealand consumers; as NZMAF does not accept current treatments.

Industry

- There are currently no suitable and effective phytosanitary techniques available for tropical fruits in order to gain access to NZ markets, and therefore the tropical fruit industry is unable to access a potential market.

Governments

- The government may be perceived as not facilitating trade with other countries and denying tropical fruits growers access to new markets.

Option 2

Benefits

Consumers

- Approval of irradiated tropical fruits may increase competition in the marketplace, improve selection and seasonal availability and increase price competition; and may improve flavour of fruits due to later picking.
- Listing of a maximum dose will provide consumers with assurance that the quality of the fruit will be maintained.

Industry

- Access to NZ markets if the treatment is accepted by NZMAF and there are presently no other acceptable alternative phytosanitary treatments;
- Increased trade opportunities and increased market available to Australian tropical fruit growers.
- Increased market available for operators of irradiation facilities.
- E-beam and X-ray treatments are less expensive to operate than heat treatments.

Governments

- Will provide an additional phytosanitary treatment at a time when existing methods are not accepted in NZ or are being phased out (eg chemical treatments).

Costs

Consumers

- May result in an increase in price of tropical fruits, as irradiation is more expensive than current treatments.

Industry

- Cost of labelling irradiated foods;
- Increased operating costs due to electricity and labour.

Governments

- The relevant quarantine agencies must agree on a minimum dose that would meet quarantine requirements for NZ markets. This may require an extensive risk analysis. Additional costs may ensue to these authorities if efficacy data is not available or additional research is required.

7. OTHER RELEVANT MATTERS

Workplan Classification

ANZFA's initial consideration of this application for placement on the Workplan was Group Three, Category 4². Following preliminary assessment under section 13 of the *Australia New Zealand Food Authority Act 1991*, it is recommended that this grouping is appropriate and that consequently it be confirmed (see ANZFA website for further information about the work plan and the different groups and categories).

Stop Clock

A stop clock was placed on the application from 26 June to 23 August 2001 whilst further information was sought from the Applicant on the technological need and efficacy of treatment at 1 kGy, toxicological and dietary exposure data and the range of countries that currently irradiate tropical fruits for quarantine purposes.

WTO Implications

As a member of the World Trade Organization (WTO) Australia must notify WTO member nations where proposed mandatory regulatory measures are inconsistent with any existing or imminent international standards and the proposed measure may have a significant effect on trade.

The *Food Standards Code* contains mandatory standards applying to both domestic and imported food. Suppliers of food products are not required to take up permissions granted through amendments to the Code, however, food products not complying with the Code cannot legally be supplied in Australia and New Zealand.

Amending the *Food Standards Code* to allow the use of irradiation of tropical fruits may significantly affect trade, i.e., increase market opportunities for Australian growers and increase market opportunities for overseas growers. However this issue will be fully considered in the context of the Regulatory Impact Statement at draft assessment and, if

² For a detailed explanation of these terms, refer to details of the Workplan on ANZFA's website: www.anzfa.gov.au.

necessary, notification will be made in accordance with the WTO Technical Barrier to Trade (TBT) or Sanitary and Phytosanitary Measure (SPS) agreements.

8. CONCLUSIONS

This application does relate to a matter that may be developed as a food regulatory measure, as provided for in section 13 of the *ANZFA Act 1991*. Costs and benefits arising from any food regulatory measure so developed will be further assessed at Draft Assessment.

Accordingly the Authority has decided to accept the application and is seeking public comment before moving to undertake a more detailed draft assessment (that is, full assessment under section 15 of the *Australia New Zealand Food Authority Act 1991*). Following the completion of the draft assessment, the Authority may prepare a draft amendment to the *Food Standards Code* or reject the application. If the Authority prepares a draft amendment, a further round of public consultation will be held before a final assessment is made (that is, before an inquiry is held under section 18 of the *Australia New Zealand Food Authority Act 1991*).

The Authority may then recommend to the Ministerial Council that it adopt the draft variation to the *Food Standards Code*, with or without amendment, or that it reject it.

If the Council then adopts the draft variation to the *Food Standards Code*, Volume 2 of the *Food Standards Code* would be amended to permit the irradiation of specified tropical fruits for phytosanitary purposes. Conditions of use such as a requirement to comply with Good Agricultural Practice, recommended handling and storage procedures prior to and after treatment and adherence to a minimum (to be advised/determined by relevant quarantine agencies) and maximum dose of 1 kGy may be included.

9. FOOD STANDARDS SETTING IN AUSTRALIA AND NEW ZEALAND

The Governments of Australia and New Zealand entered an Agreement in December 1995 establishing a system for the development of joint food standards. On 24 November 2000, Health Ministers in the Australia New Zealand Food Standards Council (ANZFSC) agreed to adopt the new *Australian New Zealand Food Standards Code*. The new Code was gazetted on 20 December 2000 in both Australia and New Zealand as an alternate to existing food regulations until December 2002 when it will become the sole food code for both countries. It aims to reduce the prescription of existing food regulations in both countries and lead to greater industry innovation, competition and trade.

Until the joint *Australia New Zealand Food Standards Code* is finalised the following arrangements for the two countries apply:

- **Food imported into New Zealand other than from Australia** must comply with either Volume 1 (known as *Australian Food Standards Code*) or Volume 2 (known as the joint *Australia New Zealand Food Standards Code*) of the *Australian Food Standards Code*, as gazetted in New Zealand, or the *New Zealand Food Regulations 1984*, but not a combination thereof. However, in all cases maximum residue limits for agricultural and veterinary chemicals must comply solely with those limits specified in

the New Zealand (*Maximum Residue Limits of Agricultural Compounds*) Mandatory Food Standard 1999.

- **Food imported into Australia other than from New Zealand** must comply solely with Volume 1 (known as *Australian Food Standards Code*) or Volume 2 (known as the joint *Australia New Zealand Food Standards Code*) of the *Australian Food Standards Code*, but not a combination of the two.
- **Food imported into New Zealand from Australia** must comply with either Volume 1 (known as *Australian Food Standards Code*) or Volume 2 (known as *Australia New Zealand Food Standards Code*) of the *Australian Food Standards Code* as gazetted in New Zealand, but not a combination thereof. Certain foods listed in Standard T1 in Volume 1 may be manufactured in Australia to equivalent provisions in the *New Zealand Food Regulations 1984*.
- **Food imported into Australia from New Zealand** must comply with Volume 1 (known as *Australian Food Standards Code*) or Volume 2 (known as *Australia New Zealand Food Standards Code*) of the *Australian Food Standards Code*, but not a combination of the two. However, under the provisions of the Trans-Tasman Mutual Recognition Arrangement, food may **also** be imported into Australia from New Zealand provided it complies with the *New Zealand Food Regulations 1984*.
- **Food manufactured in Australia and sold in Australia** must comply with Volume 1 (known as *Australian Food Standards Code*) or Volume 2 (known as *Australia New Zealand Food Standards Code*) of the *Australian Food Standards Code* but not a combination of the two. Certain foods listed in Standard T1 in Volume 1 may be manufactured in Australia to equivalent provisions in the *New Zealand Food Regulations 1984*.

In addition to the above, all food sold in New Zealand must comply with the *New Zealand Fair Trading Act 1986* and all food sold in Australia must comply with the *Australian Trade Practices Act 1974*, and the respective Australian State and Territory *Fair Trading Acts*.

Any person or organisation may apply to ANZFA to have the *Food Standards Code* amended. In addition, ANZFA may develop proposals to amend the *Australian Food Standards Code* or to develop joint Australia New Zealand food standards. ANZFA can provide advice on the requirements for applications to amend the *Food Standards Code*.

10. INVITATION FOR PUBLIC SUBMISSIONS

Written submissions containing technical or other relevant information which will assist the Authority in undertaking a draft assessment on matters relevant to the application, including consideration of its regulatory impact, are invited from interested individuals and organizations. Technical information presented should be in sufficient detail to allow independent scientific assessment.

Submissions providing more general comment and opinion are also invited. The Authority's policy on the management of submissions is available from the Standards Liaison Officer upon request.

The processes of the Authority are open to public scrutiny, and any submissions received will ordinarily be placed on the public register of the Authority and made available for inspection. If you wish any confidential information contained in a submission to remain confidential to the Authority, you should clearly identify the sensitive information and provide justification for treating it in confidence. The *Australia New Zealand Food Authority Act 1991* requires the Authority to treat in confidence trade secrets relating to food and any other information relating to food, the commercial value of which would be or could reasonably be expected to be, destroyed or diminished by disclosure.

Following its Draft assessment (Full assessment – section 17) of the application the Authority may prepare a draft standard or draft variation to a standard (and supporting draft regulatory impact statement), or decide to reject the application. If a draft standard or draft variation is prepared, it is then circulated to interested parties, including those from whom submissions were received, with a further invitation to make written submissions on the draft. Any such submissions will then be taken into consideration during the Final assessment (Inquiry – section 17), which the Authority will hold to consider the draft standard or draft variation to a standard.

All correspondence and submissions on this matter should be addressed to the **Project Manager - Application A443** at one of the following addresses:

Australia New Zealand Food Authority
PO Box 7186
Canberra BC ACT 2610
AUSTRALIA
Tel (02) 6271 2222 Fax (02) 6271 2278

Australia New Zealand Food Authority
PO Box 10559
The Terrace WELLINGTON 6036
NEW ZEALAND
Fax (04) 473 9942 Fax (04) 473 9855

Submissions should be received by the Authority by: **31 October 2001.**

ATTACHMENT 1

The following approvals have been granted for irradiation of fruits, including tropical varieties. This data was obtained from the International Consultative Group on Food Irradiation data-base of clearances of irradiated foods.

Approval of Irradiation of Fruits (General)

Explanations for Codes : 1. Delay ripening/physiological growth, 2. Disinfestation, 3. Microbial control, 4. Quarantine treatment, 5. Shelf-life extension, 6. Sprouting inhibition 7. Trichina/parasite control, 8. Sterile meals for hospital patients, 9. Sterilization, 10. Unstated.				
FRUIT				
Country	Code	Type of Clearance	Date	Dose Max (kGy)
BRAZIL	1,4,5	UNCONDITIONAL	30.01.01	**
CROATIA	1,3	UNCONDITIONAL	21.06.94	3.00
GHANA	1,2,4	UNCONDITIONAL	15.01.98	1.00
GHANA	5	UNCONDITIONAL	15.01.98	2.50
ISRAEL	2	UNCONDITIONAL	17.02.87	1.00
MEXICO	1,4	UNCONDITIONAL	07.04.95	1.00
MEXICO	5	UNCONDITIONAL	07.04.95	2.50
PAKISTAN	1,2,4	UNCONDITIONAL	07.03.96	1.00
RUSSIAN FEDERATION	5	CONDITIONAL	11.07.64	4.00
TURKEY	1,2,4	UNCONDITIONAL	06.11.99	1.00
TURKEY	5	UNCONDITIONAL	06.11.99	2.50
UKRAINE	5	CONDITIONAL	11.07.64	4.00
UNITED KINGDOM	2	UNCONDITIONAL	01.01.91	2.00
USA	1,2	UNCONDITIONAL	18.04.86	1.00

Approvals for Mangoes

Explanations for Codes : 1. Delay ripening/physiological growth, 2. Disinfestation, 3. Microbial control, 4. Quarantine treatment, 5. Shelf-life extension, 6. Sprouting inhibition 7. Trichina/parasite control, 8. Sterile meals for hospital patients, 9. Sterilization, 10. Unstated.				
MANGO				
Country	Code	Type of Clearance	Date	Dose Max (kGy)
BANGLADESH	1,2	UNCONDITIONAL	29.12.83	1.00
BRAZIL	1,4,5	UNCONDITIONAL	30.01.01	**
CHILE	2	UNCONDITIONAL	29.12.82	1.00
COSTA RICA	2,5	UNCONDITIONAL	07.07.94	1.00
CROATIA	1,3	UNCONDITIONAL	21.06.94	3.00

CUBA	1	CONDITIONAL	01.07.92	0.75
GHANA	1,2,4	UNCONDITIONAL	15.01.98	1.00
GHANA	5	UNCONDITIONAL	15.01.98	2.5
INDIA	1,2	UNCONDITIONAL	06.04.98	0.75
ISRAEL	2	UNCONDITIONAL	17.02.87	1.00
MEXICO	1,4	UNCONDITIONAL	07.04.95	1.00
MEXICO	5	UNCONDITIONAL	07.04.95	2.50
PAKISTAN	1,2,4	UNCONDITIONAL	07.03.96	1.00
RUSSIAN FEDERATION	5	CONDITIONAL	11.07.64	4.00
SOUTH AFRICA	2	CONDITIONAL	25.08.78	4.00
SYRIA	2	UNCONDITIONAL	02.08.86	1.00
THAILAND	1,2	UNCONDITIONAL	04.12.86	1.00
TURKEY	1,2,4	UNCONDITIONAL	06.11.99	1.00
UKRAINE	5	CONDITIONAL	11.07.64	4.00
UNITED KINGDOM	2	UNCONDITIONAL	01.01.91	2.00
USA	1,2	UNCONDITIONAL	18.04.86	1.00

Guava

Explanations for Codes : 1. Delay ripening/physiological growth, 2. Disinfestation, 3. Microbial control, 4. Quarantine treatment, 5. Shelf-life extension, 6. Sprouting inhibition 7. Trichina/parasite control, 8. Sterile meals for hospital patients, 9. Sterilization, 10. Unstated.

GUAVA

Country	Code	Type of Clearance	Date	Dose Max (kGy)
BRAZIL	1,4,5	UNCONDITIONAL	30.01.01	**
CROATIA	1,3	UNCONDITIONAL	21.06.94	3.00
GHANA	1,2,4	UNCONDITIONAL	15.01.98	1.00
GHANA	5	UNCONDITIONAL	15.01.98	2.5
ISRAEL	2	UNCONDITIONAL	17.02.87	1.00
MEXICO	1,4	UNCONDITIONAL	07.04.95	1.00
MEXICO	5	UNCONDITIONAL	07.04.95	2.5
PAKISTAN	1,2,4	UNCONDITIONAL	07.03.96	1.00

Unconditional:

Regulatory approval of an application without any further condition to be fulfilled for the continued application of irradiation treatment of the food or group/class of food.

Conditional:

Regulatory approval of the irradiation treatment of the food or group/class of food subject to certain conditions relating to duration of approval, total quantity of food permitted to be irradiated.