

## Appendix 3: Issues raised in the ‘sample letter’ and associated webpages and FSANZ response

The following table contains detailed responses to issues raised by submitters who wrote to FSANZ in response to FSANZ’s call for submissions using the ‘sample letter’ that was available on the Friends of the Earth (FoE) Website.

This appendix also contains FSANZ’s responses to issues on associated Friends of the Earth webpages, namely:

1. Brief overview of food irradiation in Australia and New Zealand  
[https://www.foe.org.au/queensland\\_irradiation](https://www.foe.org.au/queensland_irradiation)
2. Food Irradiation A1193 FAQ  
[https://www.foe.org.au/a1193\\_faq](https://www.foe.org.au/a1193_faq).

A high level summary of the main issues raised by submitters and FSANZ’s responses is provided at Table 3 of the Approval Report.

No.	Issue	FSANZ response
<b>Sample letter</b> <a href="https://www.foe.org.au/queensland_irradiation">https://www.foe.org.au/queensland_irradiation</a>		
1	I am shocked to hear that FSANZ has changed the date of public consultation on this important matter without properly informing the public. I ask you to extend the public consultation period.	<p>The assertion that FSANZ changed the date of public consultation without properly informing the public is not correct. The public notice given by FSANZ complied with the relevant requirements of the <i>Food Standards Australia New Zealand Act 1991</i> (FSANZ Act), namely, subsection 28(2).</p> <p>The date of public consultation changed (was brought forward) because the applicant chose to pay a fee to bring forward the assessment of the application. Assessment of the application commenced on 12 May 2020, the day upon which the fees were received by FSANZ. The application was re-notified via FSANZ Notification Circular 122/20 dated 15 May 2020. The FSANZ Work Plan was updated on 18 May 2020 to show the new timetable for the application, including the new dates for the public consultation. The FSANZ Work Plan, which is publically available on the FSANZ website, is the key document regarding expected timetables for applications and proposals and is frequently updated.</p> <p>In response to requests from submitters, FSANZ extended the public consultation period by two weeks i.e. from 11 December 2020 to 24 December 2020.</p> <p>See also FSANZ’s response to no. 136 in Appendix 2.</p>

No.	Issue	FSANZ response
		<i>Upon confirmation of the extension, the first two sentences were removed from the sample letter published on the Friends of the Earth website.</i>
2	I oppose the blanket approval of irradiation for all fresh fruit and vegetables.	The proposed permission does not constitute a blanket approval. If the application is approved, the permission will cover a small proportion of fresh produce that is moving from one quarantine region to another (conservative estimates indicate that between 0.3 – 8% of fresh fruit and vegetables in Australia and New Zealand might be irradiated), when there is a requirement that the food is free from regulated pests and where it has been determined that irradiation is an appropriate phytosanitary option.
3	I have concerns about the wholesomeness of irradiated food as well as the environmental and social impacts of irradiating our food.	<p>Multiple assessments conducted by FSANZ (including the current assessment), the World Health Organization (WHO) and other regulatory agencies have established the safety of irradiated produce. In 1980, a Joint WHO/ Food and Agriculture Organization/International Atomic Energy Agency (FAO/IAEA) Expert Committee on Food Irradiation declared food safe and wholesome following irradiation up to an overall average dose of 10 kGy (WHO Technical Report Series no. 659 – Geneva, 1981).</p> <p>The environmental impacts of food irradiation are outside FSANZ's regulatory mandate and are the responsibility of other agencies' legislation. These may include the relevant state/territory environment departments, environment protection authorities and the radiation health/safety areas of health departments.</p> <p>Without further details regarding the specific social impacts of food irradiation, FSANZ is unable to respond to this issue.</p>
4	Numerous alternatives to irradiation exist and I do not believe that the irradiation of these fruits for quarantine purposes benefits my family.	Food irradiation is an additional tool that can be used as a phytosanitary measure to treat pests such as fruit fly. Irradiation is an internationally accepted quarantine measure that provides an effective alternative to currently used disinfestation methods. While other options exist, these may be unsuitable for use in certain circumstances due to potential phytotoxicity and quality issues.
5	I am also worried that irradiated food will not be adequately labelled.	The Food Standards Code requires mandatory labelling requirements for irradiated food, and food containing irradiated ingredients and components, to enable consumers to make an informed choice.
6	Numerous studies have shown the potential health risks posed by irradiated food.	<p>There is no robust evidence that there are any potential health risks or hazards from consumption of fruit or vegetables that have been subject to phytosanitary irradiation.</p> <p>See also response to no. 8 in Appendix 2.</p>
7	The approval of regularly eaten fruit and vegetables could significantly increase the amount of irradiated food in our diet.	With the granting of a permission to irradiate all fresh fruit and vegetables, the applicant estimated that 3% and 8% of total fruit, and 1.2% and 0.3% of total vegetables consumed in Australia and New Zealand, respectively, might be irradiated. This is a conservative estimate meaning it is the greatest proportion of irradiated fruit and vegetables that may be consumed. Estimates have been made by the applicant based on their expertise in phytosanitary

No.	Issue	FSANZ response
		<p>treatments and commodity trade in general and in consultation with the irradiation industry, having the practical knowledge of phytosanitary irradiation treatments in Australia. On this basis, FSANZ does not hold the view that the approval will cause a significant increase to the amount of irradiated food in people's diets.</p> <p>Irradiation will fulfil a need where other options are unsuitable for use due to potential phytotoxicity and quality issues. It will also be useful as a temporary emergency measure when a pest incursion is suspected. Its use will be voluntary and other existing phytosanitary treatments will continue to be available.</p>
8	<p>In 2003, concerns over the safety of irradiated food led the European Union to rule out further irradiation approvals. The Australian Senate followed suit with a call for approvals to be halted until further research has been conducted.</p>	<p>The European Food Safety Authority concluded in 2011 that 'there is no immediate cause for concern' related to consumption of irradiated foods. Annual reports from the European Commission to the European Parliament and the Council show that a wide range of foods are irradiated in some 25 facilities in the EU.</p> <p>Food Ministers have approved the irradiation of a variety of foods in Australia in response to FSANZ applications A1038 (2011), A1069 (2013), A1092 (2014) and A1115 (2016) since the Australian Senate's statement in 2003.</p> <p>More than 60 countries have approved food irradiation.</p>
9	<p>Claims that irradiated foods are safe are indefensible as no research on long term consumption of an irradiated diet have been conducted.</p>	<p>FSANZ notes on its website that irradiation has been used to keep foods safe since the late 1950s, hence has a long history of use. Some subpopulations such as astronauts and people with severe immunodeficiency disorders have consumed entirely irradiated diets for prolonged periods with no adverse effects. In animals, there have been multigenerational studies, and some laboratory animals such as rodent models of severe combined immunodeficiency have been kept on entirely irradiated diets for many generations.</p> <p>The first application seeking permission to irradiate food for a phytosanitary purpose in Australia and New Zealand was assessed in 2002. Four more applications were assessed in the 15 years that followed. This shows that populations have had access to irradiated foods for almost 20 years with no evidence of adverse effects.</p> <p>Further, the Codex General Standard for Irradiated Foods (CXS 106-1983, Rev.1-2003) dates back to 1983, therefore populations globally have had access to irradiated foods for over 35 years. As stated above, food irradiation has been approved in more than 60 countries.</p>
10	<p>Irradiation has been shown to deplete vitamin C, vitamin A, proteins, essential fatty acids and other nutrients in food and has been linked to health problems such as nutritional deficiencies...</p>	<p>A comprehensive review of the scientific literature was conducted by FSANZ on the nutritional impact of irradiation on fruit and vegetables, see Section 4 of SD1.</p> <p>Using the outcomes of this nutrition risk assessment and, based on a range of other factors considered in the dietary intake assessment (as outlined in SD1), FSANZ concluded that</p>

No.	Issue	FSANZ response
11	...immune system disorders, abnormal lymph cells, and genetic damage.	<p>there would be minimal impact on population nutrient intakes.</p> <p>Eating irradiated food has not been linked to any of the abnormalities listed in credible, repeatable studies. There is no evidence from lifetime animal studies, or from humans who consumed wholly irradiated diets for prolonged periods (e.g. astronauts, patients with severe immunodeficiency disorders), that phytosanitary irradiation has any effect on risk of such conditions or on the health or function of any organs or tissues.</p>
12	In 2008-9, irradiation was responsible for neurological disorders leading to paralysis and in some cases, death, of up to one hundred Australian pet cats. Irradiated cat food is now banned in Australia.	<p>FSANZ does not regulate the safety of foods for pets or livestock.</p> <p>FSANZ is aware of this event and the toxicity of highly irradiated cat food to cats has been discussed by FSANZ in previous hazard assessments of irradiated food.</p> <p>The cat food was irradiated with <math>\geq 50</math> kGy, i.e. at least 50 times higher than the maximum dose sought by the applicant in the current application.</p> <p>FSANZ's conclusion that the effect is specific to cats is based on the following observations:</p> <ul style="list-style-type: none"> <li>• some of the cats became ill after eating dog food made by the same company and irradiated at the same doses, whereas no dogs fed that dog food developed any adverse effects</li> <li>• no similar effects have been observed in rodents fed irradiated diets for multiple generations</li> <li>• no similar effects have been observed in human beings consuming irradiated diets for prolonged periods, including astronauts and patients with severe immunodeficiency disorders.</li> </ul> <p>The cat is well-recognized to have a unique metabolism of many chemicals and for this reason, is not used as a model for human safety studies.</p>
13	The European Food Safety Authority acknowledges that the risk to humans cannot be ruled out.	See response to no. 8.
14	While irradiation is promoted as beneficial to Australian farmers; each approval also enables irradiated imports from overseas. Irradiation is a tool of large agri-business – and supports mass production systems that diminish the power of local food producers and destroy local markets.	<p>FSANZ must assess this application in accordance with the FSANZ Act. As explained in Section 6 of this report, that Act requires FSANZ to have regard to a number of matters in that assessment. These include the protection of public health and safety, which remains FSANZ's primary objective in standards development and in this assessment. As explained in this report, FSANZ's assessment, based on the best available scientific evidence, is that permitting the irradiation of fruit and vegetables in the manner sought by the application would not pose a public health and safety risk.</p> <p>The Act also requires FSANZ to have regard to the promotion of consistency between domestic and international food standards and to the desirability of an efficient and internationally competitive food industry.</p>

No.	Issue	FSANZ response
		<p>Approving the use of irradiation for all fresh fruit and vegetables as a phytosanitary measure can potentially benefit the domestic horticultural industry by allowing broader market access for domestic trade and increasing choice by businesses to use a proven quarantine treatment to eradicate fruit fly and other regulated pests. In addition, phytosanitary irradiation will be a viable treatment for crops in the event of a foreign or exotic pest incursion, which would otherwise place the Australian horticultural industry at unnecessary risk.</p> <p>Approval by FSANZ does not automatically allow access to the irradiated commodity. The relevant biosecurity agencies undertake import risk analyses for fresh fruit and vegetables, which assess the level of biosecurity risk and establish appropriate risk management measures; irradiation being one of the potential treatment options. These analyses are done independently of the food standards process and must be completed before the commodity can be accepted into the country.</p>
15	Irradiation will not eliminate the use of chemicals and pesticides in crop production; it will be used in conjunction with these and other food processes.	<p>FSANZ has not made the claim that irradiation will eliminate the use of chemicals and pesticides in crop production. Phytosanitary irradiation may reduce the use of post-harvest pesticide or fumigant use.</p> <p>FSANZ's SD1 states that ionising radiation is a viable and effective substitute to chemical treatments, particularly in cases where such treatments have been restricted or are being phased-out. Examples include the insecticide dimethoate and the fumigant methyl bromide (MeBr).</p>
16	Finally, I am not confident that these fruits will be adequately labelled. This will lead to foods being marketed as 'fresh' though they are processed. Irradiated food and their packages must be individually labelled 'treated with radiation' or 'irradiated'. A1092 does not assure me that this will be the case.	<p>See response to no. 5.</p> <p>The Food Standards Code does not regulate the use of 'fresh' claims made on food labels. Suppliers can voluntarily provide this kind of information on the labels of their food products, as long as the information is not false, misleading or deceptive under consumer protection legislation.</p> <p>The reference to A1092 in this context is not relevant.</p>
17	For these reasons I call on you to reject A1193 and to rescind all previous irradiation approvals.	Based on the findings of the risk and technical assessment and after considering information provided during the public comment period, FSANZ has decided to approve a draft variation to the Code permitting the irradiation of fresh fruit and vegetables for the purpose of pest disinfestation for a phytosanitary objective. There is no basis upon which FSANZ can rescind previous irradiation applications.
<b>Brief overview of food irradiation in Australia and New Zealand</b> <a href="https://www.foe.org.au/queensland_irradiation">https://www.foe.org.au/queensland_irradiation</a>		
18	Food irradiation is used for shelf-life extension and for neutralising, not removing, contaminants or pests.	FSANZ notes on its website that food irradiation can be used to control the spread of pests like fruit fly (phytosanitary), kill dangerous bacteria and microorganisms that cause food

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		<p>poisoning, like <i>Salmonella</i>, <i>Campylobacter</i> and <i>E. coli</i>, prolong shelf life by slowing down the ripening process, and stop vegetables from sprouting. This application relates only to the phytosanitary purpose.</p> <p>Under the Code, 26 fruits and vegetables may be irradiated for the purpose of pest disinfestation for a phytosanitary objective. Herbs and spices, and plant material for a herbal infusion may be irradiated for the purpose of controlling sprouting and pest disinfestation, including the control of weeds, and for the purpose of bacterial decontamination.</p>
19	<p>Food Standards Australia New Zealand (FSANZ) has approved 26 fruits and vegetables for irradiation as well as herbs, spices and herbal infusions. It now wants to approve a blanket approval for the irradiation of all fresh fruit and vegetables. This approval would significantly increase the proportion of irradiated foods in the average Australian and New Zealander diet.</p>	<p>See response to no. 2 and no. 7.</p>
20	<p>Irradiation decreases the vitamin and nutritional content of food and disrupts its molecular structure, producing free radicals and potentially harmful chemicals such as benzene, formaldehyde and cyclobutanones.</p>	<p>See response to no. 10.</p> <p>The various radiolytic products including free radicals, benzene, formaldehyde, furans and cyclobutanones have been discussed in successive Hazard Assessments in response to a number of applications received since 2002 for phytosanitary irradiation considered by FSANZ. As FSANZ has repeatedly noted, the levels of free radicals and benzene, generated by phytosanitary irradiation are negligible when compared to the levels found in the diet generally, either because the substances are naturally found in some foods or are generated by processes such as cooking.</p>
21	<p>Irradiation is being promoted as an 'alternative' to some post-harvest chemicals that are being phased out. Numerous non-chemical alternatives exist. Irradiation is not an alternative to chemical treatments. At best, irradiation may substitute for some post-harvest chemical treatments. However, the food most likely to be subject to irradiation is food produced using 'conventional' agricultural processes – which today means using chemicals and pesticides and possibly GMOs from seed development through harvesting.</p>	<p>See response to no. 15 and no. 4.</p> <p>The food 'most likely to be subject to irradiation' is food that requires a phytosanitary treatment before entering a different quarantine region. There are a number of phytosanitary treatments options from which to choose, irradiation being one.</p>
22	<p>Labelling is inadequate and must be improved to ensure the public's right to choose. Current laws already allow shops to use a sign close by to irradiated produce, rather than actual stickers or labels and fail to prescribe mandatory wording for the irradiation statement, leaving the messaging up to marketing companies. Neither the word radiation nor irradiation is required.</p>	<p>See response to no. 5.</p> <p>Under Standard 1.2.1 of the Food Standards Code, the information requirements also apply to foods that are not required to bear a label. Where an irradiated food or a food containing an irradiated ingredient or component is displayed for retail sale, other than in a package, then a statement that the food (or ingredient and/or component) has been treated with ionising radiation must accompany the food or be displayed in connection with the display of the food.</p>

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		FSANZ has no evidence that consumers find the information relating to irradiated food to be problematic and considers existing labelling requirements are appropriate.
<b>Food Irradiation A1193 FAQ</b> <a href="https://www.foe.org.au/a1193_faq">https://www.foe.org.au/a1193_faq</a>		
23	<p><b>What is food irradiation?</b>  Food Irradiation is the process of exposing food to ionising radiation from Cobalt-60, X-rays or electron beams. The food is mostly treated to neutralise pest insects or microbes, and to extend its shelf life.</p> <p>The Australian government has allowed food irradiation since 2001 after a 10-year moratorium was lifted. Since then, Australia and New Zealand government-supported industry campaigns have promoted irradiation as an 'alternative' to pesticides. Irradiated food is labelled, albeit inadequately. There has been an ongoing push to remove mandatory labelling requirements.</p>	<p>FSANZ has no objection/comment regarding the Friends of the Earth (FoE) description and use of irradiation.</p> <p>Regarding permissions to use food irradiation in Australia, in 2001 FSANZ approved the first irradiation application for herbs, spices and herbal infusions noting approval would be consistent with international standards (Codex).</p> <p>FSANZ cannot comment on any government-supported industry campaigns promoting irradiation other than to say that FSANZ has not been involved in any such campaigns.</p> <p>Regarding FoE claims about removing mandatory labelling, in 2011 an independent review of labelling recommended that the requirement for mandatory labelling of irradiated food be reviewed. In their response to the recommendation, Food Regulation Ministers asked FSANZ to review the need for the mandatory labelling of irradiated food, and assess whether there is a more effective approach to communicate the safety and benefits of irradiation to consumers. In April 2017, Food Regulation Ministers considered FSANZ's <a href="#">review report</a> and agreed that no further action was required.</p> <p>FSANZ notes the intent of mandatory labelling requirements for irradiated food is to enable consumers to make an informed choice. The application is not seeking a change to these labelling requirements,.</p> <p>See response to no. 5 and no. 22.</p>
24	<p><b>What's wrong with food irradiation?</b>  Irradiation uses ionising radiation, which alters food's molecular structure, but leaves it looking intact. Substances produced by exposure to radiation are known as radiolytic products. Their presence indicates whether or not a product has been irradiated (Chauwan, S. et al. (2008). Detection methods for irradiated food. Comprehensive Reviews in Food Science and Food Safety, <a href="http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2008.00063.x/full">http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2008.00063.x/full</a>).</p> <p>Different foods react differently to radiation. The changes in them mean that irradiated produce is processed; it is no longer fresh.</p>	See response to no. 16 and no. 20.
25	<b>Why are the Queensland government and Food Standards Australia New Zealand (FSANZ) fast-tracking a blanket approval for the</b>	Public notice given by FSANZ was legally valid and complied with the requirements imposed by the FSANZ Act.

No.	Issue	FSANZ response
	<p><b>irradiation of all fruit and vegetables?</b></p> <p>In January this year, Food Standards Australia New Zealand (FSANZ) published an announcement that it would assess an application by the Queensland Department of Agriculture and Fisheries to allow the irradiation of all fresh fruit and vegetables. The published proposed timeframe for the assessment of this application, known as A1193, would see work commencing in November 2020 and public consultation taking place next year- early April 2021.</p> <p>On October 30, however, FSANZ notified the public of a 6-week timeframe to respond. We now know that in May, the Queensland government paid to fast-track the processing of the application. This information was not published on the A1193 webpage, nor was it published in FSANZ notification circulars. In fact, while the application was re-announced in May, there was no reason given for the re-announcement and no change to information previously provided. The A1193 webpage continued to display only material that suggested the public consultation dates were April next year.</p> <p>As our food safety regulator, FSANZ is mandated to ensure an affective, transparent and accountable regulatory framework, within which the food industry can work efficiently. Public notice requirements are intended to promote accountability and transparency in the regulatory framework. In fact, the FSANZ Act 1991, states that FSANZ must provide the public with a timeframe for its work and also update the public of a new timeframe for carrying out work if it accepts funding for it. FSANZ has not done so.</p>	<p>FSANZ received this application on 6 November 2019 and, following an administrative assessment, FSANZ accepted the application on 27 November 2019. FSANZ's acceptance of this application was publicly notified through FSANZ Notification Circular 107/20 dated 7 January 2020 (<a href="https://www.foodstandards.gov.au/code/changes/circulars/Pages/NotificationCircular107%20%80%9320.aspx">https://www.foodstandards.gov.au/code/changes/circulars/Pages/NotificationCircular107%20%80%9320.aspx</a>), in line with the requirements of subsection 28(2) of the FSANZ Act. As part of the notification, FSANZ published its administrative assessment report including a proposed timeframe for assessment. The proposed start date was late-November 2020 and the public comment period (or Call for Submissions period) was proposed to start in early-April 2021.</p> <p>However, the applicant chose to expedite the assessment of their application by paying the required fee (see section 27 of the FSANZ Act). The assessment commenced on 12 May 2020, the date the fee was received. The application was re-notified via FSANZ Notification Circular 122/20 dated 15 May 2020 (<a href="https://www.foodstandards.gov.au/code/changes/circulars/Pages/NotificationCircular122%20%80%9320.aspx">https://www.foodstandards.gov.au/code/changes/circulars/Pages/NotificationCircular122%20%80%9320.aspx</a>).</p> <p>The Call for Submissions period was subsequently also brought forward from early-April 2021 to 30 October 2020 to meet the 9 month statutory timeframe for General Level applications per the FSANZ Act. The public comment period was notified via FSANZ Notification Circular 140/20 dated 30 October 2020 (<a href="https://www.foodstandards.gov.au/code/changes/circulars/Pages/notificationcirc140-20.aspx">https://www.foodstandards.gov.au/code/changes/circulars/Pages/notificationcirc140-20.aspx</a>).</p> <p>Updates to timelines for this and all applications and proposals are notified in the publically available FSANZ Work Plan (<a href="https://www.foodstandards.gov.au/code/changes/workplan/Pages/default.aspx">https://www.foodstandards.gov.au/code/changes/workplan/Pages/default.aspx</a>). This is the key document providing updates on when FSANZ proposes to undertake the key steps in the process and is frequently updated. The Work Plan was updated on 10 January 2020 following acceptance of the application, and then on 18 May 2020 upon commencement of the assessment of the application, including the revised dates for the public comment period.</p> <p>See also responses to no. 136 and no. 137 of Appendix 2.</p>
26	<p><b>Why does this matter? (Nos. 26-33)</b></p> <p>The regulatory system requires citizen participation to function democratically. As it stands, a paying applicant (the Queensland government) has asked for regulatory changes that it sees will benefit certain industries.</p>	<p>FSANZ notes on its website that anyone can apply to change the Code. Each application is assessed independently and in accordance with the requirements of the FSANZ Act.</p>
27	<p>It has then paid to alter the timeframe for processing and receiving feedback for the proposal.</p>	<p>Any applicant can, at any stage, choose to pay a fee to bring forward the start date of the assessment of their application and, subsequently, the public comment period and</p>

No.	Issue	FSANZ response
		<p>completion date, including FSANZ's decision.</p> <p>Irrespective of whether or not the application is paid or unpaid, the statutory timeframe once commenced is the same, and the length of the public comment period is typically six weeks. In this particular case, as a result of a request from submitters, the public comment period was extended by two weeks. This provided an additional opportunity for all interested parties to submit their comments. This is evidenced in that only three late submissions were received (compared with 480 received on time).</p> <p>See also response to no. 136 of Appendix 2.</p>
28	<p>The public was not explicitly informed of these changes. The applicant and irradiation proponents are aware of the application and able to respond within a new timeframe – but their information channels do not reach out to the broader public or those without a special or vested interest in the matter. Nor do channels of FSANZ. FSANZ relies on consumer advocacy and grassroots organisation to publicise these issues with their constituents and take the issues to the broader public.</p>	<p>The public were properly informed and given an appropriate eight week opportunity to respond. See FSANZ's responses to no. 25 above and to no. 136 of Appendix 2.</p> <p>FSANZ cannot comment on the information channels and practices of the applicant or irradiation proponents.</p> <p>The assertion that FSANZ relies on consumer advocacy and grassroots organisations to publicise issues with their constituents and take the issues to the broader public is untrue. FSANZ has a reach of some 40,000 constituents via its own channels. See FSANZ's responses to no 136 of Appendix 2.</p>
29	<p>To hinder our participation by altering the timeframe means that YOUR voice, the voice of the general consumer, and the input of diverse industries will not be represented in the so-called public consultation.</p>	<p>The alteration to the timeframe occurred because the applicant elected to pay a fee to bring forward the start date of the application; it was not done to deliberately hinder the participation of constituents, as alluded to by FoE.</p>
30	<p>Friends of the Earth/Food Irradiation Watch have monitored and responded to every irradiation application made in Australia and NZ since the moratorium on food irradiation was lifted in 1999. With our colleagues in Gene Ethics, we have been monitoring A1193 as well and expecting to work on it from Dec 2020 on. There was no indication that we needed to otherwise. As volunteer-run networks, timeframes and public information matters AND.... Consumer voices count!</p>	<p>Friends of the Earth/Food Irradiation Watch indicate that they have monitored and responded to every irradiation application made in Australia and New Zealand and, together with Gene Ethics have been monitoring A1193 as well. If that is the case, then one could reasonably argue that, given their extensive involvement in, and monitoring of, FSANZ's standards development functions:</p> <ul style="list-style-type: none"> <li>• Friends of the Earth/Food Irradiation Watch and Gene Ethics would/should be well aware that an applicant can elect at any time to pay to expedite the start of their application</li> <li>• To the extent that the steps taken by FSANZ with regards to A1193 – and the notices issued by FSANZ for A1193 – are the same as other applications, Friends of the Earth/Food irradiation Watch and Gene Ethics would/should be well aware of the need to monitor the FSANZ Work Plan for changes to timeframes triggered by applicants electing to pay to bring forward the start date of an application.</li> </ul>
31	<p>While food irradiation applications have been approved, without community scrutiny, FSANZ and irradiation proponents would have been able to fast-track more applications and use less discretion.</p>	<p>FSANZ is an independent statutory authority and it not a proponent of any application. The same statutory timeframes and processes apply irrespective of whether an application is paid or not.</p> <p>The assertion that food irradiation applications have been approved without community</p>

No.	Issue	FSANZ response
		<p>scrutiny is unfounded. As far back as the first irradiation application in 2002, FSANZ's consultation processes have supported widespread public scrutiny, with FSANZ receiving 303 and 722 submissions in the first and second rounds of public consultation, respectively. With the widespread use of social media tools, FSANZ's reach has continued to grow.</p> <p>The assertion that without community scrutiny, FSANZ would have been able to fast track more applications and use less discretion is unfounded. FSANZ must assess each application in accordance with the FSANZ Act.</p>
32	They could have been less rigorous in their science...	<p>FSANZ undertakes risk assessments in accordance with the most up-to-date international risk assessment procedures and using the best available scientific evidence.</p> <p>See also response to no. 1 in Appendix 2.</p>
33	<p>...and they would have most likely removed all labelling requirements for irradiated food too. Labelling was under threat after the federal government's 2011 Labelling Logic recommended its 'review', with proponents suggesting that it was not necessary and was an impediment to the uptake of the technology. It took 6 years of lobbying and community engagement for food ministers in 2017 to support the wishes of the overwhelming majority of Australians and New Zealanders and leave mandatory labelling in place. Citizen action, not the government or industry, has defended our right to know!</p>	See response to no. 23.
34	<p><b>What has been approved to date?</b>  To date, Food Standards Australia New Zealand (FSANZ) has approved the irradiation of herbs, spices, herbal infusions, and a wide variety of fruits and vegetables including: blueberries, raspberries, mangoes, mangosteens, pawpaws, carambolas, breadfruits, custard apples, lychees, longans, rambutans, persimmons, tomatoes, capsicums, apples, apricots, cherries, nectarines, peaches, plums, honeydew, rockmelon, strawberries, table grapes, zucchini and squash.</p> <p>Now, they want to pass a blanket approval for the irradiation of all fruit and vegetables.</p>	<p>FSANZ has no objection/comment regarding FoE's list of what has been approved to date.</p> <p>With regard to FSANZ seeking to pass a blanket approval, see response to no. 2.</p>
35	<p><b>Why do we recommend that FSANZ reject A1193? (Nos. 35-49)</b>  Nutrition: Irradiation depletes the vitamin and nutritional content of food. FSANZ generally says that the decrease is no more than with cooking – but who expects their fresh fruit to be pre-cooked or for their cooked veggies to lose double the amount of nutrients?</p>	See response to no. 10.
36	Radiation: Exposure to radiation changes the composition of the food producing 'radiolytic products' including free radicals, various	See response to no. 20.

No.	Issue	FSANZ response
	<p>hydrocarbons, formaldehyde, amines, furan and 2-alkylcyclobutanones (2-ACBs) (FSANZ A1092). (A1193, SD1 p 15) Some of these may be harmful.</p> <p>Furan is carcinogenic to rats and mice, and is classified by IARC as possibly carcinogenic to human beings (Seok et al. 2013) (A1193, SD1 p 19). 2-ACBs have been linked to DNA damage in humans and cancer in rats. FSANZ does not deny that radiolytic products may be harmful; FSANZ (CFS A1193, p 2) states that:</p> <p>“Radiolytic compounds generated through food irradiation are not produced at levels that are likely to result in harm.”</p> <p>But the levels can change.</p>	
37	<p>There is no guarantee that FSANZ will not approve an increase in the permitted radiation exposure levels. Already, some foods, herbs, spices and plants for herbal infusions are approved at much higher levels. The CODEX general standard, which FSANZ refers to expand permits, allows irradiation up to 10 kGy, significantly more than the 1 kGy requested in this application.</p>	<p>The scope of the application and therefore the assessment was the phytosanitary irradiation of fresh fruit and vegetables at doses ranging between 150 Gy to 1 kGy. Anything outside of that range is not being considered for approval.</p> <p>Any proposed changes to the Code seeking to increase the approved maximum dose would require a new application / proposal demonstrating safety and including adequate technological justification. That application / proposal would then have to be assessed in accordance with the FSANZ Act. The permitted dose range has been assessed as adequate for the irradiation of fruit and vegetables for phytosanitary purposes.</p>
38	<p>Irradiating of all fruit and vegetables would adversely affect the nutritional value and safety of significant components of the Australian and New Zealand food supplies.</p>	<p>See response to no. 10 for effects on nutritional value. See response to no. 6 for effects on safety. See response to no. 7 for proportion of food supply affected.</p>
39	<p>While irradiation uptake is currently low, it is clear that Australians are increasing the amount of plant-based foods in their diets. A blanket approval for all fruit and vegetables could lead to the irradiation of a large part of certain communities' diets. 2019 figures from research company Roy Morgan show that almost 2.5 million Australians or 12.1 per cent of the population now have diets where almost all the food is vegetarian.</p>	<p>See response to no. 7.</p>
40	<p>The nutritional and safety assessment fails to include research that questions the safety of irradiated foods and does not present evidence of the safety of a largely irradiated diet. Safety cannot be presumed.</p> <p>In fact, there has been no systematic data collection or published research to support the claim of safe consumption. Only relatively small amounts of a few foods have been irradiated and eaten, for various lengths of time, and no long-term studies have been conducted on human</p>	<p>See responses to no. 3, no. 9 and no. 32, and response to no. 1 in Appendix 2.</p>

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	<p>consumption of irradiated foods. Indeed, FSANZ (A1069, SD1 p. 3) admits that:</p> <p>"No consumption data are available, but the amounts sold into the retail trade are known approximately. As the foods have been retailed for several years in a few thousand retail outlets (Eustace &amp; Bruhn 2006), it may be presumed that retailers are actually selling most of the product."</p> <p>FSANZ makes the fundamental error of asserting that a lack of evidence of harm is the same as evidence of safety. Suggesting that food irradiation has been proven safe - without any kind of surveillance system - is scientifically indefensible.</p>	
41	<p>Irradiated pet food was responsible for the death and injury of a significant number of cats in Australia, leading to its ban. FSANZ has failed to even mention this or include relevant research in its assessment of A1193.</p> <p>In 2008-9, 87 Australian cats died or were paralysed after consuming irradiated cat food (Child, G, Foster, DJ, Fougere, BJ, Milan, JM, Rozmanec, M. (2009). Ataxia and paralysis in cats in Australia associated with exposure to an imported gamma-irradiated commercial dry pet food. Australian Veterinary Journal 87, 349-351.) FSANZ's initial response (See for example FSANZ (2011) Application A1038 irradiation of persimmons approval report, p. 9) was to exclude the research from its assessments because it had already concluded that the illness was cat specific, despite a lack of solid scientific evidence for this claim.</p> <p>Until the mechanisms of these adverse health impacts are fully explored and understood, and negative impacts on humans and other species are absolutely ruled out, no irradiated foods should be allowed to enter the human food supply.</p>	See response to no. 12.
42	Irradiation is not an alternative to chemical treatments. At best, irradiation may substitute for some post-harvest chemical treatments. However, the food most likely to be subject to irradiation is food produced using 'conventional' agricultural processes – which today means using chemicals and pesticides and possibly GMOs from seed development through harvesting.	See response to no. 21
43	There is no technological need for irradiation as numerous alternatives exist, such as pest-free zones, physical disinfestation and organic agriculture. Examples include:	See response to no. 4. The evidence supporting the proposed use of irradiation as a phytosanitary measure for all fresh fruit and vegetables, within the specified dose range, provides adequate assurance that

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	<p>Delayed ripening: Many fruits such as bananas and papaya can be picked at a green stage when they are not hosts for fruit flies. They will ripen at the market.</p> <p>Whole of systems approach: This requires an orchard management system that involves fruit fly baits, traps, removal of all fallen and over-ripe fruit, as well as having a harvest maturity index from fruits.</p> <p>Non-chemical de-contamination methods include: heat/steam vapour treatment, cold treatment, exclusion zones, modified atmospheres and vacuum packs. For example:</p> <ul style="list-style-type: none"> <li>• Australia exports steam vapour treated mangos to Japan as that country does not permit irradiated or chemically treated fruits. Australia sends chemically treated or irradiated mangos to our domestic markets and irradiated mangos to New Zealand.</li> <li>• New Zealand accepts steam vapour treated papayas from several Pacific countries but not from Australia. Australian papayas sent to Victoria and South Australia are treated with chemicals and can be irradiated (Leu, Andre, OFA newsletter, Organic Update, 31/1/12).</li> </ul>	<p>this method is technologically justified and effective in achieving its stated purpose. See Section 2 of SD1.</p>
44	<p>Irradiation is a tool of large agribusiness and will be used on top of, not instead of, chemical treatments. So far, there has been little research into the interaction of radiation on pesticides and GMOs. Australia has a growing organics industry which thrives without the use of any of these technologies.</p>	<p>See response to no. 15.</p> <p>Interaction of irradiation with GMOs in a manner different to that with non-modified organisms has no plausible mechanism.</p> <p>Ultimately, the choice of treatment (including for organic produce growers) is up to each individual business, based on an assessment of effectiveness and cost.</p>
45	<p>Labelling requirements are weak and there is no way to visually distinguish between irradiated and non-irradiated foods. Thus, shoppers depend on the integrity and comprehensiveness of irradiation labelling.</p>	<p>See response to no. 5.</p>
46	<p>As there is no simple, reliable and affordable test for irradiated foods, it is difficult for state and local authorities to monitor them in the marketplace and to enforce the labelling requirements. It is unclear whether or how FSANZ or state authorities will monitor the labelling of irradiated food as well as the food purchased and then used in commercial kitchens, restaurants, juice bars, etc.</p>	<p>Current detection methods for irradiated food are able to detect whether a food has been irradiated or not. The processing of food by irradiation is one of the heaviest regulated and audited treatments available to industry. Correct dosages are managed by accurate dosimetry, process control records at point of entry and maintenance of records under the requirements of Standard 1.5.3.</p> <p>As mentioned above, FSANZ does not enforce the Code.</p>
47	<p>A1193 cannot be claimed to be a mechanism for aligning Australia with overseas regulations or practices. The EU, for example, only permits the irradiation of herbs and spices. Japan only permits the irradiation of potatoes. Despite international agreements stating that they may, many other countries do not have blanket approvals for all fruit and vegetables.</p>	<p>As per subsection 18(2) of the FSANZ Act, FSANZ must also have regard to a number of matters which includes the promotion of consistency between domestic and international food standards. The relevant international standard setting agencies are the Codex and the International Plant Protection Convention (IPPC). Both agencies endorse the use of food irradiation.</p>

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		<p>The relevant Codex standard is the Codex General Standard for Irradiated Foods (CXS 106-1983, Rev.1–2003). Under this standard, food may be irradiated to a maximum dose of 10 kGy, provided irradiation fulfils a technological requirement and/or is beneficial in protecting consumer health. This standard also states that irradiation must not be used as a substitute for good hygienic and good manufacturing practices or good agricultural practices.</p> <p>The IPPC sets internationally recognised protocols and standards for food irradiation including the International Standard for Phytosanitary Measures 18 (ISPM 18) – Guidelines for the use of irradiation as a phytosanitary measure (FAO IPPC 2003) and ISPM 28 – Phytosanitary treatments for regulated pests, with Part 7 being specific to fruit flies (FAO IPPC 2009).</p> <p>In addition, the EU, as well as a number of countries worldwide, have specific, national regulations covering the irradiation of food, including fresh fruit and vegetables. Currently, food irradiation is approved in more than 60 countries. The applicant indicates that there are now at least 15 countries trading in irradiated produce. Amending the Code as requested therefore will bring Australian and New Zealand standards more into line with Codex and other countries' regulations.</p> <p>Appendix 1 of this report provides a summary of specific countries' permissions for irradiated foods.</p>
48	<p>Finally, the applicant is the Queensland Government, which also participates in the health and safety assessment of the application. This presents a clear conflict of interest which casts substantial doubt on, and undermines consumer confidence in, the ability of FSANZ to protect the public health of all Australians.</p>	<p>This issue – which relates to the Australia and New Zealand Ministerial Forum on Food Regulation (now the Food Ministers' Meeting) – is out of scope.</p> <p>As explained in this report, FSANZ made its own independent and evidence based assessment of the application in accordance with the FSANZ Act.</p>
49	<p>We are gravely concerned that the Queensland government has attempted to fast-track A1193 and that FSANZ has changed the dates of public consultation without clear notification to the public. The purpose of the Food Standards Act is to ensure public health protection via, amongst other things, "an affective, transparent and accountable regulatory framework, within which the food industry can work efficiently." Public notice requirements are intended to promote accountability and transparency in the regulatory framework. We assume that their intention is also in promote public engagement.</p> <p>By changing the date of public consultation, unannounced, FSANZ has limited the scope of possible community engagement beyond FSANZ's networks, disadvantaged the community it is meant to protect and represent and thus failed to provide opportunity for the robust community</p>	<p>See response to no. 1, no. 25 and no. 27, and to no. 136 of Appendix 2.</p>

No.	Issue	FSANZ response
	conversations required in a functioning democracy.	