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**Submission to Ministry of Primary Industries: Folate Fortification**

**November 2019**

**Introduction**

Folic acid is an essential B vitamin important for the healthy development of babies early in pregnancy. There is overwhelming evidence that consuming sufficient folic acid before conception and during early pregnancy can prevent many cases of neural tube defects (NTD) such as spina bifida.

New Zealand’s rate of NTDs is higher than it could be, and Māori women have higher rates of affected live births than other groups. The financial, social, and emotional impact from these birth defects can be significant for many families, whānau, and communities across New Zealand.

MPI recognises the importance of this issue and is seeking feedback on whether the government should:

* continue with the current voluntary approach of fortifying up to 50% of packaged sliced bread
* ask industry to enhance the voluntary approach to fortify 80% of packaged sliced bread, or
* introduce mandatory fortification of bread, bread-making wheat flour, or all wheat flour.

There is no consistent evidence that folic acid, when fortified in food at the recommended level, has any harmful health effects.

All options would exclude organic products.

We are seeking your feedback on these options. Hearing the views of the public will help us understand the possible impacts of the proposals.

**Submitter details:**

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**Official Information Act 1982**

All submissions are subject to the Official Information Act and can be released (along with personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

### The problem

The number of folic acid-sensitive NTD-affected pregnancies in New Zealand could be reduced if the blood folate levels of women of childbearing age was improved. Most women of childbearing age cannot get enough folate from natural food sources to ensure optimal blood folate levels for the prevention of NTDs.

Supplementation only works for women who plan their pregnancies and know about the importance of taking folic acid tablets during the critical period of at least one month before and for the three months following conception. Around 53% of New Zealand pregnancies are unplanned.

Some foods are voluntarily fortified with folic acid. This is not enough, however, to sufficiently reduce the risk of NTD-affected pregnancies across the New Zealand population.

1. **DO YOU AGREE WITH THE PROBLEM AS STATED?**

Agree.

Disagree.

Unsure.

Please explain why:

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| The Cancer Society NZ is a non-profit organisation which aims to minimise the incidence and impact of cancer on all those living in New Zealand. We work across the cancer continuum with key work areas that include health promotion, supportive care, provision of information and resources, and funding of research. The Cancer Society NZ is making a submission on folate fortification of food due to the potential for both protective and adverse effects of folate on cancer risk.  The Cancer Society NZ supports the evidence for the protective effects of folic acid to reduce neural tube defect (NTD) risk in babies that has been clearly identified by literature provided by MPI[[1]](#footnote-2). Despite folate supplementation peri-conception, voluntary folate fortification since 2009 and rising number of foods identified with folate, many women especially Māori woman do not get sufficient folate and rates of neural tube defects remain too high.  Voluntary fortification necessitates the good will of the food industry. The modelling undertaking by MPI has shown insufficient uptake of the Bakers Voluntary Code of Practise to fortify breads by industry with less than the recommended 50% (42%) of food currently fortified. While improvements in NTDs have improved since 2009, woman of child bearing age continue to have low folate levels and high NTD rates and inequity continues[[2]](#footnote-3). The industry lead code for voluntary fortification of breads has been insufficient to improve NTDs markedly and even less so for our most vulnerable populations.  Due to the continued high levels of NTDs and barriers for women of childbearing age to obtain adequate folate, the Cancer Society NZ agrees that voluntary fortification is insufficient and stronger measures are needed to promote folate intake to reduce rates of NTDs.  However due to the research inconsistencies about folate supplementation and adverse cancer risk the Cancer Society also recommends its continued research and monitoring (see below). |

### The objective of the review

The objective of this review is to increase the consumption of food containing folic acid by women of childbearing age, thereby reducing the number of NTD-affected pregnancies, while considering consumer choice, increasing equity of health outcomes, and minimising impacts on industry.

1. **DO YOU AGREE WITH THE OBJECTIVE OF THE REVIEW?**

Agree.

Disagree.

Unsure.

Please explain why:

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| Despite folate being available naturally in our food supply and in fortified foods, many women (with greater numbers of Māori) do not achieve adequate folate rich diets including fruit, vegetables, breads and cereals[[3]](#footnote-4).  Folate supplementation peri-conception is also poorly utilised partly as over fifty percent of women do not plan pregnancy or know of their pregnancy until neural tube development is almost complete.  Mandatory folate fortification has lowered rates of NTDs and improved equity for vulnerable populations in other countries. Since 2009 Australia changed from voluntary to mandatory fortification of folate into wheat flour for bread making and successfully reduced rates of NTDs and disparities significantly for disadvantaged Aboriginal women[[4]](#footnote-5)[[5]](#footnote-6)[[6]](#footnote-7). The cost benefits of doing so have also been found to be highly effective[[7]](#footnote-8).  Mandatory fortification will positively impact the folic acid intake of more New Zealanders than current levels of voluntary fortification[[8]](#footnote-9). Folic acid fortification of commonly consumed foods can be a reliable and effective way to attain health benefits by increasing the nutrient intake of a population without relying on individual supplementation practices[[9]](#footnote-10).  The Cancer Society supports strengthening folate fortification in our food supply as an effective way to reduce NTDs but recommends continued research and monitoring of cancer risks. |

### Option 1: Maintaining the status quo

Option 1 would involve continued voluntary support by large bread bakers through their Code of Practice. Their goal is to fortify up to 50% of their packaged sliced bread, by volume.

MPI has assessed option 1 against the criteria for health impacts, cost effectiveness, equity, consumer choice, and other impacts on pages 19 – 21 in the discussion paper.

1. **DO YOU AGREE WITH THE ASSESSMENT OF THE STATUS QUO AGAINST THE CRITERIA?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have:

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| We agree with MPIs assessment but support mandatory folic acid fortification due to the limited impact of the status quo on folic acid intake in women under 50 years. |

**Option 2: Asking industry to enhance voluntary fortification**

Option 2 would involve asking industry (currently the large plant bakers) to voluntarily increase the volume of packaged sliced bread being fortified under the Code of Practice from the 2017 level of 38% to a new goal of 80%.

MPI has assessed option 2 against the criteria for health impacts, cost effectiveness, equity, consumer choice, and other impacts on pages 22 – 24 in the discussion paper.

1. **DO YOU AGREE WITH THE ASSESSMENT OF THE ENHANCED VOLUNTARY FORTIFICATION OPTION AGAINST THE CRITERIA AND LIKELY IMPACTS?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have:

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| We agree with MPIs assessment but support mandatory folic acid fortification due to the limited impact of voluntary fortification on folic acid intake in women under 50 years.  Industry to date have not reached its voluntary fortification rates of 50%. The Cancer Society is supportive of strengthening folate fortification and making it mandatory to improve folate fortification levels. More widespread folate fortification is likely to improve uptake and reduce NTDs in vulnerable groups. |

**Option 3a: Mandatory fortification of non-organic bread**

Option 3a would see bread fortified with folic acid at the bread-making stage. It would apply to all non-organic bread products, and include bread made from cereals other than wheat (e.g. corn and rice bread).

The Australia New Zealand Food Standards Code would continue to permit the voluntary fortification of folic acid in other specified foods (such as breakfast cereals).

MPI has assessed option 3a against the criteria for health impacts, cost effectiveness, equity, consumer choice, and other impacts on pages 26 – 29 in the discussion paper.

1. **DO YOU AGREE WITH THE ASSESSMENT OF MANDATORY FOLIC ACID FORTIFICATION OF BREAD AGAINST THE CRITERIA AND LIKELY IMPACTS?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have:

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| We agree with the assessment but support mandatory folic acid fortification Option 3b based on the modelling and data provided by MPI.  Despite Option 3a having the capacity to make good improvements in equitable outcomes for NDTs, the implementation difficulties, high costs to implement and monitoring and limitations in food choice for consumers make this option undesirable. |

**Option 3b: Mandatory fortification of non-organic bread-making wheat flour**

Under option 3b, all non-organic wheat flour for bread-making would be fortified with folic acid at the flour-milling stage. In general, folic acid is best added late in the milling process and at a point that ensures thorough and consistent mixing with the flour.

Cereals other than wheat that are processed into flour for bread-making purposes would not be required to be fortified with folic acid (such as rice).

Flour used for purposes other than bread making would not be required to be fortified.

The Australia New Zealand Food Standards Code would continue to permit the voluntary fortification of folic acid in other specified foods (such as breakfast cereals).

MPI has assessed option 3b against the criteria for health impacts, cost effectiveness, equity, consumer choice, and other impacts on pages 30 – 34 in the discussion paper.

1. **DO YOU AGREE WITH THE ASSESSMENT OF MANDATORY FOLIC ACID FORTIFICATION OF BREAD-MAKING WHEAT FLOUR AGAINST THE CRITERIA AND LIKELY IMPACTS?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have:

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| The Cancer Society agrees with the assessment and supports Option 3b: Mandatory Fortification of Non Organic bread making wheat flour based on the evidence provided by MPI. Option b appears to provide the best balance between increasing folate of the population and   * health risk improvement (of NDTs and impacts on other populations) * the wider reach to vulnerable populations to improve inequities of NDTs * cost and to a less extent * consumer choice   This would also align well with Australia Food Standards and their fortification experiences. |

**Option 3c: Mandatory fortification of all non-organic wheat flour**

Option 3c would require the fortification of all non-organic wheat flour, whether milled in New Zealand or imported from overseas.

The Australia New Zealand Food Standards Code would continue to permit the voluntary fortification of folic acid in other specified foods (such as breakfast cereals).

MPI has assessed option 3c against the criteria for health impacts, cost effectiveness, equity, consumer choice, and other impacts on pages 35 – 39 in the discussion paper.

1. **DO YOU AGREE WITH THE ASSESSMENT OF MANDATORY FOLIC ACID FORTIFICATION OF NON-ORGANIC WHEAT FLOUR AGAINST THE CRITERIA AND LIKELY IMPACTS?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have:

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| We agree with the assessment but support mandatory folic acid fortification Option 3b based on the lower number of young children exposed to levels of folic acid above the upper limit  Despite the better health improvements and equity of health outcomes this option would bring, the high cost of implementation and limitations for consumers to opt out make this choice less desirable than option b. |

**Implementation**

MPI provides information on the proposed approaches to implementation for the three options presented on pages 40 – 43 in the discussion paper.

1. **DO YOU AGREE WITH THE APPROACH TO IMPLEMENTATION?**

Agree.

Disagree.

Unsure.

Please explain why and provide any evidence you may have. Note: if you are one of the businesses that could be affected, what do you estimate the increased costs to be?

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| This is beyond the scope of our expertise but the proposed approaches to implementation for the three options presented on pages 40–43 in the discussion paper sounds reasonable. The food industry is better equipped to comment on this. |

**General comments**

If you have any other general comments or suggestions for the *Folic acid fortification: Increasing folic acid availability in food* discussion paper, please let us know.

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| Folate is important for the normal function of healthy cells and fortification is an effective and equitable way to address low folate intake/levels in woman of childbearing age to reduce NTDs.  Evidence finds both a protective effect of high folate intake/levels for some cancers but also inconsistent adverse associations across different study types especially for those with pre-existing tumours. However overall report recommendations consistently advise that the benefits of folic acid fortification outweigh any potential risk for cancer[[10]](#footnote-11)[[11]](#footnote-12)[[12]](#footnote-13)[[13]](#footnote-14) These recommendations align with the Cancer Society’s 2011 Position Statement on Folate and Cancer Risk[[14]](#footnote-15).  Due to some uncertainty about high folate and cancer links the Cancer Society continues to recommend people with existing bowel adenomas and those with an increased risk of developing bowel adenomas avoid taking high-dose folic acid supplements (above the upper limit of 1mg (1000µg) per day. This aligns with the World Cancer Research Fund recommendations to avoid high dose folic acid and dietary supplements for cancer prevention[[15]](#footnote-16).  The Cancer Society supports Option 3b: Mandatory fortification of non-organic bread-making wheat flour. The Cancer Society agree that the benefits of folic acid supplementation outweigh those of any potential cancer effects and will particularly benefit those most at risk. Due to the research inconsistencies about folate supplementation and cancer risk the Cancer Society also recommends its continued research and monitoring.  Food Security impacts at least 19% of households in New Zealand with greater rates experienced in low income and more deprived neighbourhoods, Māori and Pacific populations and families with greater numbers of children[[16]](#footnote-17)[[17]](#footnote-18). Food insecure households are less likely meet the recommendations for fruit and vegetable intake compare to food secure households. The Cancer Society recommends that strategies to support food insecure women to easily access healthy affordable food are also addressed alongside folic acid fortification as an important way to address inequities in food choice, NTDs and health. |

1. Ministry of Primary Industries, Voluntary Folic Acid Fortification: Monitoring and Evaluation Report, Feb 2018. [↑](#footnote-ref-2)
2. Office of Prime Ministers Chief Science Advisor and the Royal Society Te Aparangi. The Health Benefits and Risk of Folic Acid Fortification of Food. June 2018 available from <https://www.pmcsa.org.nz/wp-content/uploads/The-health-benefits-and-risks-of-folic-acid-fortification-of-food.pdf>. [↑](#footnote-ref-3)
3. Ministry of Health, NZ Health Survey: Regional Data Explorer, 2019, available from <https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update/_w_7de86db0/#!/compare-regions>. [↑](#footnote-ref-4)
4. Slagman A., Harris L., Campbell S, et al. Folic acid deficiency declined substantially after introduction of the mandatory fortification programme in Queensland, Public Health Nutrition. August 2018. DOI: 10.1017/S1368980019002258.

   Australia: a secondary health data analysis [↑](#footnote-ref-5)
5. Slagman A., Harris L., Campbell S, et al. Low proportions of folic acid deficiency after introduction of mandatory folic acid fortification in remote areas of northern Queensland, Australia: a secondary health data analysis, Biomarkers, 2019. 24:7, 684-691. DOI: 10.1080/1354750X.2019.1652346 [↑](#footnote-ref-6)
6. D’Antoine, H., Bower, C. Folate Status and Neural Tube Defects in Aboriginal Australians: the Success of Mandatory Fortification in Reducing a Health Disparity. Current Developments in Nutrition. 2019.3, available from <https://academic.oup.com/cdn/article/3/8/nzz071/5519849> [↑](#footnote-ref-7)
7. Saing, S., Haywood, P., van der Linden, N et al, Real‑World Cost Effectiveness of Mandatory Folic Acid Fortification of Bread‑Making Flour in Australia, 2019, 9, 17:243-254 at https://doi.org/10.1007/s40258-018-00454-3 [↑](#footnote-ref-8)
8. Food Standards Australia New Zealand. Proposal P295 Consideration of Mandatory Fortification with Folic Acid: First Review Report FSANZ; 2007. [↑](#footnote-ref-9)
9. Food Standards Australia New Zealand. Proposal P295: Consideration of mandatory fortification with folic acid: Final Assessment Report. FSANZ; 2006. [↑](#footnote-ref-10)
10. Scientific Advisory Committee on Nutrition. Update on Folic Acid. 2017. [↑](#footnote-ref-11)
11. Centeno Tablante, E., Pachón,H., Guetterman,HM., Finkelstein,JL., Fortification of wheat and maize flour with folic acid for population health outcomes. Cochrane Database of Systematic Reviews 2019, Issue 7. [↑](#footnote-ref-12)
12. World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: a Global Perspective.* Continuous Update Project Expert Report 2018. p8, of chapter Diet nutrition physical activity and colorectal cancer. [↑](#footnote-ref-13)
13. Office of Prime Ministers Chief Science Advisor and the Royal Society Te Aparangi. The Health Benefits and Risk of Folic Acid Fortification of Food. June 2018, available at <https://www.pmcsa.org.nz/wp-content/uploads/The-health-benefits-and-risks-of-folic-acid-fortification-of-food.pdf> [↑](#footnote-ref-14)
14. The Cancer Society of NZ, Position Statement on Folate and Reducing Cancer Risk, March 2011, Cancer Society NZ, available at <https://cancernz.org.nz/assets/Positions-Statements/473-CSNAT-Folate-Positioning-statement-Jul13.pdf>. [↑](#footnote-ref-15)
15. World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: a Global Perspective.* Continuous Update Project Expert Report 2018. p8, of chapter Diet nutrition physical activity and colorectal cancer [↑](#footnote-ref-16)
16. Auckland City Mission, Shining the Light on Food Security in Aoteoroa, 2019. Auckland City Mission. [↑](#footnote-ref-17)
17. Ministry of Health. Household Food Insecurity Among Children: New Zealand Health Survey: Summary of findings. 2019. Wellington: Ministry of Health. [↑](#footnote-ref-18)