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12 Sept, 2017

Submission in support of Golden Rice Application A1138

To whom it may concern,

I wish to write to you in support of permission to import Golden rice into Australia. As you are aware, Vitamin A is a rare deficiency in Australia and there is no plan to import rice intentionally for the treatment of Vitamin A deficiency in Australia. This is simply to allow for the accidental importation of Golden rice when rice is imported to Australia or New Zealand.

Vitamin A deficiency is an enormous issue facing millions of people in the developing world. Golden rice is a not-for-profit aid project aimed at overcoming this deficiency by providing beta-carotene, the precursor of Vitamin A, in a form readily available to these people many of whom can only afford rice. In a perfect world these people would eat a balanced diet which would provide them with sufficient Vitamin A or beta-carotene. Alas, this is not the case and Golden rice provides the best short to medium term solution to this issue. Supplements are costly, difficult to distribute and have use-by dates. Rice with enhanced levels of beta-carotene is the best way of providing people in the developing world where rice is a staple with a diet that can overcome a deficiency in Vitamin A.

Australia imports almost 150,000 tonnes of rice every year from Asia, particularly high value types such as basmati from India and Pakistan, and fragrant rice from Thailand. Similarly New Zealand imports all of its rice with a considerable amount coming from south-east Asia. Hopefully these will be amongst some of the countries which will also produce Golden rice as they have people suffering from Vitamin A deficiency.

All of the rice imported into Australia and New Zealand is hulled; it is incapable of germinating and growing into a viable plant. There is a small chance that some of the rice lots imported into Australia and New Zealand may contain a small, incidental amount of hulled Golden rice. This obviously has no chance of germinating and affecting Australia's rice production. If this submission is approved it will merely allow for this accidental importation.

Through colleagues of mine at IRRI and my reading into Golden rice I have become aware of its development. It has been a long process. The first incarnation (GR1) produced the easily identifiable yellow rice, but the beta-carotene content was low. On reconstructing the trait (GR2) a higher level of beta-carotene was produced. This is readily digestible and absorbed by children and will be able to provide half of the daily beta-carotene needs of a child with half a cup of cooked Golden rice (Tang et al 2009, Tang 2010)

Of equal importance was incorporating the trait into high yielding varieties – if the yield is not as high or higher than existing varieties and hybrids of rice then farmers will not grow the Golden rice varieties and hybrids and the project will fail. It has taken a long time and researchers at IRRI have had to contend with field trials being destroyed by activists groups. However, it is my understanding that they have now achieved high yielding Golden rice varieties and hybrids. All safety aspects of this trait have been addressed; Vitamin A toxicity will not be encountered as beta-carotene is what the Golden rice contains and this is excreted by the body in urine when in excess. The world is finally ready to embrace Golden rice.

I would like to request that FSANZ approve this application. It will indicate to countries where Golden rice will be grown that current importing countries like Australia and New Zealand will not stop importing rice from their country should they choose to allow Golden rice to be grown. This is a small but hugely significant step in providing a safe and wonderful technology be applied to save millions of people who would otherwise suffer from night blindness caused by Vitamin A deficiency.

Kind regards

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References

Tang, G., Qin, J., Dolnikowski, G. G., Russell, R.M. and Grusak, M.A. (2009) Golden Rice is an effective source of vitamin A. The American Journal of Clinical Nutrition. Vol 89, # 6, 1776-1783.

Tang, G. (2010) Bioconversion of dietary provitamin A carotenoids to vitamin A in humans. American Society for Nutrition. Vol 91 #5,. 1468s – 1473s.