



## Submission to Food Standards Australia and New Zealand re Application Number A1138: Proposal for food derived from Provitamin A Rice

The Australian Academy of Science welcomes the opportunity to comment on the application for draft variation to Schedule 26 that includes a reference to food derived from provitamin A rice line GR2E.

In many countries, Vitamin A deficiency (VAD) is a serious cause of mortality and morbidity for young children, despite interventions and policy measures aimed at improving living standards. The deficiency is a nutritionally acquired immune deficiency syndrome, and the most significant cause of childhood blindness, particularly in children under five years of age. VAD affects approximately 19 million pregnant women and 190 million pre-school age children, mostly in Southeast Asia and Africa.

Provitamin A GR2E Rice, also known as Golden Rice, has been developed as a culturally-sensitive nutritional intervention to combat vitamin A deficiency. The technology has been donated by its inventors for use in developing countries and in public owned rice varieties, and there are no limitations, except export sale, on the use of Golden Rice harvest, which can be locally sold, or replanted by growers.

While Golden Rice has not been developed for agricultural use in Australia or New Zealand, its developers have applied for permission to include it in the Code to mitigate the risk of trace amounts of GR2E rice inadvertently enter the food supply through exports from countries that supply milled rice to Australia/New Zealand.

The Academy notes that FSANZ has completed a thorough safety assessment that includes a characterisation of the transferred gene sequences, their origin, function and stability in the rice genome; the changes at the level of DNA and protein in the whole food; compositional analyses; an evaluation of intended and unintended changes; and a nutrition risk assessment in relation to  $\beta$ -carotene intake. The Academy endorses the conclusion of this analysis that food derived from GR2E is as safe for human consumption as food derived from conventional rice. For this reason, the Academy recommends that the variation to Schedule 26 in the Code to include food derived from provitamin A GR2E rice should be approved.