APPLICATION TO AMEND SCHEDULE 18 OF THE AUSTRALIA NEW ZEALAND FOOD STANDARDS CODE TO EXTEND THE USE OF GIBBERELLIC ACID TO CEREAL GRAIN GERMINATION

EXECUTIVE SUMMARY

Currently under Schedule 18 of the Food Standards Code, Gibberellic Acid is permitted as a processing aid for the technological purpose of barley germination with the maximum level set as Good Manufacturing Practice (GMP). Cargill Malt Asia Pacific Pty Ltd seeks to extend the approval of the use to all other cereal grains including wheat and rye. This is being requested as an expedited process.

The main aim of malting is to transform the food reserves of grain, which are largely insoluble starch and protein, into a substrate capable of dissolution and extraction by hot water during later stages of processing to produce wort which is an aqueous solution of fermentable carbohydrates and soluble protein.

Malted grains and malt extract (either syrup or dried powder) are currently supplied to the brewing, distillers and baking industries plus food manufacturers in Australia and overseas.

Gibberellic Acid is a naturally occurring plant hormone that is found in grains as well as fruits and vegetables. Gibberellic Acid aids in breaking of grain dormancy in its natural state and with additional application promotes germination of the grain.

Application of Gibberellic Acid during the early stages of germination in the malting process, promotes the biochemical modification of the grain through proteolytic, amylolytic and cytolytic reactions. By decreasing the grain pH, proteolysis is promoted which aids in the formation of soluble nitrogen and extract both critical parameters for brewers and distillers.

Additionally the application of Gibberellic Acid increases the alpha amylase levels in malted cereals, which are essential not only for manufacturing of beer but particularly important for the baking industry. The presence of alpha amylase increases starch hydrolysis during baking and contributes to the increase in bread volume and quality. Malt extract is used to improve the organoleptic characteristics of the baked products and traditionally malt flour is included into other flours to make up for the common alpha amylase deficiency noted in Australian bread flours. The variation in alpha amylase is due to the inconsistency of environmental conditions experienced from each growing season.

The brewing industry has undergone significant change in the past decade to expand on traditional malted barley based beverages to include other malted cereal grain based beers, predominantly wheat and rye. To ensure consistency with barley malting processes and allowing local product to be processed the extension of the current approval to include all other cereal grains is requested.

The brewing industry has widely accepted the use of Gibberellic Acid for the malting of barley for decades, with many widespread malting text books and research conducted from the 1960's onwards.

Currently the use of Gibberellic Acid as a processing aid in food processing is not restricted by Codex Alimentarius (Codex) standards. Gibberellic Acid is identified on the FA/45 INF/03 - Codex Inventory of Substances used as Processing Aids (IPA), Main List, with no specified uses or specifications.

The United States Environmental Protection Agency (EPA) have approved the use of Gibberellic Acid on wheat, barley, oats, sorghum, rye as well as many fruits and vegetables. The approval applies to

the application to plants, seed, cuttings and on food commodities after harvest. There are no tolerances for this application.

As Gibberellic Acid is naturally occurring and approved in agriculture for many fruits and vegetables it is already included in the food production of Australia. The Australian Pesticides & Veterinary Medicines Authority has approved the use of Gibberellic Acid to be applied to crops including grapes, citrus, stone fruit, dried fruits and malting barley.

As Gibberellic Acid is used extensively globally through the malting and food industries, we are seeking modification of the current approval to include all cereal grain germination in Schedule 18 of the Food Standards Code.