CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

E

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 13

CRD36
April 2024
ORIGINAL LANGUAGE

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

17th Session
15-19 April 2024

(*Prepared by Peru with the support of Argentina, Brazil, Chile, Costa Rica, Ecuador, Jamaica, Paraguay, Suriname and Uruguay*)

Agenda Item 13: Request for comments on the recommendation for the establishment of maximum levels for cadmium and lead in quinoa

The undersigned are grateful for the document prepared by the Joint FAO/WHO JECFA Secretariats on cadmium and lead in quinoa. Taking into account the conclusions and recommendations of JECFA in document CX/CF 24/17/13, we consider that there is sufficient evidence to establish separate MLs for cadmium and lead for quinoa, for which we submit the following comments.

In the General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) (CODEX STAN 193-1995, page 35 and 37 respectively), it is indicated that the maximum levels for cadmium and lead do not apply to quinoa.

Quinoa is an ancient crop that contributes to global food security. Quinoa is the only plant food that has all the essential amino acids, trace elements and vitamins and does not contain gluten. The essential amino acids are found in the kernel of the grain, unlike other cereals that have them in the exosperm or husk, such as rice or wheat[1].

Quinoa (*Chenopodium quinoa*) is an Andean pseudocereal produced in countries such as Bolivia, Peru, Ecuador and southern Colombia, with more than 3,000 varieties, distinguished by their nutritional properties and adaptation to different agro-ecological zones. Quinoa's nutritional profile stands out for its protein, carbohydrate, lipid and gluten-free content; it is rich in vitamins; and it is an excellent source of minerals, such as calcium, magnesium, iron and phosphorus. It is one of the few foods that have in its composition all the essential amino acids, standing out from other cereals such as rice or wheat.

In 1996, quinoa was catalogued by FAO as one of the promising crops of humanity, not only for its great beneficial properties and multiple uses, but also for considering it as an alternative to solve the serious problems of human nutrition. NASA also included it in the CELLS (Controlled Ecological Life Support System) system to equip its rockets for long duration space travel, as it is a food with an excellent nutritional composition as an alternative to solve the problems of insufficient protein intake.

In REP18/CF, paragraph 12, it is stated that: "the CCCF noted the view that as a pseudocereal and with differing growing conditions, it may be appropriate to treat quinoa on an individual basis, therefore the ML for lead and cadmium for this commodity could be based on quinoa specific data".

The signatory countries consider that there is sufficient evidence to establish separate MLs for cadmium and lead for quinoa and, in accordance with the statistical data on international trade, the maximum levels proposed in the petition are the most appropriate, which would generate the lowest rejection rate worldwide.

[1] https://www.fao.org/3/aq287s/aq287s.pdf

CONCLUSIONS – JECFA Secretariat:

The analysis performed by the JECFA Secretariat indicate that, in term of consumer protection and trade, enforcing a maximum level of 0.1 or 0.2 mg/kg for cadmium in cereal grains quinoa would have little impact on dietary exposure to cadmium for the general population, compared with the current situation with no Codex ML, while the proportion of rejected quinoa cereal grains would be approximately 5% with an ML of 0.1 mg/kg and 0.2% with an ML of 0.2 mg/kg.

As for lead in quinoa cereal grains, the analysis performed by the JECFA Secretariat indicate that in terms of consumer protection and trade, enforcing a maximum level of 0.1 or 0.2 mg/kg for lead in cereal grains quinoa would have also little impact on dietary exposure to lead for the general population, compared with the current situation with no Codex ML while the proportion of rejected quinoa cereal grains would be approximately of 4% with an ML of 0.1 mg/kg and 0.4% with an ML of 0.2 mg/kg.

Therefore, Argentina, Chile, Costa Rica, Ecuador, Jamaica, Paraguay, Peru, Suriname and Uruguay, support the JECFA recommendation regarding the establishment of separate maximum levels for cadmium and lead for quinoa, as described below:

Cadmium

Product name	**Maximum level (NM)** **Mg/kg**
Quinoa	0.15

Lead

Product name	**Maximum level (NM)** **Mg/kg**
Quinoa	0.20