

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



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AGENDA ITEM NO. 4(B)

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

**CODEX COMMITTEE ON FOOD LABELLING
THIRTY-FIFTH SESSION
OTTAWA, CANADA, APRIL 30 - MAY 4, 2007**

**GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND
MARKETING OF ORGANICALLY PRODUCED FOODS:
PROPOSED DRAFT REVISED ANNEX 2: TABLE I
(NATURAL SODIUM NITRATE)
(ALIMORM 06/29/22 – APPENDIX IV)**

GOVERNMENT COMMENTS AT STEP 3

COMMENTS FROM:

**COSTA RICA
EUROPEAN COMMUNITY
NORWAY
SWITZERLAND**

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM)

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COSTA RICA:

Aside from discussions that took place during the previous Session of the CCFL, Costa Rica noted that the Delegation of Chile provided sufficient information in compliance with the requirements of the evaluation process for inclusion of substances in Table 1 of Annex 2, and that it also distributed the relevant scientific information during other sessions. Furthermore, Natural Sodium Nitrate from Chile is one of the few available sources of nitrogen in natural form so its availability would represent a favourable option to supply the need for this element as fertilizer in organic agriculture. However, we believe that additional information regarding the non-contamination of subterranean and surface waters would strengthen its use as an important ingredient to favour this activity.

This, or other arguments in support, would help enrich the discussion during the next Session of the CCFL.

EUROPEAN COMMUNITY:

- 1) As regards Appendix IV of ALINORM 06/29/22, the EC rejects the inclusion of Natural Sodium Nitrate in Table 1 of Annex 2 'Codex Guidelines' (CAC/GL 32).
- 2) The EC, in accordance with the procedure agreed during the 34th Session of CCFL (Ottawa – May 2006), envisages to submit a summary of the results of the evaluation of the substances in square brackets (cf. Appendix III and IV of ALINORM 06/29/22) against the Criteria of Section 5 of the 'Codex Guidelines'.

NORWAY:

Since there is no new information about natural sodium nitrate available, we would therefore like to repeat our comment from last year:

According to organic principles, livestock manure, cultivation methods and fertilizers/conditioners of low solubility should mainly be used for fertilizing the soil. Sodium (Chilean) nitrate from natural deposits has high contents of mineral nitrogen and the nitrate is easily absorbed by the plant. This is not according to the organic principles, and Chilean nitrate should thus not be allowed in organic production.

Synthesized sodium nitrate is regarded as an easily absorbable fertilizer, and is not allowed to use in organic farming. It is hard to differentiate between synthesized sodium nitrate and Chilean nitrate, and it is therefore difficult to understand why Chilean nitrate should be allowed to use in organic farming.

As stated above, Chilean nitrate is easily absorbed by the plant. Easily absorbable nitrate may cause excessive levels of nitrate in vegetables. A high level of nitrate is unwanted in vegetables due to the

conversion of nitrate to nitrite and nitrosamines during consumption. This aspect also emphasizes why Chilean nitrate should not be used in organic production.

We would also like to mention that nitrate can easily be leached into ground water, which may have a negative impact on the environment. Chilean nitrate also has a high content of sodium, which can have negative consequences for the environment.

Therefore Norway proposes that Chilean nitrate should not be included in Annex II

SWITZERLAND:

Switzerland is strictly opposed to the inclusion of sodium nitrate in annex II.

Paragraph 5.1 of Section 5 of Codex Alimentarius Guidelines for organically produced foods requires, that any new substances must meet the listed general criteria. Sodium nitrate does not fulfil these criteria and contradicts the principles of organic farming, especially because of the following:

- Not consistent with principles of organic production (foreword, paragraph 7): Sodium nitrate is a non-renewable resource and its use is not adapted to locally organized agricultural systems.
- Not necessary/essential for its intended use. Easily soluble nitrogen fertilizers are not needed to grow crops organically.
- Availability of alternative methods: There are renewable resources available in combination with good organic agricultural practices.
- Not essential for obtaining or maintaining the fertility of the soil or to fulfil specific nutrition requirements of crops which cannot be satisfied by the practices included in Annex 1 or other products included in Table 2 of Annex 2.

Furthermore, we must take into account that the use of this substance is absolutely rejected by stakeholders.

As our discussions in CCFL have clearly shown that no consensus will be reached on this issue, we propose to end the debate on it.

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM):

Matrix for the evaluation of substances against criteria of the Codex Alimentarius Guidelines for Organic Food (ALINORM 03/22A)

SCORING	++ very positive	+ positive	oo not to evaluate	~both positive and negative	- negative	-- very negative
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Criteria for the non-inclusion or amendment of a substance in Annex 2, Table 1.

Criteria for review	Evaluation against criteria	Score
<p><i>Section 5.1</i></p> <p><i>General Principles</i> Consistent with the principles of organic production</p>	<p>Non-compatibility with concepts of plant nutrition in organic farming</p> <p>Organic crops should primarily receive nutrients from the soil, which is regarded as the basis for crop production. Only in case of need, nutrients from external sources may be added. In organic agriculture one of the basic principles is to fertilize/nourish primary the soil, which provides nutrients to the plant. By contrast, conventional agriculture often directly feeds the plant.</p> <p>In organic farming, N is supplied in the form of organic substances, where most N is bound to organic molecules such as protein. Such compounds “feed” the soil (promote activity of soil micro-organisms), and become available for crops only after mineralization by micro-organisms. By contrast, conventional N fertilizers often contain mineral, highly soluble nitrogen.</p> <p>Sodium (Chilean) nitrate is highly soluble like conventional nitrogen fertilizers.</p> <p>Chilean nitrate contains mainly mineral NaNO₃, and its effect on crop growth is identical to mineral, synthetic nitrate. Fertilization with Chilean nitrate therefore corresponds to the conventional concept of plant nutrition, but contradicts the organic concept of plant nutrition.</p> <p>One of the major concerns is that organic farming might become similar to conventional farming (with respect to N fertilization).</p>	--
Substance is necessary / essential for its intended use	<p>Not essential for its intended use.</p> <p>Within the framework of concepts of plant nutrition in organic farming, N fertilizers are necessary to a certain extent. At present, there is a whole range of N fertilizers of plant and animal origin, which are compatible with the organic fertilization concept. Thus, there is no need to use nitrate fertilizers like Chilean nitrate.</p>	--
Manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	<p>Non-renewable nitrogen resource</p> <p>Sodium (Chilean) Nitrate is made from a non-renewable source, whereas all other N-sources used in organic farming are renewable.</p> <p>Given the geographically limited reserves and isolated supply, the transportation of nitrogen for long distances has the potential to cause greater environmental impacts than most other mined minerals. In most areas in the world, there are local resources available for the production of organic nitrogen fertilizers, however these might be more expensive or more complicated than manufacturing sodium nitrate.</p>	-

<p>Lowest negative impact on human or animal health and quality of life</p>	<p>Higher nitrate contents when used in high amounts</p> <p>If used in high amounts, Chilean nitrate might contribute to higher nitrate content in leafy green vegetables such as lettuce and spinach. There is also a potential for food safety risks due to the potential formation of nitrites or nitrosamine, a carcinogenic risky substance.</p> <p>Other Food safety issues</p> <p>A range of commercial organic N fertilizers which comply with the above requirements is currently available. Occasionally, concerns over the safety of individual materials were expressed (e.g. BSE in bovine materials, ‘asian bird flu’ in feather meal). Where such concerns were scientifically justified, many countries many countries have adopted measures to reduce or manage the identified risks by restrictions in the standards.</p>	<p>-/+</p>
<p>Approved alternatives not available</p>	<p>Alternative fertilization systems are established also in developing countries</p> <p>Organic growers throughout the world have successfully developed systems that use compost, green manure, and plant or animal by-products to supply the nitrogen needed to grow all commercial crops throughout the year over a wide range of climates and soils, including in developing countries.</p> <p>Alternative products are available</p> <p>In organic farming systems, nitrogen is obtained from crop rotations that include nitrogen-fixing leguminous crops, free-living nitrogen fixing organisms, and the application of compost and manure. Plant and animal by-products can be used to provide supplemental nitrogen. Therefore, given the abundance and ready availability of such sources, Sodium nitrate is unnecessary and cannot be considered essential for its intended use.</p>	<p>--</p>
<p><i>Section 5.1(a)</i></p> <p>Used for fertilization and soil conditioning Essential for obtaining or maintaining fertility of the soil or fulfil specific nutrition requirement of crops, soil conditioning and rotation purposes witch cannot be satisfied by the practices included Annex 1, or other products included in Table 2 of Annex 2.</p>	<p>Risk of imbalances</p> <p>An organic fertilizing system is based on cultivation of legumes in a crop cycle with cash crops and green manure in combination with farmyard manure and compost where available. Such a system contains a balance of nitrogen and carbon sources, both of which nourish soil organisms that are essential for the cycling of nutrients.</p> <p>A nitrate fertilizer that lacks carbon creates a carbon/nitrogen imbalance that increases the metabolic rate of soil microbial biomass, which in turn accelerates the mineralization of soil organic matter. The crop response and increase in soil activity is short-lived.</p>	<p>-</p>
<p>Ingredient is of plant, animal, microbial or mineral origin; may undergo the following processes: Physical (Mechanical, thermal), enzymatic or microbial (composting, fermentation); only when the above processes have been exhausted, chemical processes may be considered and only for the extraction of carriers and binders.</p>	<p>Mineral source fulfilled</p> <p>Chilean nitrate (synonym: sodium nitrate) is manufactured from sodium-rich rocks which occur in a number of locations, e.g. Chile. The mineral deposit ‘caliche’ which occurs in Chile contains 6-10 % NaNO₃. To manufacture Chilean nitrate, caliche is mined and crushed, then NaNO₃ is extracted and crystallized. The end product Chilean nitrate contains ca. 98 % NaNO₃. The nitrate ion, which acts as N source for crops, is identical to nitrate from synthetic mineral fertilizers.</p>	<p>+</p>

<p>Their use does not have a harmful impact on the balance of the soil ecosystem or on the soil physical characteristics, or water and air quality</p>	<p>Less stimulation of soil life than organic N- fertilizers Generally there are no concerns, if used sparingly. However, Sodium (Chilean) nitrate stimulates soil life significantly less than organic N fertilizers.</p> <p>Highly soluble nitrates might leach into water Sodium nitrate accelerates the mineralization and depletion of soil organic matter, in contrast to organic nitrogen fertilizers that maintain and improve soil organic matter.</p> <p>Nitrate is highly mobile in soil. Nitrate that is not immediately assimilated by plants can be leached in the ground water.</p>	<p>-</p>
<p>Use may be restricted to specific conditions, specific regions or specific commodities</p>	<p>Restricting the amount used on single fields difficult to inspect In those countries that had prohibited the substance but made an exception for a limited amount, monitoring a numerical limit on nitrogen contributions has proven to be a recordkeeping burden on the farmer, a verification problem for inspectors, and an administrative burden on the certifier, which is not necessary for the allowed organic fertilisers</p>	<p>-</p>
<p>Stakeholder view points</p>	<p>Excluded in all major international and national standards Currently, the major international standards for organic farming (e.g. IFOAM Basic Standards; European regulation 2092/91 EEC) as well as almost all national standards do not allow the use of Chilean nitrate. The USDA’s National Organic Program places it on the Prohibited Non-synthetic substances list, with an exception that permits very restricted usage (7 CFR 205.602(g)).</p>	<p>--</p>