



## PROGRAMME MIXTE FAO/OMS SUR LES NORMES ALIMENTAIRES COMITÉ DU CODEX SUR L'ÉTIQUETAGE DES DENRÉES ALIMENTAIRES

### Quarante-et-unième session

Charlottetown, Île-du-Prince-Édouard (Canada), 14 – 17 mai 2013

### DIRECTIVES CONCERNANT LA PRODUCTION, LA TRANSFORMATION, L'ÉTIQUETAGE ET LA COMMERCIALISATION DES ALIMENTS BIOLOGIQUES

#### Utilisation de l'éthylène en tant qu'inhibiteur de la germination des pommes de terre et des oignons

#### I. GÉNÉRALITÉS

Le Comité du Codex sur l'étiquetage des denrées alimentaires (CCFL) a tenu sa 40<sup>e</sup> session en mai 2012 et a examiné la proposition de l'Union européenne pour que soit autorisée l'utilisation de l'éthylène en tant qu'inhibiteur de la germination des pommes de terre et des oignons (Point 5b de l'ordre du jour).

À la 40<sup>e</sup> session du CCFL, le Gté a dit qu'il n'avait pas fait une recommandation définitive concernant cette substance. Le CCFL a accepté de maintenir un groupe de travail électronique (Gté) présidé par les États-Unis et le Cameroun dont le mandat serait d'étudier l'utilisation de l'éthylène en tant qu'inhibiteur de la germination des pommes de terre et des oignons.

Ce rapport comprend un résumé des réponses à l'information additionnelle que les participants au Gté ont étudiée. Ce rapport final a été remis au Secrétariat avant la 41<sup>e</sup> session du CCFL.

#### II. PARTICIPATION AU Gté

En août 2012, les États-Unis et le Cameroun, en qualité de coprésidents de ce Gté, ont invité tous les membres du CCFL à prendre part au Gté portant sur la révision des Directives concernant la production, la transformation, l'étiquetage et la commercialisation des aliments biologiques. Dix-huit États membres et une organisation membre ont dit souhaiter participer à ce groupe. Une liste des participants est donnée en Annexe I.

Le Gté a établi le 7 septembre 2012 comme échéance pour soumettre des données additionnelles ou des données de recherche à l'appui de la proposition d'utiliser l'éthylène comme inhibiteur de la germination des pommes de terre et des oignons. Un document de la Norvège a été reçu avant l'échéance. Une publication examinée par des pairs<sup>1</sup> a été reçue à titre d'information générale.

En novembre 2012, les États-Unis, en qualité de coprésident du groupe de travail, ont distribué le modèle de la proposition et l'information générale additionnelle aux membres du Gté avec les instructions pour la présentation de commentaires.

À la réception des commentaires, un projet de rapport a été envoyé aux membres du groupe de travail pour un deuxième cycle de commentaires qui ont été incorporés au rapport final.

Un calendrier actualisé du travail de Gté est fourni en *Annexe III*.

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<sup>1</sup> EFSA Journal 2012; 10(1):2508, disponible à <http://www.efsa.europa.eu/en/efsajournal/doc/2508.pdf>

### III. EXAMEN DES SUBSTANCES DE L'ANNEXE 2 : ÉTHYLÈNE EN TANT QU'INHIBITEUR DE LA GERMINATION DES POMMES DE TERRE ET DES OIGNONS

#### A. Résumé des réponses au premier cycle de consultation

L'information générale additionnelle fournie par la Norvège a été transmise aux participants en réponse aux commentaires reçus à la 40<sup>e</sup> session du Comité du Codex sur l'étiquetage des denrées alimentaires concernant l'utilisation de l'éthylène comme inhibiteur de germination.

En plus de la proposition originelle de l'UE et de l'information additionnelle fournie par la Norvège, quatre États membres (Australie, Brésil, États-Unis et Uruguay) ont répondu à la demande initiale de commentaires. Tous les commentaires du premier cycle de consultation ont été incorporés à la grille d'examen fournie en *Annexe II*.

#### B. Résumé des réponses du deuxième cycle

Vu le peu de réponses au premier cycle de consultation, les coprésidents se sont demandés après ce premier cycle, s'il y avait au sein du groupe de travail électronique un consensus suffisant pour appuyer l'ajout de l'éthylène à l'Annexe 2 aux fins d'inhibition de la germination des pommes de terre et des oignons ou s'y opposer.

Pour le second cycle de commentaires sur le projet de rapport, les coprésidents ont transmis un projet de rapport qui offrait aux membres du Gté trois options de réponse.

Les coprésidents ont indiqué dans la demande de commentaires que l'Option A pouvait représenter la meilleure opportunité d'atteindre un consensus et de répondre aux préoccupations exprimées par plusieurs membres participant au Gté. Les commentaires sur les trois options devaient être reçus le 19 avril 2013.

Les coprésidents ont suggéré lors de la deuxième demande de commentaires que les membres envisagent les prochaines étapes dans l'éventualité où un consensus ne pouvait être dégagé concernant l'inclusion de la substance conformément à l'Option A.

Les trois options qui ont été examinées pour inclure l'éthylène dans le Tableau 2 sont présentées ci-dessous.

TABLEAU 2

#### SUBSTANCES POUR LA LUTTE CONTRE LES ORGANISMES NUISIBLES ET LES MALADIES DES PLANTES

Substance		Description; composition exigée; conditions d'emploi
<b>IV. AUTRE</b>		
[Éthylène]	<b>Option A :</b>	[Besoin reconnu par l'organisme ou autorité de certification pour inhiber la germination des pommes de terre et des oignons entreposés là où des variétés ayant des caractéristiques de dormance prolongée ne sont pas disponibles ou ces variétés ne sont pas adaptées aux conditions de culture locales. Doit être utilisé de manière à minimiser l'exposition des exploitants et des travailleurs à la substance.]
[Éthylène]	<b>Option B :</b>	[Besoin reconnu par l'organisme ou autorité de certification pour inhiber la germination des pommes de terre et des oignons entreposés là où des variétés ayant des caractéristiques de dormance prolongée ne sont pas disponibles ou ces variétés ne sont pas adaptées aux conditions de culture locales.]
	<b>Option C :</b>	Substance non ajoutée au tableau. Si un membre du Gté n'est pas favorable à des utilisations additionnelles de l'éthylène pour inhiber la germination, il est prié d'en indiquer la ou les raisons dans sa réponse.

Treize membres ont répondu à la demande de commentaires du second cycle : Argentine, Australie, Brésil, Cameroun, Canada, Chili, Costa Rica, UE, Inde, Mexique, Norvège, États-Unis et Uruguay.

*Commentaires sur les options proposées*

#### **Option A.**

La majorité des commentaires étaient favorables à l'Option A.

L'UE a signalé qu'il a été nécessaire de modifier les conditions d'approbation de l'éthylène dans l'UE et de restreindre les autorisations à des utilisations intérieures par des utilisateurs professionnels et que cette restriction s'appliquait également à la production agricole biologique. L'UE estime qu'il faut toujours ajouter l'éthylène en tant qu'inhibiteur de la germination des oignons et des pommes de terre à l'Annexe II conformément à l'Option A.

#### **Option B**

Un membre (Australie) était favorable à l'Option B.

L'Australie a indiqué qu'elle était favorable à l'Option B en raison de ses préoccupations concernant l'exposition de l'exploitant et de la main-d'œuvre.

#### **Option C**

Un membre (Norvège) était favorable à l'Option C, qui est de ne pas inclure l'éthylène dans l'Annexe 2.

Dans ses commentaires, la Norvège a indiqué qu'elle favorisait l'Option C (non inclusion) parce qu'elle pense qu'il existe encore des lacunes dans les données et des incohérences par rapport aux critères de 5.1, soit les points 3 et 4 précisant que la substance ne doit pas donner lieu ou contribuer à des effets inacceptables sur l'environnement.

La Norvège a indiqué qu'elle était toujours très préoccupée par l'utilisation de l'éthylène comme régulateur de la croissance de plantes en raison des lacunes que présentent les données sur l'utilisation de la substance publiées dans le EFSA Journal 2012 ; 10(1) :2508<sup>2</sup>. Tous les commentaires reçus du second cycle de consultation sont inclus dans l'*Appendice IV*.

### **C. Conclusions**

Les coprésidents sont reconnaissants à chacun des membres du Gté des apports importants qu'ils ont faits durant les deux cycles de consultation sur l'utilisation proposée de l'éthylène en tant qu'inhibiteur de la germination des pommes de terre et des oignons et les en remercient. La majorité des répondants étaient favorables à l'inclusion de l'éthylène ; toutefois, étant donné les préoccupations qu'un membre a toujours concernant les données présentées dans la proposition, les coprésidents recommandent que le sujet soit discuté à la 41<sup>e</sup> session du CCFL pour voir si un consensus peut être dégagé sur l'inclusion de la substance.

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<sup>2</sup> <http://www.efsa.europa.eu/en/efsajournal/doc/2508.pdf>

## APPENDIX I

**Electronic Working Group on the Review of the Guidelines for the Production, Processing and Labelling of Organically Produced Food**

**LIST OF PARTICIPANTS**

<b>Member Country/ Observer</b>	<b>Name and Contact Information</b>
Argentina	<p>Ing. Agr. Juan Carlos Ramírez Coordinator of Organic Production Republic of Argentina National Agri-food Health and Quality Service (SENASA) Email address: <a href="mailto:jramirez@senasa.gov.ar">jramirez@senasa.gov.ar</a></p> <p>Ing. Agr. Pilar Huergo Email: <a href="mailto:phuergo@senasa.gov.ar">phuergo@senasa.gov.ar</a></p> <p>Ing. Agr. Liliana Úbeda Email: <a href="mailto:lubeda@senasa.gov.ar">lubeda@senasa.gov.ar</a></p>
Australia	<p>Ms. Angela O'Sullivan Director, International Food Standards Department of Agriculture, Fisheries and Forestry Email: <a href="mailto:angela.osullivan@daff.gov.au">angela.osullivan@daff.gov.au</a> Email: <a href="mailto:codex.contact@daff.gov.au">codex.contact@daff.gov.au</a></p>
Brazil	<p>Rodrigo Vargas Email: <a href="mailto:rodrigo.vargas@anvisa.gov.br">rodrigo.vargas@anvisa.gov.br</a></p>
Cameroon	<p>Mrs. Jeanine Nkodo Atanga Ingénieur Agronome Economiste Sous-Directeur de la Coopération Ministère de l'Agriculture et du Développement Rural Email: <a href="mailto:jeanine_nkodo@yahoo.fr">jeanine_nkodo@yahoo.fr</a></p> <p>Mr. Jean Martin Etoundi Ingénieur Général des Techniques Industrielles (Spécialiste de Nutrition des Technologies Alimentaires) Secrétaire Technique du CCAFRICA, Secrétaire Technique du CNCOSAC, Sous Directeur de la Promotion à l'ANOR. Email: <a href="mailto:pointfocalcodexcameroun@yahoo.fr">pointfocalcodexcameroun@yahoo.fr</a> Email: <a href="mailto:etoundijme@yahoo.fr">etoundijme@yahoo.fr</a></p>
Canada	<p>Etienne Dako Associate professor (University of Moncton) and member of Canadian CCFL Delegation Email: <a href="mailto:etienne.dako@umoncton.ca">etienne.dako@umoncton.ca</a></p>
Chile	<p>Ligia Morend Profesional Subdepartamento de Agricultura Organica Division Proteccion de Recursos Naturales Renovables Servicio Agrícola y Ganadero Email: <a href="mailto:ligia.morend@sag.gob.cl">ligia.morend@sag.gob.cl</a></p> <p>Roxana Vera Profesional Subdepartamento de Negociaciones Internacionales Division Asuntos Internacionales Servicio Agrícola y Ganadero Email: <a href="mailto:roxana.vera@sab.gob.cl">roxana.vera@sab.gob.cl</a></p>

Costa Rica	Amanda Lass Cruz Asesora Tecnología de Alimentos – Codex Alimentarius Dirección de Mejora Regulatoria y Reglamentación Técnica Ministerio de Economía, Industria y Comercio Email: <a href="mailto:alasso@meic.go.cr">mailto:alasso@meic.go.cr</a>
Egypt	Ms. Noha Mohammed Attia Food Standard Specialist E-mail : <a href="mailto:nonaaatia@yahoo.com">nonaaatia@yahoo.com</a> Phone : 00202 22845531 Fax : 00202 22845504
European Union	Mr. Luis Martin Plaza European Commission DG Agriculture and Rural Development Unit H.3 – organic farming L130 03/245 B-1049 Brussels/Belgium Tel.: +32 229-93736 Email: <a href="mailto:Luis.MARTIN-PLAZA@ec.europa.eu">Luis.MARTIN-PLAZA@ec.europa.eu</a>  Ms Maria Fladl European Commission DG Agriculture and Rural Development Unit H.3 – organic farming L130 03/236 B-1049 Brussels/Belgium Tel.: +32 2 298 04 40 E-mail: <a href="mailto:maria.fladl@ec.europa.eu">maria.fladl@ec.europa.eu</a>
FoodDrinkEurope	Dirk Jacobs Director Consumer Information, Diet and Health Email: <a href="mailto:d.jacobs@fooddrinkeurope.eu">d.jacobs@fooddrinkeurope.eu</a>
India	Ms. Vinod Kotwal Director (Codex) Food Safety and Standards Authority of India E-mail: <a href="mailto:vinod.kotwal@nic.in">vinod.kotwal@nic.in</a> Email: <a href="mailto:codex-india@nb.nic.in">codex-india@nb.nic.in</a>
Japan	Mr. Tsuyoshi Uchida Associate Director Ministry of Agriculture, Forestry and Fisheries of Japan Email: <a href="mailto:tsuyoshi_uchida@nm.maff.go.jp">tsuyoshi_uchida@nm.maff.go.jp</a> Email: <a href="mailto:codex_maff@nm.maff.go.jp">codex_maff@nm.maff.go.jp</a>
Malaysia	Ms. Fauziah Arshad Deputy Director Standard and Codex Branch Food Safety and Quality Division Ministry of Health Malaysia Phone: +603 BB85 0794 Email: <a href="mailto:fauziaharshad@moh.gov.my">fauziaharshad@moh.gov.my</a>  Ms. Noraini Wahab Principal Assistant Director Codex and International Section Food Safety and Quality Division Ministry of Health Malaysia Phone: +603 B8B5 0736 Fax: +603 BBB5 0790 E-mail: <a href="mailto:norawahab@moh.gov.my">norawahab@moh.gov.my</a> <a href="mailto:ccp_malaysia@moh.gov.my">ccp_malaysia@moh.gov.my</a>
Mexico	Lidia P. Barrios Alvarado Jefa de Departamento de Diseño y Gestión Regulatoria Dirección General de Inocuidad Agroalimentaria, Acuícola y Pesquera Guillermo Pérez Valenzuela No. 127, Col. Del Carmen. Del. Coyoacán, México, D.F. C.P. 04100. Tel. +52 (55) 5090 3000 Ext. 51532 Email: <a href="mailto:lidia.barrios@senasica.gob.mx">lidia.barrios@senasica.gob.mx</a> <a href="mailto:codexmex@economia.gob.mx">codexmex@economia.gob.mx</a>

Norway	<p>Dr. Hanne Marit GRAN Senior Advisor Section for Plants, Organic Production and GMs Norwegian Food Safety Authority - Head Office E-mail: <a href="mailto:hamgr@mattilsynet.no">hamgr@mattilsynet.no</a></p>
Poland	<p>Mr. Grzegorz Ziemięcki Senior expert in the Department of Promotion and Communication of the Ministry of Agriculture and Rural Development Email: <a href="mailto:grzegorz.ziemięcki@minrol.gov.pl">grzegorz.ziemięcki@minrol.gov.pl</a> Email: <a href="mailto:kodeks@ijhars.gov.pl">kodeks@ijhars.gov.pl</a></p>
Thailand	<p>Ing-Orn Panyakit Senior Standard Officer National Bureau of Agricultural Commodity and Food Standards (ACFS) Ministry of Agriculture and Cooperatives 50 Paholyothin Road, Jatujak, Bangkok, 10900 Thailand Phone: +66 2 5612277 ext 1426 Fax: +66 2 5613373 Email: <a href="mailto:codex@acfs.go.th">codex@acfs.go.th</a> Email: <a href="mailto:p_ingorn@yahoo.co.th">p_ingorn@yahoo.co.th</a></p>
United Kingdom	<p>Nicolas Turner Senior Policy Advisor Organic Team Department for Environment, Food and Rural Affairs 8C Millbank c/o 17 Smith Square London SW1P 3JR United Kingdom Tel: +44 (0)207 238 5869 Email: <a href="mailto:Nicolas.Turner@DEFRA.GSI.GOV.UK">Nicolas.Turner@DEFRA.GSI.GOV.UK</a></p>
United States of America	<p>Lisa M. Brines, Ph.D. Agricultural Marketing Specialist National Organic Program, Standards Division Agricultural Marketing Service U.S. Department of Agriculture 1400 Independence Ave SW, Stop 0268 Washington, DC 20250-0268 Tel: +1-202-720-3252 Email: <a href="mailto:Lisa.Brines@ams.usda.gov">Lisa.Brines@ams.usda.gov</a></p> <p>Jeffrey Canavan U.S. Department of Agriculture 1400 Independence Ave., SW-Stop 5273 Patriots Plaza 3, 8<sup>th</sup> Floor-161A Washington, DC 20250 Phone: (301) 504-0860 Fax: (202) 245-4792 Email: <a href="mailto:jeff.canavan@fsis.usda.gov">jeff.canavan@fsis.usda.gov</a></p>
Uruguay	<p>Ing. Agr. Fabiana Osorio Departamento de Promoción Comercial Dirección General de la Granja Ministerio de Ganadería, Agricultura y Pesca Avda Gral Eugenio Garzon 456, 1º Piso 12900 Montevideo - Uruguay Tel: (598) 23047422 Fax: (598) 23048051 Email: <a href="mailto:fosorio@mgap.gub.uy">fosorio@mgap.gub.uy</a></p>

## APPENDIX II

**CCFL ELECTRONIC WORKING GROUP ON THE REVIEW OF THE GUIDELINES FOR THE PRODUCTION, PROCESSING AND LABELLING OF ORGANICALLY PRODUCED FOOD**

**ANNEX 2 PERMITTED SUBSTANCES FOR THE PRODUCTION OF ORGANIC FOODS**

Review of New Substances proposed for inclusion in Annex 2 – September 2011

Including Responses from Round 1 of eWG Review

**A. Substance: ethylene**

**B. Use: Sprouting inhibition in potatoes and onions**

**C. Applicable specific criteria: b) substances used for the purpose of plant disease or pest and weed control**

**D. Submitted By: European Union (EU)**

Assessment against Section 5.1 Criteria	
I. General Description of Substance	
Member/Observer	Description
EU	Natural gas C <sub>2</sub> H <sub>4</sub> (CH <sub>2</sub> =CH <sub>2</sub> ) produced by all higher plants and therefore omnipresent in nature. The ethylene (identical to the naturally occurring ethylene) used for agricultural purposes is obtained through chemical processes.  Constant exposure of stored potatoes and onions to ethylene in low concentration inhibits sprouting.
II. Section 5.1 General Criteria (all criteria in this section should be addressed)	
5.1.i) Is the substance consistent with the principles of organic production as outlined in the Guidelines?	
Member/Observer	Answer
EU	This use of ethylene is consistent with the principle of careful handling of products in order to maintain their quality during the storage and contributes to the economic and ecological sustainability of organic potato and onion production, while being consistent with the other principles of organic production.
5.1.ii) Is use of the substance necessary/essential for its intended use?	
Member/Observer	Answer
EU	A longer marketing period is important for the economic sustainability of farms.
Brazil	Sprout control impacts the quality of potatoes and onions and allows their storage for extended periods of time. Ethylene can help controlling sprout of potatoes and onions.
Uruguay	While several countries suggest that the use of low concentrations of ethylene inhibit sprouting of potatoes and onions, there is literature that indicates stimulation of sprouting in

	potatoes, among other adverse effects of its use (i.e. "Effect of ethylene on quality of fresh fruits and vegetables". Saltveit ME, Postharvest Biology and Technology 15 (1999) 279-292). <sup>3</sup>
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**5.1.iii) Does the manufacture, use and disposal of the substance result in, or contribute to, harmful effects on the environment?**

Member/ Observer	Answer
EU	No. Ethylene is often considered a by-product in chemical engineering process manuals, and to the extent that it is captured rather than released into the environment can be seen as reducing the ambient air pollution.
Brazil	<p>Brazil has no data on the impact of manufacture, use and disposal of ethylene on the environment.</p> <p>In relation to the comments from Norway, we would like to point out that the EFSA assessment identified data gap on the environmental fate of ethylene. Thus, there is no conclusive evidence of harmful effects on the environment.</p> <p>Besides ethylene has history of safe use in organic and traditional agriculture and CCFL has already approved its use for the ripening of bananas and kiwi fruits, for degreening of citrus for fruit fly prevention and as a flowering agent for pineapples.</p>

**5.1.iv) Does the substance have the lowest negative impact on human or animal health and quality of life?**

Member/ Observer	Answer
EU	<p>No adverse effect known on human or animal health.</p> <p>No adverse effect on intrinsic food quality. Under conditions of prolonged storage, a higher external and internal quality can be maintained (absence of sprouts and wrinkles, composition of tubers).</p>
Brazil	<p>Brazil did not identify any study on the impact of ethylene on human or animal health.</p> <p>In relation to the comments from Norway, it should be noted that the EFSA assessment did not reach any conclusion on the toxicity of ethylene due to the lack of data. This data gap should not be interpreted as evidence of harmful effects on human or animal health.</p> <p>Besides ethylene has history of safe use in organic and traditional agriculture and CCFL has already approved its use for the ripening of bananas and kiwi fruits, for degreening of citrus for fruit fly prevention and as a flowering agent for pineapples.</p>

**5.1.v) Are approved alternative available in sufficient quality or quantity?**

Member/ Observer	Answer
EU	Cold storage, use of varieties with high dormancy and/or caraway seed oil (for potatoes, where registered) may provide solutions in certain situations.

<sup>3</sup> Available at <http://www.sciencedirect.com/science/article/pii/S092552149800091X>



	<p>However, both alternatives are not adequate for use in many situations.</p> <p><u>Cold storage</u></p> <p>Cold storage of potatoes increases reducing sugars. This leads to increased acrylamide when cooked (e.g. frying, baking, roasting).</p> <p>The Codex Code of Practice for reduction of acrylamide in food (CAC/RCP 67-2009) highlights that cold storage of potatoes at low temperatures is to be avoided and that alternatives should be determined to help reduce acrylamide in potato foods (whether processed foods, foods prepared in restaurants or at home). This Code of Practice was adopted by the Codex Committee on Contaminants in Food and CAC in 2009. Alternatives to cold storage of potatoes are therefore needed.</p> <p><u>Caraway seed oil</u></p> <p>The experience with the use of this substance is rather limited. Its use is not registered in many countries and can therefore not be used by organic producers in these countries.</p> <p><u>Use of potato varieties with high dormancy</u></p> <p>The choice of varieties is very important in organic production. The potato variety chosen should ideally have a strong resistance against potato blight and other diseases and should also have characteristics that make it suitable for organic production in the local circumstances. While high dormancy is a positive characteristic of a variety, it is not always possible to choose a variety that possesses as well the other positive characteristics sought. Therefore in many situations a variety with high dormancy can not be chosen.</p> <p><u>Conclusion</u></p> <p>Alternatives are not sufficiently available. The use of ethylene for sprouting inhibition is a useful alternative that meets the requirements for organic production.</p>
<b>Brazil</b>	<p>Brazil is aware of other alternatives to sprout control in potatoes and onions, such as the use of certain vegetable oils, cold storage and high dormancy varieties.</p> <p>However, these alternatives might not be available in sufficient quality and quantity for all organic producers.</p>
<b>Uruguay</b>	<p>With regard to Appendix III of the document, point 5.1.v. -</p> <p>Regarding refrigerated storage, at least in our conditions, this practice not always increases the content of reducing sugars, because this process typically occurs at a temperature of 4 ° C.</p> <p>Uruguay has also the option of storing potatoes in the ground and the use of varieties with different periods of dormancy. It is also noteworthy that the potato crop has two production cycles per year (spring and fall) in our country.</p>
<b>Has the applicant adequately addressed the general criteria in section 5.1?</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>Brazil</b>	<p>Brazil understands that the applicant has adequately addressed the general criteria in section 5.1.</p> <p>We believe that the history of use of ethylene by organic and traditional farmers without evidence of adverse effects should be taken into consideration.</p>

	<p>Additionally, CCFL has already approved the use of ethylene for the ripening of bananas and kiwi fruits, for degreening of citrus for fruit fly prevention and as a flowering agent for pineapples.</p> <p>Thus, we understand that the decision on the use of ethylene for sprouting inhibition of potatoes and onions should be consistent with the other approved uses for ethylene.</p> <p>If the available information is considered insufficient to fulfill the general criteria in section 5.1, the use of ethylene for other purposes should be review until new data is available.</p>
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**IV. Section 5.1 Specific Criteria: b) substance used for the purpose of plant disease or pest and weed control**

**5.1.b)1) Is the substance essential for the control of a harmful organism or a particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available?**

Member/ Observer	Answer
EU	This use of ethylene is not directly linked to the control of a pest or disease, but this use of ethylene can nevertheless be considered to be plant protection and therefore the same criteria should apply. Cold storage, use of varieties with high dormancy and/or caraway seed oil (for potatoes, where registered) may provide solutions in certain situations.
Australia	Australia is not confident this matter is about plant protection; rather it is more about post harvest storage treatment and marketing of potatoes and onions.
Brazil	The use of ethylene might be an alternative to the control of sprout in potatoes and onions, especially when other practices are not available.
United States	We have not observed the need for ethylene for post harvest use on organic potatoes and onions in a variety of growing regions in the United States. Organic producers can use natural plant oils and cold storage as alternatives. We recognize that plant oils may not be available in all regions, although the use of natural substances would be preferable to the use of synthetic ethylene under the criteria at 5.1.b)4).

**5.1.b)2) Does its use take into account the potential harmful impact on the environment, the ecology (in particular non-target organisms) and the health of consumers, livestock and bees?**

Member/ Observer	Answer
EU	<p>Environmental fate, hazards and risks are assessed in detail during pesticide registration in the EU, and authorizations are accompanied by obligations for appropriate risk management.</p> <p>Ethylene does not raise environmental or health concerns.</p> <p>Theoretically, after release from the storage rooms, ethylene could affect the vegetation, but the quantities used are negligible in comparison to natural and industrial emissions.</p>
Australia	Based on current practices (e.g. de-greening) ethylene gas does not pose any major contamination risk to the environment, local ecology, or health of humans, terrestrial animals and insects.
Brazil	As explained before, we understand that the use of ethylene for sprouting inhibition in potatoes and onions takes into account these factors.
Norway	Exposure of operators and workers may occur when entering the application room, after ventilation and during maintenance works; bystanders may be exposed to leakages from the

	treatment rooms or during the venting of the gas into the atmosphere after treatment. No information was available to quantify the potential exposure derived from these scenarios. Therefore no conclusion could be reached on the risk assessment for ethylene exposure and a data gap was set to address this issue.
<b>5.1.b)3) Is the substance of plant, microbial or mineral origin? Has it undergone any of the following processes: physical (mechanical, thermal), enzymatic, microbial (composting, fermentation)?</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>EU</b>	Ethylene is a natural gas produced by all higher plants. The ethylene (identical to the naturally occurring ethylene) used for agricultural purposes is obtained through decomposition of petroleum gases or by dehydration of alcohol.
<b>Australia</b>	Noted
<b>Brazil</b>	We agree with the EU comments.
<b>5.1.b)4) Is the substance chemically synthesized? Are there alternatives products available in their natural form? Do the conditions of use result in the presence of residues on edible parts of the product?</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>EU</b>	The ethylene used is chemically produced and is identical to the naturally occurring ethylene. Ethylene does not result in the presence of residues in any part of the plant.
<b>Australia</b>	Noted
<b>Brazil</b>	We agree with the EU comments.
<b>5.1.b)5) Should the substance use be restricted to specific conditions, specific regions, or specific commodities?</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>EU</b>	It should be limited to sprouting inhibition in potatoes and onions.
<b>Australia</b>	Where varieties of potatoes and onions that have long dormancy characteristics are not available, or these varieties are not suited to local growing conditions, the inspection body may approve the use of ethylene gas to limit the sprouting of stored potatoes and/or onions.
<b>Brazil</b>	We agree with the EU comments.
<b>United States</b>	We have not observed the need for ethylene for post harvest use on organic potatoes and onions in a variety of growing regions in the United States. Organic producers use natural plant oils and cold storage as alternatives. We recognize that plant oils may not be available in all regions, although the use of natural substances would be preferable to the use of synthetic ethylene under the criteria at 5.1.b)4).
<b>Has the applicant adequately addressed the specific criteria in section b) substances used for the purpose of plant disease or pest and weed control</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>Brazil</b>	Brazil understands that the applicant has adequately addressed these aspects.
<b>Norway</b>	For the time being, these [data] gaps and findings are too essential for us to be able to agree upon including ethylene for various purposes in Annex 2, Table 2 to GL32-19922. They may conflict with the criteria for general inclusion of substances, point 3 and 4 saying "use and

	disposal of the substance should not result in, or contribute to, harmful effects on the environment and should have the lowest negative impact on human or animal health and quality of life”.
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## VI. General questions for all proposals

### Is there any information needed to complete the review of the new substance? (Please include links to supporting research here)

Member/ Observer	Answer
<b>Australia</b>	<p>There are a few claims that did not include supporting information. For example, is there evidence to:</p> <ul style="list-style-type: none"> <li>– indicate that low levels of ethylene do inhibit sprouting?</li> <li>– support the claim that by capturing ethylene rather than releasing it into the environment can be seen as reducing the ambient air pollution?</li> </ul> <p>Does controlling the amount of light (unsubstantiated information from the Internet) coupled with dry ambient temperatures provide ideal storage conditions and help reduce sprout formation in potatoes and onions?</p> <p>The FAO suggests that using potato varieties with long <i>dormancy</i> periods and proper <i>curing</i> methods are options to control sprouting in potatoes and onions:-  <a href="http://www.fao.org/wairdocs/x5014e/X5014e0b.htm">www.fao.org/wairdocs/x5014e/X5014e0b.htm</a>  <a href="http://www.fao.org/docrep/X5415E/x5415e03.htm#3.3%20control%20of%20sprouting">www.fao.org/docrep/X5415E/x5415e03.htm#3.3%20control%20of%20sprouting</a></p>
<b>Brazil</b>	No additional comments.
<b>Norway</b>	A recently published scientific peer review of pesticide risk assessment of the active substance ethylene (EFSA Journal 2012; 10(1):2508) identified several data gaps regarding the use of ethylene for plant growth regulator on bananas and potatoes (point 7 in the report). <sup>4</sup>

### Are any additional conditions of use needed?

Member/ Observer	Answer
<b>Australia</b>	<p>Yes: Need for ethylene recognised by the certification body or authority for sprout inhibition of stored potatoes and onions where varieties that have long dormancy characteristics are not available, or these varieties are not suited to local growing conditions. [Option 2].</p> <p>If there is strong support for option 1, Australia would be open to considering certain restrictions, such as limiting the time the treatment may be applied.</p>
<b>Brazil</b>	No additional comments.
<b>Uruguay</b>	Uruguay suggests including ethylene in Table 2 and proposes supporting option 2, leaving to national authorities the possibility of permitting its use in each country.

<sup>4</sup> Report is available at <http://www.efsa.europa.eu/en/efsajournal/doc/2508.pdf>

<b>Would you support the addition of the new substance in Annex 2?</b>	
<b>Member/ Observer</b>	<b>Answer</b>
<b>Australia</b>	If supported, ethylene for sprout inhibition not be listed as a substance for plant pest and disease control (Annex 2, Table 2), but be appended to the current reference to ethylene for ripening (Annex 1, para 82) or be listed as a processing aid (Annex 2, Table 4).
<b>Brazil</b>	Yes.
<b>Norway</b>	[No.] For the time being, these gaps and findings are too essential for us to be able to agree upon including ethylene for various purposes in Annex 2, Table 2 to GL32-19922. They may conflict with the criteria for general inclusion of substances, point 3 and 4 saying “use and disposal of the substance should not result in, or contribute to, harmful effects on the environment and should have the lowest negative impact on human or animal health and quality of life.”
<b>Uruguay</b>	Uruguay suggests including ethylene in Table 2 and proposes supporting option 2, leaving to national authorities the possibility of permitting its use in each country.

## APPENDIX III

**Electronic Working Group on the Review of the Guidelines for the Production, Processing and Labelling of Organically Produced Food****UPDATED Timeline**

Completed	Letter of invitation to join the eWG sent to member countries and observers; Request for any data or research information on ethylene to be considered by working group.
Completed	Deadline for submitting interest to participate in eWG. Deadline for submission of data or research information on ethylene to be considered by eWG.
Completed	Proposal and new data and research information sent to eWG members for consideration using structured work approach and review templates
Completed	Comments on proposal due
Completed	eWG Draft Report distributed to participants
Completed	Comments on eWG Draft Report due
April 30, 2013	eWG Final Report submitted to Codex Secretariat for distribution and consideration of the 41 <sup>th</sup> Session of the CCFL in May 14-17, 2013

## APPENDIX IV

## COMPILATION OF COMMENTS SUBMITTED FOR THE SECOND ROUND OF COMMENTS ON THE DRAFT REPORT

ARGENTINA**Comments from Argentina to the Draft Report of the Electronic Working Group on the Review of the Guidelines of Production, Processing, Labelling and Marketing of Organically Produced Foods (CAC/GL 32-1999) specifically on use of ethylene as a sprouting inhibitor for potatoes and onions**

Argentina agrees to include ethylene as allowed substance within the Guidelines like a sprouting inhibitor for potatoes and onions

Argentina maintains its earlier position about the location where the substance should be included in the Annexes – Tables. Argentina supports the inclusion of the ethylene in a new Table to be incorporated in the Annex 2 as follows:

## ANNEX 2 PERMITTED SUBSTANCES FOR THE PRODUCTION OF ORGANIC FOOD

**Table 2' "Substances permitted for the post harvest management".**

Justification: It is understood that the inclusion of the ethylene in the Table 2 "Substances for plant pest and disease control". IV "Other" is not right. The purpose of the use of ethylene is not the control of pests and diseases but to make the management of sprouting of potatoes and onions in the post harvest

Regarding to the three options presented in the final report of the electronic working group, **Argentina agrees with the Option A** as follows:

**"Need recognized by the certification body or authority for sprout inhibition of stores potatoes and onions where varieties that have long dormancy characteristics are not available, or this varieties are not suited to local growing conditions. Must be used in a manner that minimizes exposure to operators and workers."**

AUSTRALIA

Australia does not support the recommendation of accepting proposed Option A. Australia considers that the wording at the end of Option A *'...Must be used in a manner that minimizes exposure to operators and workers'* represents an issue that is related to occupational health and safety, which is the responsibility of each member country and we believe is outside the scope of Codex. Further, Australia supports Brazil's comments in section 5.1.iv of Annex 2 of the draft eWG report, which highlight that *'...the EFSA assessment did not reach any conclusion on the toxicity of ethylene due to the lack of data. This data gap should not be interpreted as evidence of harmful effects on human or animal health.'*

Australia supports proposed Option B, which does not have the additional occupational health and safety wording.

BRAZIL

Brazil supports the use of ethylene as sprouting inhibitor for onions and potatoes and its inclusion in Table 2. We understand that Option A, as suggested by co-chairs, covers adequately the conditions that should be taken into consideration for the use of ethylene as sprouting inhibitor for onions and potatoes.

CAMEROON

Comments from Cameroon to the Draft Report of the Electronic Working Group on the Review of the Guidelines of Production, Processing, Labeling and Marketing of Organically Produced Foods (CAC/GL 32-1999) specifically on use of ethylene as a sprouting inhibitor for potatoes and onions

Cameroon is a producer of potatoes and onions. The varieties of these crops produced have high dormancy characteristics and, the post harvest process for inhibition of germination is natural specially, through sun drying. In fact, more the sun is, better the products are stored, and less it is, greater are the losses related to post-harvest sprouting. Then, natural drying solution is not sufficient.

Considering the discussion of the first round of the EWG and studies previously carried out by the EU which led to introduce the adoption of the standard project in discussion, we infer that it is essential to have an alternative and economically viable solution such as the use of ethylene.

Furthermore, Cameroon is a producer of bananas where ethylene is used as a retarder of ripening. We have not so far observed on workers, animals and environment, adverse effects of this product for the simple reason that it is used in very small quantities from which workers are generally protected.

In addition, potatoes are produced in regions of Cameroon where climate is relatively cold with less temperature. Ethylene thus presents itself as an effective alternative for many post harvest losses observed in these growing areas because of low intensity of sunlight.

Regarding the risks faced by workers due to the use of ethylene, it is necessary to require Member States to implement the establishment of a manual of additional procedures for their protection. However, if the risks appear forward, it would be quite recommended reviewing these procedures manuals, where necessary.

In conclusion, Cameroon supports the use of ethylene as a sprout inhibitor for potatoes and onions, and agrees to option A as recommended by the co-chairs.

#### CANADA

Canada is pleased to provide the following comments.

Canada would like to remind the Committee that the Annex in the *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods* is an indicative list intended to provide guidance on substances which might be used by national authorities. Each country must evaluate, against the established criteria, whether or not it is appropriate to use a particular substance, given their regional circumstances.

As stated in the Guidelines, "The following lists do not attempt to be all inclusive or exclusive, or a finite regulatory tool, but rather to provide advice to governments on internationally agreed inputs. A system of review criteria as detailed in Section 5 of these Guidelines for products to be considered by national governments should be the primary determinant for acceptability or rejection of substances."

Thus Canada could support Option A provided the "authority" determines that it meets the criteria established in Section 5.1 of the Guidelines. However, as this is the case with all substances, Canada questions whether listing this or other substances in this manner is necessary.

Canada looks forward to reviewing further justification which will be presented in the report of the electronic working group.

#### CHILE

Chile considered the three proposed conditions for use for ethylene and we agree with the Option A.

#### COSTA RICA

Costa Rica desea externar su agradecimiento por la oportunidad de emitir los siguientes comentarios:

El etileno y los usos propuestos en las diferentes modalidades que se han planteado ante el CODEX, no encajan en ninguno de los anexos de las normas orgánicas. Debe proponerse una lista de productos permitidos en pos-cosecha y que en este momento no existe.

Lo anterior por cuanto no es fertilizante, no es producto fitosanitario y tampoco coadyuvante ni ingrediente. Debe ser un anexo aparte que también incluya otras sustancias que se han identificado como necesarias para la protección de los productos durante la pos-cosecha tanto de origen vegetal como animal.

Como comentario general cabe mencionar que Costa Rica argumentó para la justificación del uso de etileno en la inducción de floración en piña:

- el etileno es un gas naturalmente producido por las frutas en su proceso de maduración, por lo que está presente siempre en la naturaleza.
- el sistema de utilización del etileno en espacios cerrados, tampoco provoca mayor contaminación a la atmosfera, que vale aclarar que tampoco existen muchos datos en la literatura sobre este aspecto.
- su uso está en concordancia con los principios de la producción orgánica.
- aunque en Costa Rica en la producción orgánica no se está utilizando en papa orgánica, sería un factor que ayudaría a conservar la calidad del producto por un tiempo más prolongado.



- los principios que se utilizaron para aceptar el etileno en otros usos, aplican en este caso también, ya que las posibilidades de otras alternativas son limitadas o en algunos casos no existen y en el caso de la papa las variedades utilizadas en Costa Rica , requerirían del uso del etileno.

Costa Rica want to externalize their appreciation for the opportunity to provide the following comments: Ethylene and the proposed uses in the different modalities that have been raised before the CODEX, do not fit in any of the annexes of organic standards. Should be offered a list of products allowed in post-harvest and at this time there. This is because fertilizer is not plant protection product or adjuvant either ingredient. You must be a separate annex that also includes other substances that have been identified as necessary for the protection of products during postharvest both plant and animal.

As a general comment it should be mentioned that Costa Rica argued for the justification of the use of ethylene in the induction of flowering in pineapple:

- Ethylene gas is produced naturally in the fruit ripening process, so it is always present in nature.
- the use of ethylene system indoors, not causes more pollution into the atmosphere, that it is clear that there are not many data in the literature on this aspect.
- Their use is in accordance with the principles of organic production.
- Although in Costa Rica in organic production is not being used in organic potato would be a factor that would help preserve the quality of the product for a longer time.
- The principles that were used to accept the ethylene in other applications, apply in this case also, since the chances of other alternatives are limited or in some cases do not exist and in the case of potato varieties used in Costa Rica, require the use of ethylene.

EUROPEAN UNION

The EU agrees with your recommendation for listing the substance in Annex 2 following Option A.

[I ] would like to stress that in the light of current scientific and technical knowledge, it has been necessary to amend the conditions of approval of ethylene in the EU and to restrict the authorisations to indoor uses by professional users. This restriction also applied to the organic farming production. Therefore, the EU considers still needed the addition of Ethylene as a sprouting inhibitor for onions and potatoes in Annex II, following Option A.

INDIA

India would like to mention that Option A is the most suitable which is “Need recognized by the certification body or authority for sprout inhibition of stored potatoes and onions where varieties that have long dormancy characteristics are not available, or these varieties are not suited to local growing conditions. Must be used in a manner that minimizes exposure to operators and workers”, since ethylene, a naturally produced chemical / plant hormone during ripening of fruits is used as growth regulator and also for artificial ripening of fruits. Residues of gaseous ethylene in agricultural or horticulture products may not pose health alert.

MEXICO

Thank you for the information, we support option A.

Substance	Description; compositional requirements; conditions for use	
<b>IV. OTHER</b>		
[Ethylene]	<b>Option A:</b>	[Need recognized by the certification body or authority for sprout inhibition of stored potatoes and onions where varieties that have long dormancy characteristics are not available, or these varieties are not suited to local growing conditions. Must be used in a manner that minimizes exposure to operators and workers.]

NORWAY

In consideration of the criteria at section 5.1. of the guidelines, the eWG has identified three options, please find our comments below.

Norway is still very concerned about the use of ethylene as a plant growth regulator based on the fact that several data gaps regarding the use are published in EFSA Journal 2012; 10(1):2508<sup>5</sup>.

**We strongly support Option C, as we consider this the most appropriate option for ethylene.**

**The reason for this** is that data gap is identified for toxicological information allowing to set reference values for ethylene if the levels of exposure of consumers, operators, workers and bystanders are shown to exceed natural background exposure levels. Based on this EFSA could not reach a conclusion on the potential genotoxic or carcinogenic effect of ethylene exposure.

Similar data gap is also identified for ethylene oxide derived from the use of ethylene. Ethylene oxide is of toxicological concern and appears to be more toxic than ethylene, and is considered as a category 2 carcinogen and mutagen. The EFSA publication also points out a potential for long-range transport of ethylene oxide through the atmosphere, and appoint this as a critical area of concern.

It is our opinion that these gaps and findings are too essential to support the inclusion of ethylene for various purposes in Annex 2, Table 2 to GL32-1992<sup>6</sup> at this time, even when including conditions for use as described in option A and B.

We also consider the inclusion of ethylene to be in conflict with the criteria for general inclusion of substances, point 3 and 4 saying “*use and disposal of the substance should not result in, or contribute to, harmful effects on the environment and should have the lowest negative impact on human or animal health and quality of life*”.

**To conclude: We do not support the proposal from the co-chairs that option A is the way forward as it is our strong opinion that ethylene, based on current data, cannot be included in the list of substances for plant, pest and disease control for organically produced foods.**

**URUGUAY**

Uruguay comments on the Draft Report of the Electronic Working Group on the Review of the Guidelines for the Production, Processing and Labeling of Organically Produced Food. Uruguay considers that the option A is the most adequate.

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<sup>5</sup> <http://www.efsa.europa.eu/en/efsajournal/doc/2508.pdf>

<sup>6</sup> Guidelines for the production, processing, labelling and marketing of organically produced foods, GL 32-1999.