



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
FAO/WHO COORDINATING COMMITTEE FOR NORTH AMERICA
AND THE SOUTH WEST PACIFIC**

Eleventh session

Nuku'alofa, Tonga, 28 September - 1 October 2010

DISCUSSION PAPER ON THE DEVELOPMENT OF A STANDARD FOR KAVA

(prepared by Tonga with the Assistance of Cook Islands, Federated States of Micronesia, Fiji, Papua New Guinea, Kiribati, Samoa, Solomon Islands, Vanuatu)

Background

1. At its 10th session, held in Tonga from 28-31 October 2008, the Coordinator (Tonga) presented to the Coordinating Committee for North America and the South West Pacific (CCNASWP), a discussion paper regarding the development of an international standard for kava products¹.
2. The Coordinating Committee generally agreed that further scientific research were needed to clarify a number of safety issues, prior to considering the standardization of kava for food.
3. The Coordinating Committee also agreed to recommend to WHO and FAO to assist countries to carry out research and studies. In particular on those aspects indicated in Points 7 and 8 of the project document attached to CX/NASWP 10/11/8, with clear identification of the need for technical inputs required to facilitate necessary assistance, including data generation for safety assessment of kava as food.
4. The Coordinating Committee agreed that the Coordinator (Tonga) in consultation with Pacific Island countries develop a comprehensive discussion paper address the uncertainties: i) scope of kava and the use of kava as food; ii) processing methods, iii) regulatory measures for safety control of these products by countries, and iv) markets of export; and other relevant issues, for consideration at its 10th Session.

Rationale for development of a standard for kava

5. Kava (*Piperi methysticum*, G. Forst, Piperaceae) is an important agricultural commodity for Pacific Island Countries, forming an integral part of cultural, economic and social life. It has been domesticated for around 3000 years², and is being traded within and outside of the region in important quantities and value.
6. The kava drink, which has been consumed in the Pacific Island Countries for centuries without any reported ill-effects on the liver³, is made from a water extract of the root and/or rhizome of *Piper methysticum*. A recent WHO risk assessment concluded that “clinical trial of kava have not revealed hepatotoxicity as a problem⁴ suggesting that “water extracts are devoid of toxic effects”⁵ and recommending that “products should be developed from water-based suspensions of kava”⁶. The safety of water based kava drinks is supported by long-term ethno-pharmacological observations⁷.

¹ 10th Session of CCNASWP, NX 08/10/7

² SPC (2001): Pacific kava: a producer’s guide, p.5

³ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, p.4

⁴ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, p. 62

⁵ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, p. 59

⁶ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, p. 62

⁷ Loew & Gaus (2002) in:WHO (2007):, p.11

7. The said WHO risk assessment recommended that “adequate quality control measures standardized across the producing countries with agreed standard operating procedures should be instituted for growth, harvesting and processing of the kava root or rhizome”⁸. However in the 10th Session of CCNASWP, WHO states that the report examines pharmacological properties of several substances in kava but did not evaluate the safety of kava for food use.⁹

8. Pacific producing countries are currently at various stages of establishing national level legislation¹⁰ on kava to ensure fair trade in high quality kava products and to protect the health of consumers. In view of harmonizing these national standards, the development of a codex standard for kava has been proposed by member countries to regulate the use of varieties and parts of the plant which have been identified as a safe food for human consumption.

Recommendation on proposed work

9. It is recommended to request the Codex Alimentarius Commission to initiate work to develop a codex standard for kava.

10. The 11th Session of the FAO/WHO Coordinating Committee for North America and the South West Pacific is invited to consider the document provided in the attachment and to forward the request for new work to the 34th Session of the Codex Alimentarius Commission for its consideration.

Request for Comments

11. Governments and international organizations in Observer status with the Codex Alimentarius Commission are invited to submit comments on this discussion paper, as directed above, for further consideration by the 11th Session of the CCNASWP.

⁸ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, p.63

⁹ WHO Response to Agenda Item to CX/NASWP 08/10/7

¹⁰ Kava Act 2002, Vanuatu

PROJECT DOCUMENTATION

Proposal to develop a Codex Standard for Kava

1. The Purpose and Scope of the Standard:

The purpose of this document is to develop a Codex standard for kava products, intended for human consumption. This proposal is intended to cover kava products whether processed, semi-processed or raw intended as a food for human consumption in accordance with the codex definition¹¹.

Product Definition

Kava is the name used in the Pacific Island Countries to describe a local traditional drink which has been used for cultural / ceremonial / social purposes for centuries. Other names for kava include 'ava (Samoa), awa (Hawaii), sakau (Pohnpei, FSM) and yaqona (Fiji). The word kava is used to refer both to the plant and the beverage produced from it.¹² The plant from which it is derived is botanically known as *Piperi methysticum* G Forst (Piperaceae), a Pacific plant species of the pepper family.¹³ The kava drink is made from a water extract of only the root and/or rhizome (i.e., the elongated enlarged plant part located between the stem and the roots) of *Piperi methysticum*.

The varieties to which this standard refers to are as follows (local vernacular names)¹⁴:

Vanuatu Kava Noble Varieties¹⁰ (Local names): *Melomelo, Asiyai, Biyaj, Palimet, Miela, Olitao, Kelai, Ge wiswisket, Ge gusug, Borogoru, Silese, Melmel, Borogu, Sese, Urukara, Bir Sul, Bir Kar, Palarasul, Palasa, Poivota, Pia, Ahouia, Leay, Amon, Puariki, Pualiu, Naga miwok, Ge vemea*

Fiji Kava varieties: *Matakaro, Damu Gona vula, Dokobana vula, Qila balavu, Dokobana loa, Vula kasa balavu, Loa kasa leka, Kabra, Loa, Vula kasa leka*

Samoa Kava varieties: *Ava Lea, Ava La'au, Ava Loa, Ava Tonga,*

Tonga Kava varieties: *Lekakula, Lekakula 'akau, , Lekahina 'akau, kava Tea, kava Kula, kava Fulufulu*

Solomon Islands Kava varieties: *Melomelo*

FSM Kava varieties: *Rahmwahnger*

PNG Kava varieties: *Kau kupwe (from Baluan Island)*

Kava products intended for food use in this standard are classified as follows:

- Raw/fresh (including frozen)
- Dried (in form of chips or roots)
- Powdered
- Water extract

Safety of kava products

A recent WHO risk assessment of kava products has found that “kava has had at least a 1500-year history of relatively safe use, with liver side effects never having arisen in the ethno pharmacological data”¹⁵ and concludes that “clinical trials of kava have not revealed hepatotoxicity as a problem”¹⁶. This has been confirmed by further studies evaluating the toxicology of kava drink.¹⁷ Based on available scientific information it can be inferred that kava as a traditional beverage is safe for human consumption.

¹¹ Codex Alimentarius Commission (FAO/WHO): Procedural Manual, 17th Edition, Rome 2007, p.41

¹² Piscopo G. in: Pacific Health Research Council: Kava and Pacific Health, Suva, Fiji, 2002, p.1

¹³ Secretariat of the Pacific Community. Pacific kava: a producer's guide. Suva, Fiji Islands, 2001, p. 5

¹⁴ Lebot, V. and Lévesque, J (1989). Allertonia. The Origin and Distribution of Kava (*Piper methysticum* G. Forst, Piperaceae):

¹⁵ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, Geneva 2007, p. 11

¹⁶ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, Geneva 2007, p. 62

¹⁷ National Botanical Research Institute. Toxicological Evaluations of Kava Drink., 2008, p.4

2. Its Relevance and Timeliness:

(i) Kava Production

Kava (*Piper methysticum*) plant, a member of the pepper family *Piperaceae* has been cultivated in the Pacific Region (including Fiji, FSM, Papua New Guinea, Samoa, Tonga and Vanuatu) for many years. Kava is a major source of income for thousands of small farm holders in these islands.

Table 1. The annual production of Kava for the past ten years for the Pacific Islands in terms of area and volume.

	1998	2002	2003	2004	2005	2006	2007	2008	2009
<i>Local Kava Production (hectares)</i>									
Vanuatu									
Fiji									
Tonga						2208	1748		
Samoa									
Solomon Is									
Papua New Guinea									
	1998	2002	2003	2004	2005	2006	2007	2008	2009
<i>Local Kava Production Volume (metric tons)</i>									
Vanuatu									
Fiji									
Tonga						8182	6477		
Samoa									
Solomons Is									
Papua New Guinea									

Kava Trade (Export)

With the increasing migration of Pacific Islanders to New Zealand, Australia and the United States, export of kava has increased over the past 30 years, a major export commodity and contributed significantly to the local island economies, generating incomes to thousands of small farm holders. Significant volumes were exported to Germany until 1998, mainly as raw material of kava roots, stems, and leaves for pharmaceuticals products. The International Kava Executive Council (IKEC) has established that kava trade between PIC and Europe is valued at US\$ 200 Million.¹⁸ Vanuatu is exporting approximately US\$ 6 million worth of kava products per year to New Caledonia (part of France / EU) for the last three years.¹⁹

The export of kava is estimated as follows.

¹⁸ International Kava Executive Council, South Pacific

¹⁹ Vanuatu Chamber of Commerce, Department of Livestock and Quarantine in Vanuatu.

Table 2. The export of kava from countries of the Pacific in terms of export values, volumes and importing countries.

	1998	2002	2003	2004	2005	2006	2007	2008	2009
<i>Export Value (US\$ Thousands)</i>									
<i>Vanuatu</i> ²⁰	9,737	5,009	2,910	12,544	5,396.0	8,156.0	6,845.0	6,210.0	6,210
<i>Fiji</i>	34,649	1,907	1,597	2,231	2,562.0	4,045.0	4,168.0	4,891.0	4,950
<i>Tonga</i>	1,333	333	328	528	235.0	538.0	442.0	113.0	1,289
<i>Samoa</i>	1,975	7	10	11	0.7	0.8	0.7	0.6	2
<i>Solomon Is</i>				0.7	0.7	7.7		208.3	
	1998	2002	2003	2004	2005	2006	2007	2008	2009
<i>Export Volume (metric tons)</i>									
<i>Vanuatu</i> ²¹	794	1,369	700	2,734.0	788.0	713.0	482.0	837.0	477.0
<i>Fiji</i>				142.0	132.0	187.0	180.0	199.0	220.0
<i>Tonga</i>	147	29	27	43.0	19.0	65.0	46.0	11.0	161.0
<i>Samoa</i>				1.5	0.2	0.1	0.1	0.2	0.2
<i>Solomons Is</i>				0.1	0.1	3.0		14.0	
<i>Importing Countries</i>	Fiji, New Caledonia, Zealand, Australia, Germany, USA	Fiji, New Caledonia, Zealand, Australia, USA, China	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA	Fiji, New Caledonia, Kiribati, New Zealand, Australia, USA

3. The Main Aspects to be covered:

If the CCNASWP should decide to recommend to the Codex Alimentarius Commission to consider and approve this proposal for new work, a CCNASWP Codex Standard for Kava will be drafted in accordance with the Codex uniform layout for food products. The proposed standard will cover kava varieties, plant parts, kava products in the form of frozen fresh, dried (in form of chips or roots), powdered and water extract, process, quality, safety, labeling in order to provide certainty and assurance to consumers.

4. An Assessment against the *Criteria for the Establishment of Work Priorities*:

a. Volume, Value and Pattern of Trade of Kava from the Pacific Countries

With the increasing migration overseas of Pacific Islanders to Australia, New Zealand and the United States, export of kava products has increased to New Zealand, Australia and the United States has increased in the past 30 years, to ensure that their traditional drink is readily available in their new country of residence. Traditionally, man is the main consumer of kava, but socially, women also partake in drinking kava too. Hence, kava has become one of the major export commodities and foreign exchange earnings for the PICs.

Kava is a major income earner for thousands of smallholder farmers and traders in the PICs. The varieties recommended for this standard are listed under **product definitions** as above. Table 2 confirms that there is a significant volume and pattern of trade between countries on kava products.

b. Diversity of national legislations and apparent resultant or potential impediments to international trade.

- i. Several Pacific Island countries are developing national standards for kava. For instance Vanuatu has recently (April 2008) enacted the Kava Act 2002 amended 2008, while Samoa, Tonga and Fiji are undergoing a similar process. The Pacific Island kava producing countries have committed to establish uniform legislations/standards at national level²² to facilitate trade and avoid trade impediments between countries. This is in line with the recommendation by WHO to put in place “adequate quality control measures standardized across the producing countries with agreed standard operating procedures, should be instituted for growth, harvesting and processing of the kava root”.²³

²⁰ Revised figures from the Bureau National de la Statistique, Sac Postale Réservé 9019, Port Vila, Vanuatu

²¹ Revised figures from the Bureau National de la Statistique, Sac Postale Réservé 9019, Port Vila, Vanuatu

²² International Kava Executive Council (2008)

²³ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, Geneva 2007, p.63

- ii. Regional market potential – a significant amount of kava is being traded within the countries of the region (see above). All kava being imported in developed countries, such as Japan, NZ, Canada, China, Europe and USA is sourced exclusively from the Pacific Island Countries.
- iii. Impediments to trade are the ban of pharmaceuticals processed kava products in 1998 which discontinued the export of kava roots, stems and leaves as raw materials to Germany. In 2002, Canada, Ireland, Germany, Switzerland, UK and USA, etc., banned or issued warnings about the safety of kava products. Australia regulated the trade of kava and finally in 2006, imposed total restriction on the import of kava products.
- iv. Kava is highly amenable to standardization, because the part of the plant used for food purposes is uniform throughout all countries. The varieties in the proposed standard are those that have been traditionally consumed in the Pacific for centuries and can be identified by standard taxonomical means.
- v. The proposed standard will ensure consumer health protection by identifying suitable varieties of kava, parts of the plant and the process of preparation that over centuries have not shown any undesirable health effects. This will draw upon scientific evidence as presented by a recent scientific risk assessment by WHO. The standard is expected to enhance trade opportunities for the kava producing/exporting countries by providing assurance to importing countries that they will receive safe, high quality kava products. The codex standard will promote harmonization of national standards and thereby contribute to the facilitation of international trade in kava products.

5. Relevance to the Codex Strategic Objectives:

The proposed standard meets the criteria outlined in Goals 1, 2 and 5 of the Codex Strategic Plan.²⁴

Goal 1: It will contribute goal 1 by providing a sound regulatory framework harmonized across countries of the region. As mentioned earlier, Pacific producing countries are currently at various stages of establishing national level legislation on kava to ensure fair trade in high quality kava products and to protect the health of consumers. In view of harmonizing these national standards, the development of a codex standard for kava has been proposed by member countries to regulate the use of varieties and parts of the plant.

Goal 2: It will promote wide and consistent application of scientific principles and risk analysis, including promoting the collection of data from developing countries and from all regions of the world so that the risk analysis is based on global conditions and requirements. The standard will be based upon findings of the recent WHO Risk assessment for kava products²⁵.

Goal 5: It will promote maximum and effective participation of members – Pacific Island Countries are already collaborating on a regional basis through the International Kava Executive Council (IKEC) and electronic/physical working groups and this will be continued and further intensified in the development of the proposed standard.

6. Information on the Relation between the Proposal and Other Existing Codex Documents:

This proposal is an initiative of PICs to promote safe production of kava, as there is currently no such existing standard within codex. It will refer as much as possible to other general codex standards (e.g. hygiene, labeling, food additive and contaminants, etc).

7. Identification of Any Requirement for and Availability of Expert Scientific Advice:

Scientific advice is required on the following:

- i. Determination of the kavalactone content (range) in kava varieties, which are known to be safe to human consumption;
- ii. Analysis of the nutrient content in kava products, which are covered in the standard.
- iii. Definition of agreed methods of analysis and sampling.

²⁴ CODEX ALIMENTARIUS COMMISSION STRATEGIC Plan 2008–2013

²⁵ WHO (2007): Assessment of the risk of hepatotoxicity with kava products, Geneva 2007

8. Identification of Any Need for Technical Input to the Standard From External Bodies so That This Can Be Planned For:

Technical assistance by WHO and/or FAO to substantiate scientific advice in Section 7 above, as appropriate.

There may be a need to conduct research (taxonomic key, DNA fingerprint, chemical composition) on varieties present in PIC producing countries and how these relate to each other (chemotype, etc) for traceability purposes. This should build on research done by Vincent Lebot et al.

9. The Proposed Time-line for Completion the New Work, Including the Start Date, the Proposed Date for Adoption at Step 5, and the Proposed Date for Adoption by the Commission”

Start Date: 2009

Proposed Date for Adoption at Step 5: 2011

Proposed Date for Adoption by the Commission: 2013

References

Codex Alimentarius Commission (FAO/WHO): 9th Session of CCNASWP, CRD 6 (Kava Standard, submitted by Vanuatu), Apia, Samoa, 2006

Codex Alimentarius Commission (FAO/WHO): 9th Session of CCNASWP, CRD 11 (Proposal for Dried Kava Products, submitted by Fiji, Papua New Guinea, Samoa and Tonga), Apia, Samoa, 2006

Codex Alimentarius Commission (FAO/WHO): 30th Session of CAC, ALINORM 07/30/32, Rome, Italy, 2007

Codex Alimentarius Commission (FAO/WHO): Procedural Manual, 17th Edition. Rome, Italy 2007

National Botanical Research Institute. Toxicological Evaluations of Kava Drink. Uttar Pradesh, India, 2008

Pacific Health Research Council: Kava and Pacific Health, Suva, Fiji, 2002

Secretariat of the Pacific Community (SPC). Pacific kava: a producer's guide. Suva, Fiji Islands, 2001

World Health Organization (WHO). Assessment of the Risk of Hepatotoxicity of Kava Products, Quality Assurance and Safety of Medicines, Medicines Policy and Standards, Geneva (2007)