U.S. Food Regulators’ Perceptions of Areca Nut as Food and Religious Exemption

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Areca catechu

- Processed edible seed kernel
- Fruiting palm tree
Triune of Paan (Betel Quid)

- Areca nut
- Betel leaf
- Slaked lime (calcium hydroxide)
Food Condiments and Tobacco Are Optional
Religious Ritual (puja) Non-Food Item in Hinduism, Buddhism, and Animism
Background

- Areca nut and betel quid (with and without tobacco) cause oral cancer, oral submucous fibrosis (OSF) and other precancerous lesions. (WHO International Agency for Research on Cancer, 2004).

- OSF is an unconventional chronic foodborne disease.

- OSF has a 7 to 30% malignant transfer rate.

- Areca nut is only etiologic agent for OSF.
Constant irritation causes chronic inflammation; Alkaloid absorption in the mouth causes fibrosis
OSF is observable—scarlet stained teeth and restrictive mouth opening (trismus)

Figure 3. Man with scarlet-stained teeth and periodontal disease associated with betel nut use.

Role of areca alkaloids in OSF (Ghom & Mhaske, 2008).
Background (continued)

- 600 million people (10 – 20 % of the world’s population) practice areca nut chewing culture on the subcontinent of India and in South East Asia—including immigrants and refugees in the U.S.

- Areca nut (with natural alkaloids including arecoline) is the fourth most common addictive substance in the world after; alcohol, tobacco, and caffeine.
Problem Statement

• U.S. food regulators may not be aware of areca nut or paan.

• May not consider areca nut or paan as food.

• May not consider areca nut exempt from adulteration if labeled: For Religious Purposes Only – Not For Human Consumption.
Methodology

• Food regulators in 20 metro areas (22 states) with largest Asian populations surveyed.
• (19 of 108 (17.6%) responded).

Questions:
• Have you heard of betel nut (areca nut)?
• Have you heard of paan (betel quid)?
• Do you consider betel nut a food?
• Do you consider paan a food?
• Would you consider a religious exemption?
Heard of Betel Nut/Paan? Are They Food? (%)
Religious Exemption if Labeled?

Would you consider a religious exemption for an adulterated food if labeled: For Religious Purposes Only - Not For Human Consumption?

*Yes: 10.5%
*No: 42.1%
*Unsure: 47.4%
Conclusions

• There is a lack of awareness amongst U.S. food regulators regarding areca nut and paan (betel quid).

• Regulators are unsure if areca nut and paan are food.

• Only 10.5% of regulators would consider a religious exemption.
Recommendations

• Provide food regulators with evidence of the serious harm caused by areca nut chewing; with and without tobacco.

• Examine oral submucous fibrosis (OSF) as an unconventional chronic foodborne disease caused by consumption of areca nut.

• Educate immigrants and refugees concerning the health effects from consuming areca nut products.
Recommendations (continued)

• Inform health providers, serving at risk populations, about the likelihood of diagnosing OSF and other precancerous lesions and conditions.

• Regulate areca nut as an adulterated food.

• Exempt whole areca nut for religious worship when packaged and labeled; Not For Human Consumption – Religious Purposes Only.
Ancient Areca Nut (Betel Nut) Chewing Culture is where…

- Cultural anthropology meets food safety.
- The definition of food is challenged.
- Religious exemption is unique.
- Areca nut addiction (betelmania) meets tobacco addiction.
- U.S. food regulators can mitigate oral cancer and oral sub mucous fibrosis (OSF) disease worldwide insofar as U.S. policy has a ripple effect worldwide.
References


References (continued)


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Questions?