Eventual Management of Sprout-Transmitted Salmonellosis

We have read the contribution of Proctor et al. (10) with great interest. It illustrates most explicitly that food products of vegetable origin may be associated with outbreaks of salmonellosis with an attack rate of the order of 10^4, until recently considered to be due mainly to products of animal origin. The finding that decontamination of seeds (1) does not preclude the possibility that sprouts will become a vehicle for pathogenic Enterobacteriaceae is not surprising. A sporadic cell, stemming from the enterically contaminated environment and protected by minor cracks (2), may survive exposure to a disinfectant. During sprouting this will colonize the produce, which constitutes an excellent niche for microbial proliferation because it is free of antimicrobial constituents and provides high humidity and permissive temperatures (4, 7).

Avoiding exposure, particularly of the young, old, pregnant, and immunocompromised segment of the public (9), to contaminated sprouts can, however, be addressed by an option other than shunning ingestion. In the 1930s the nestor of British infectiologists, Sir Graham Wilson, advocated a strategy of protection of the population from food-transmitted pathogens termed Wilson’s triad (8). Where preventive measures, such as good agricultural practices in the instance of sprouts, fail, terminal decontamination (pathogen reduction) offers an effective complementary mode of intervention; milk pasteurization constitutes the classical example of this scenario.

Our previous general experience (5), recently substantiated for sprouts (11), demonstrates that treatment of sprouts with gamma rays at the level of ≈3 kGy may be expected to ensure an adequate reduction of the initial load of pathogenic Enterobacteriaceae, provided it is linked to seed decontamination and meticulous hygiene during the sprouting phase. It appears (3) that this treatment will not markedly diminish nutritional and sensory attributes of the produce. Radiation-induced adverse health effects need not be feared (5). Opposition to this mode of processing-for-safety, rooted in perceived malignant effects of radiation per se, can be expected. This can be mitigated through emphasizing the overall public health benefits by means of communication from experts regarding safety (6).

REFERENCES


Corby B. Struijk*
D. A. A. Mossel*
Eijkman Foundation
Utrecht University
P.O. Box 6024
3503 PA Utrecht, The Netherlands

*Phone: 31 30 2933019
Fax: 31 30 2948687

Ed. Note: The authors of the published article did not respond.