

SALMONELLA CONTAMINATED CUCUMBER IN THE UNITED STATES: A THREAT TO NEPAL, INDIA, PAKISTAN AND BANGLADESH?

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LETTER TO EDITOR:

A salmonella outbreak now prevalent in the US, has been traced to Floridian-cucumbers. At present 449 cases have been identified with 125 of these cases requiring hospitalization according to the Centre for disease control (CDC). The suspect cucumbers have undergone a state-wide recall. At present no deaths have been recorded. The incriminated genus and species have been identified to be *Salmonella Africana* and *Salmonella Braenderup*. [1]

The current outbreak experienced in the USA, poses a potential risk for developing countries in the Far East. Countries such as Nepal, India, Pakistan, India and Bangladesh are major consumers of vegetables; particularly members of the gourd family i.e. Cucumbers. A host of factors further exacerbate the risk of such an outbreak occurring in the far East. Firstly, the nation's most at risk are predominantly vegetarian and consume a larger amount of cucumber as compared to the average American. The food hygiene and stowage practices in rural areas of these nations is not on par with American food safety hygiene, standards and protocols. The aforementioned nations are developing countries and their ability to quarantine and prevent the spread of such an outbreak would be hampered by their economic constraints and this could thereby result in a catastrophic outbreak with a massive death toll. [2]

Certain factors increase the likelihood of cucumbers being contaminated with salmonella, these risk factors should be ameliorated to prevent such contamination and subsequent consumption by humans. The basis for the prevention of this contamination starts at the farm and the burden of this food safety is subsequently passed as the food product is delivered through the chain of custody from growing, harvesting, cleaning, transport, packaging, sale and preparation to consumption at home. If there are any failures to prevent the contamination in the aforementioned chain of custody an outbreak may easily occur. The early links in the chain of custody are difficult to ameliorate as stronger legislation and enforcement surrounding "good farming practices" are required. [3] At the household level however, there are a few ameliorating factors which can easily be implemented to prevent such outbreaks. The cross contamination between raw meat products and fresh produce such as cucumbers should be minimized. It is vital to keep them from coming into contact with one another, simple methods such as using separate cutting boards for specific produce is highly effective. Hand hygiene is a cheap and easily implemented measure. The proper stowage of produce is of great importance and can easily be instituted at a household level through education of the populous. [4]

If an outbreak were to occur simple measures to minimize the spread and contamination between households such as disinfecting surfaces with hot water and soap and throwing away potentially spoilt food would be instrumental in preventing the further spread. [5]

CONCLUSIONS

The threat of fresh produce being contaminated with salmonella is a real one and should not be taken lightly. At risk nations should take a "grass roots" approach and initiative to ensure food safety across the entire chain of custody from improving farming practices with better legislation to the education of the end user at the time of the preparation of the food product to ensure that contamination is minimized. It is through such interdepartmental collaboration that food safety can be improved to prevent such outbreaks in future.

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