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How Food Safety Perceptions Impact Fresh Culinary Herb Use & Post-purchase Behavior

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This report summarizes key results from a 2024 US marketplace survey of fresh culinary herb purchasers which demonstrates herb use and satisfaction vary between consumers based on their perceived safety of those products.

Fresh culinary herbs are popular for adding flavor to foods and may offer health benefits (Fig. 1). Many herbs contain natural antioxidants that may fight certain microbes; but, similar to other fresh produce, they may also carry harmful microbes that cause foodborne illness. Research has examined food safety risk perceptions in fresh produce, but not herbs. Here, a 2024 study conducted in collaboration between researchers at the University of Tennessee, Michigan State University, and Texas Tech University addressed US herb purchasers' perceptions of culinary herb safety and how that impacts their behavior towards herbs. A total of 798 people participated in the study from across the US.

Figure 1. Fresh Potted Basil Ready for Sale.

Photo credit: S. Humphrey

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The largest portion of the sample purchased herbs that were cut and bundled or loose (43%), followed by cut and packaged in a clam shell (36%), live in a container (11%), or live with roots but no growing media (11%). On average, participants kept the herbs 3 days prior to use and 83% of the sample rinsed the herbs with water before use, 10% used something in addition to water to wash the herbs, and 8% did nothing. The herbs were primarily used in a cook dishes (62%), followed by fresh (20%), other (15%), and preserved (3%). Most of the herbs were purchased from the grocery store (55%), followed by coops (24%), farmers markets (12%), garden centers (6%), and home improvement, big box, and club/wholesale stores accounted for the remaining 4%. The average amount spent on herbs per shopping trip was $6.59.

Important herb attributes included grown under high food safety conditions, grown without pesticides, harvest date shown, grown locally, grown organically, a trusted brand, grown domestically, and non-GMO. Similar attributes were rated as important across herbs.

Regardless of if the herbs were potted or cut, the majority of the sample perceived them as safe (78% of the sample for cut herbs; 79% for potted herbs; Fig. 2). However, potted herbs were perceived as slightly safer than cut herbs given that only 6% of the sample rated potted herbs as "unsafe" and nearly 8% rated cut herbs as "unsafe".

Safety perceptions influenced US consumers' perceptions of their herb purchases. Figure 3 shows participants' level of satisfaction with their culinary herb purchases for potted and cut herbs for the safe and unsafe groups. In general, regardless of the herb form, participants in the safe groups were more delighted and satisfied than the unsafe group. The safe group also rated the herb's performance better and the overall outcome as more desirable relative to the unsafe group.

Interestingly, safety perceptions also impacted post-purchase behavior. Participants who perceived herbs as safe were more likely to recommend the seller, repeat purchase from that seller, and repeat purchase that herb. The differences between the safe and unsafe groups' post-purchase behavior were significantly larger when evaluating the potted herbs relative to the cut herbs. This may stem from greater variability with potted herbs relative to cut and packaged herbs given that they are still alive and growing.

Overall, the study highlights that culinary herbs are perceived safe by end customers. This translates to improved perceptions of the herbs in terms of performance, satisfaction, delight, and post-purchase behavior. Highlighting key safety attributes (e.g., grown under high food safety conditions) could aid in educating customers, reiterate herb safety, and generate customer loyalty.

To read the entire study, please visit: https://doi.org/10.21273/HORTTECH05819-25.

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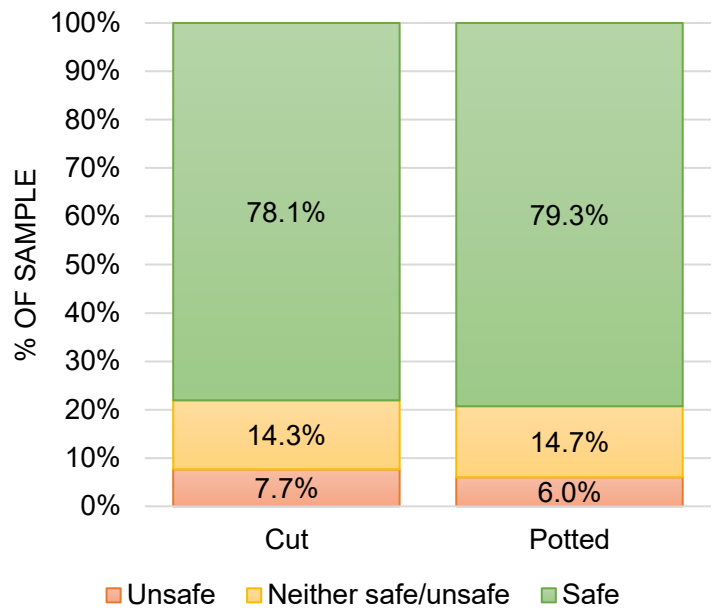

Figure 2. Perceived Safety of Fresh Culinary Herbs (n=798).

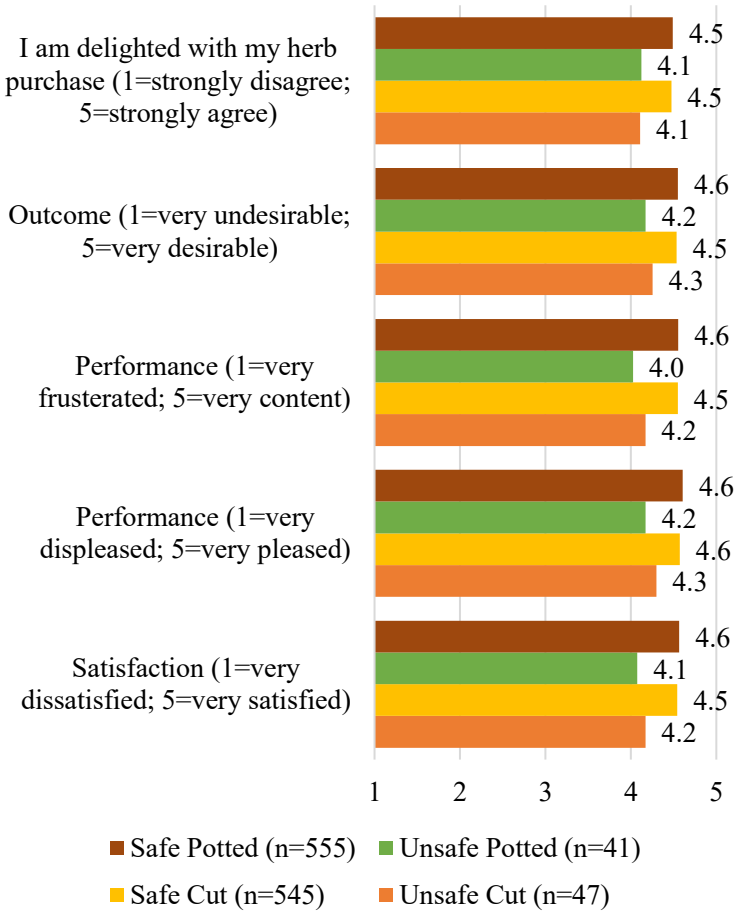

Figure 3. Herb Purchasers' Perceived Satisfaction with Their Herb Purchases.

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