



Thinking with Fermentation for Planetary Health

Background and Goals

The exhibition "Culturing the Change: Fermentation for Planetary Health" at the Deutsches Museum (see figure 1) aimed to showcase the importance of fermentation practices in addressing climate and ecological crises. Through posters, videos, and fermented foods, the exhibition highlighted how fermentation can reduce food waste and preserve biocultural diversity, contributing to a more just and sustainable food system. The displayed pieces of content each told a unique story about the cultural significance and ecological benefits of fermentation practices. They were designed to engage visitors and provide a comprehensive understanding of fermentation's role in promoting planetary health.

The project sought to create an engaging and informative exhibition to spark curiosity and inspire visitors to take action towards a healthier planet. One goal was to cultivate interest in fermentation and its potential benefits for planetary health, while also encouraging visitors to reflect on their relationship with food. The target audience included the diverse visitors of the Deutsches Museum, the scientific community, and the Turkish community living in Munich. The exhibition aimed to engage a broad spectrum of individuals, encouraging them to explore and appreciate the benefits of fermentation. By highlighting the environmental and cultural benefits of fermentation, the exhibition sought to inspire visitors to incorporate these practices into their daily lives and contribute to a more sustainable food system.

SciComm Format and Evaluation

The development of the exhibition "Culturing the Change: Fermentation for Planetary Health" was guided by a participatory approach that involved key target groups through three preliminary workshops, meetings, and site visits. This strategy ensured collaborative engagement at each project stage, enabling insights to be gathered and activities adjusted accordingly. Themed food and beverages were served at these events to foster a social space for further discussion, reinforcing the topic's relevance. The first workshop on September 6, 2022, at LMU-RCC, introduced the preliminary communication strategy, which had been shared via e-mail to the RCC and MSCL news lists. It gathered 15 participants from the MSCL, RCC, LMU, and the Turkish community. This event facilitated discussions on the communication approach and allowed brainstorming for future activities, marking the project's official launch and initiating networking with the target audience.

Based on feedback from the first workshop, the exhibition content was refined through multiple visits to the Deutsches Museum. A collaboration with documentary director Naomi von Westphalen was initiated to create two key exhibition videos, involving several planning meetings and visits to the Turkish Association and Munich Community Kitchen for video preparations. An online workshop on February 28, 2023, with the Ferments Group from North Carolina State University's Public Science Lab and the University of Copenhagen's Center for Evolutionary Hologenomics allowed preliminary exhibition content and structure to be shared. Feedback from a diverse group, including microbiologists, ecologists, and chefs, provided valuable insights and poster contributions.

At the RCC, early versions of exhibition posters, videos, and other displays were showcased during the Exhibition-in-Progress Feedback Session on March 28, 2023.

The session, attended by 36 participants, offered an opportunity for real-time feedback through discussions and post-it notes. Pre- and post-event evaluation forms captured attendees' knowledge and expectations, which were instrumental in refining the exhibition.

Formative evaluation to gather feedback and measure the effectiveness of the exhibition was conducted through collaborative design events and questionnaires. These methods were used to examine the effectiveness of the project regarding the goals of raising awareness and inspiring action.

Results and Discussion

The feedback from participants during the "Exhibition-in-Progress" session played a crucial role in refining the exhibition content. Their varied expectations, from excitement and curiosity to appreciation for the project's theme, underscored the exhibition's potential impact. Standout remarks, such as "Mold is gold. Ferment the future" highlighted the enthusiasm surrounding fermentation and its cultural significance. However, concerns were raised about the alcohol content in certain fermented products due to religious or cultural sensitivities.

Visitors of the exhibition were asked to participate in a survey post-visit to capture impressions and suggestions for improvement. The quantitative feedback indicated overall satisfaction with the exhibition, with attendees expressing appreciation for the variety of fermented foods, tasting opportunities, and engaging videos (see figure 2). Qualitative feedback from interviews echoed these sentiments, with participants suggesting enhancements such as clearer linkage between fermentation and planetary health, increased interactivity, and integration of sensory experiences. The survey revealed significant insights into participants' perceptions of fermentation and its potential impact on planetary health. In response to the question, "What excites you the most about fermentation?" participants provided diverse responses, with cultural significance, DIY aspects, preservation, artisanal production, and health benefits emerging as prominent themes among the 30 respondents. Similarly, when asked about the ways in which fermentation practices can improve planetary health, participants highlighted sustainability, waste reduction, health benefits, cultural significance, and educational opportunities.

The exhibition's success extended beyond physical engagements to include significant online engagement through social media platforms. Announcements of events and sharing of photos generated substantial engagement, particularly on Twitter and LinkedIn. Notably, engagement with the Turkish community peaked after a final guided tour, resulting in an article about the exhibition being published on a local news website. This online visibility further amplified the exhibition's reach and impact, reinforcing the importance of science communication in promoting awareness about fermentation and its role in addressing planetary health challenges.

Figure 1: Exhibition “Culturing the Change: Fermentation for Planetary Health” at the Deutsches Museum



Figure 2: Visitors feedback on the most memorable parts of the exhibition at the Deutsches Museum

