ABSTRACT

This study aims to develop an edible antifungal using mint leaves (Mentha) and cloves (Syzygium aromaticum) as the main ingredients. The mint leaves and cloves were obtained from the nearest market. Typically, these ingredients are used as spices in cooking, but in this study, they were utilized as natural antimicrobial agents in the production of antifungal treatments for corn-based livestock feed. The production process includes ingredient preparation, extraction of mint leaves and cloves, and the production of the edible antifungal itself. The results of the study indicate that the M, C, and MC formulations effectively combat Aspergillus flavus and Fusarium sp. with an average inhibition zone of more than 3 mm². The study also found that the MC50 formulation was the most effective antifungal against Aspergillus flavus and Fusarium sp.. Additionally, this formulation was able to prevent toxin formation in stored corn and increase the weight of the corn, which led to a lower feed conversion ratio (FCR). These findings suggest that the higher the essential oil content, the more effective the antifungal activity, indicating a positive correlation between the essential oil content of mint and cloves and the efficacy of natural antifungal agents. Further research is needed to diversify treatments or incorporate specific compounds to enhance chicken weight gain. Moreover, optimizing the formulation and concentration of essential oils is still required to maximize antifungal effectiveness and ensure broader application feasibility.

Keywords: Corn, mint leaves, cloves, chicken, natural antifungal effectiveness