

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

In conclusion, the innovation of sliced peanut and almond jam represents a meaningful advancement in the development of practical, high-protein, plant-based food products. By transforming conventional spreadable nut butters into a firm, sliceable format, this product addresses the need for portable, easy-to-serve, and nutritionally dense snacks suited for modern lifestyles. Peanuts and almonds were selected for their rich protein content, healthy fats, fiber, and essential micronutrients, making them ideal candidates for a functional and wholesome food innovation.

The production process—comprising roasting, grinding, cooking with agar, molding, and baking—successfully created a stable product with a unique texture. Sensory evaluations showed strong acceptance in flavor and visual appeal, though some textural adjustments may be needed to improve softness and spreadability. The nutritional profile supports health-conscious consumption, while the use of sealed nylon/LDPE plastic packaging combined with a carton outer wrap ensures product safety and shelf stability of up to 90 days under optimal storage conditions.

Overall, sliced jam is a convenient, nutrient-rich, and consumer-friendly product that merges functionality with innovation in plant-based food development. Its thoughtful design, clean-label formulation, and reliable packaging solution align with current trends in sustainable and health-oriented food innovation (Singh et al., 2017).

5.2 Suggestion

To further improve the sliced jam, future research should prioritize refining the formulation to enhance texture without compromising structural integrity. Adjusting the amount of thickening agents or exploring alternative gelling substances may help achieve a softer, more spreadable consistency while retaining sliceability. Further studies are also encouraged to examine the

potential of natural preservatives, diverse nut combinations, or functional additions such as seeds, dried fruits, and plant-based protein isolates, which can enrich the product's nutritional value and flavor profile. Optimizing baking temperature and duration may also improve moisture balance and overall mouthfeel.

From a packaging perspective, the adoption of sustainable materials such as biodegradable sealed films and compostable cartons could improve environmental impact while maintaining product quality and shelf life. As highlighted by Kalpana et al. (2022), the development of biodegradable films based on polysaccharides, proteins, and bio-nanocomposites offers promising alternatives to conventional plastic packaging due to their favorable barrier properties, biodegradability, and consumer safety. In addition, conducting consumer studies across age groups and dietary needs would provide insights into user preferences, acceptance, and product positioning in diverse markets.

Through continued formulation improvement, packaging innovation, and consumer-driven research, sliced jam can evolve into a leading functional food product that aligns with current trends in health, convenience, and sustainability.