

## CHAPTER 5

### CONCLUSIONS

Catfish is one of the popular species of freshwater fish in Malaysia, especially in Negeri Sembilan. The living habitat, soil management, pond management are among the important factors that might contribute to the quality of the catfish produced. From this study, physicochemical composition and sensory properties of wild-caught and farm-raised catfish are slightly different as the result of farm-raised catfish had substantially greater in protein (15 to 20%), fat (3 to 6%), and ash (1.3 to 1.8%) contents than wild-caught sample. These are probably due to the catfish that are raised in pond obtaining enough protein and fat source from their feeding while wild-caught catfish need to compete algae and detritus which is one of the nutrient sources with other species in habitat.

It is interesting to note that in the farm-raised catfish samples from pond A and pond C, regardless of the diets, docosahexaenoic acid (DHA) and linoleic acid were the dominant polyunsaturated fatty acids (PUFAs) detected. However, the percentages of these PUFAs differ significantly between the two ponds. In pond A, DHA accounted for 4.51% of the PUFAs, while in pond C, linoleic acid comprised 31.85% of the PUFAs.

In this study, wild-caught catfish and farm-raised catfish can be differentiated by qualitative descriptive analysis result which showed that wild-caught catfish sample is firm and less pasty texture than the farm-raised sample.

According to the statement, the sensory quality of odor in catfish from earth pond B was described as significantly having pungent odour compared to wild-caught catfish and catfish from earth pond A and C.

This suggests that there is a noticeable difference in the smell between the catfish in earth pond B and the other sources mentioned. Other than that, from the appearance of catfish are the darker color and black thread look of the farm-raised catfish is likely than wild-caught catfish due to the diet they are fed. Catfish that are raised in ponds are often fed a diet of corn, soybeans, and other grains, which can give their flesh a darker color. The black thread look is a muscle fiber that is more pronounced in farm-raised catfish. This is because farm-raised catfish are typically kept in more crowded conditions, which leads to more exercise and a more developed muscle fiber.

In terms of flavour, wild-caught catfish scored higher than farm-raised catfish for charred taste (3.92) and metallic taste (4.65). One of the main reasons why people might not want to eat wild-caught catfish is because of the higher score of charred and metallic flavour due to were exposed water pollution in their habitat.