PENGARUH FERMENTASI TERHADAP KANDUNGAN ANTITRIPSIN DAN PROTEIN PADA KACANG DAN BUNGKIL KEDELAI (*Glycine max* L.)

SKRIPSI

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ABSTRAK

Kacang dan bungkil kedelai (*Glycine max* L.) merupakan salah satu jenis legum yang kaya akan protein. Protein merupakan salah satu zat penting di dalam tubuh yang dapat mendukung pertumbuhan dan perkembangan. Namun, protein yang terkandung dalam kacang dan bungkil kedelai dapat terganggu penyerapannya karena adanya senyawa antinutrisi. Antinutrisi, salah satunya yaitu antitripsin, merupakan metabolit sekunder yang dapat menyebabkan pengurangan pemanfaatan nutrisi terutama protein, vitamin dan mineral. Pada penelitian sebelumnya, fermentasi dapat digunakan untuk mengurangi kandungan antitripsin pada kedelai. Tujuan penelitian ini adalah untuk mengetahui pengaruh fermentasi terhadap kandungan antitripsin dan protein dengan melihat pengaruh jenis mikroorganisme dan jenis material terhadap kandungan antitripsin dan protein pada kacang dan bungkil kedelai. Metode yang digunakan dalam penelitian ini yaitu kajian sistematik literatur. Berdasarkan data sekunder dari 10 jurnal yang relevan, diperoleh bahwa hasil fermentasi berpengaruh terhadap penurunan kandungan antitripsin dan peningkatan kandungan protein. Pada penggunaan jenis mikroorganisme yang berbeda, didapatkan jenis bakteri menghasilkan pengaruh yang lebih baik terhadap penurunan kandungan antitripsin, dibandingkan jenis jamur. Sedangkan jenis jamur menghasilkan pengaruh yang lebih baik terhadap peningkatan kandungan protein, dibandingkan jenis bakteri. Metode fermentasi memiliki pengaruh yang lebih baik terhadap penurunan kandungan antitripsin pada kacang kedelai dibandingkan pada bungkil kedelai, sedangkan peningkatan kandungan protein pada kacang dan bungkil kedelai tidak berbeda signifikan.

Kata kunci: antitripsin, bungkil kedelai, fermentasi, kedelai, protein

ABSTRACT

Soybean and soybean meal (Glycine max L.) is one type of legume that is rich in protein. Protein is one of the important substances that can support the growth and development of the body. However, the protein content in soybean and soybean meal can be impaired absorption due to the presence of anti-nutritional compounds. Antinutrients, one of which is trypsin inhibitor, are secondary metabolites that can cause a reduction in the utilization of nutrients, especially protein, vitamins, and minerals. In previous studies, fermentation can be used to reduce the trypsin inhibitor in soybeans. The aim of this study was to determine the effect of fermentation on the trypsin inhibitor and protein content, by looking at the effect of the type of microorganism and material on the trypsin inhibitor and protein content in soybean and soybean meal. This study used systematic literature review method. Based on secondary data from 10 relevant journals, found that fermentation had an effect on decreasing trypsin inhibitor and increasing protein content. In the use of different types of microorganism, found that the type of bacteria produced a better effect on decreasing the trypsin inhibitor content, compared with fungi. Whereas the type of fungi produced a better effect on increasing the protein content, compared with bacteria. The fermentation method had a better effect on decreasing the trypsin inhibitor content in soybean compared with soybean meal. While an increase on the protein content in soybean and soybean meal not significantly different.

***Keyword**: fermentation, protein, soybean, soybean meal, trypsin inhibitor*

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