

Abstract

The objective of this study was evaluated the chemical and nutrient composition of feed stuff on highland and selected to be used as premix for organic animal feed preparation and the formulation of the premix suitable for organic animal feed and premixed products for organic animal feed. Obtaining raw materials with outstanding properties for use in premix organic compounding, which consists of 3 groups of raw material information including groups that are outstanding in being a vitamin source such as emblica, tomato, pumpkin, black sesame etc., the group that is outstanding in being a mineral source such as perilla meal, coffee grounds, black sesame etc., and the group that is outstanding in a source of amino acid such as sesame meal, black soldier fly worm, giant worm, spirulina etc. Then, preliminary selection of 20 raw materials are expected to be qualified in the premixes production such as emblica, guava, tomato, marigold, pumpkin, black sesame, cabbage, carrot, eggplant, bananas, sesame meal, black soldier fly, giant worm, soy beans, red beans, spirulina, coffee grounds, perilla, tea leaves and mulberry leaves. After that, studies have been made to gather information about nutritional requirements for vitamins, minerals and amino acids of pigs and poultry. The poultry are divided into broilers and laying hens.

The result showed that Spirulina is the raw material with the highest total protein (46.32%). Giant worms are the raw materials with the highest total fat content (42.21%). In addition, most plant raw materials are found high fiber. The amino acids studied focus on 2 main types of amino acids, methionine and lysine amino acids, which is an essential amino acid that is often lacking in pig and poultry diets. White beans are the raw materials with the highest lysine (3.87%), and spirulina has the highest amount of methionine amino acid compared to other raw materials amount of methionine 4.54%. The main minerals that are important for growth was found that spirulina has high calcium content (450.20 mg/100g) and the amount also high in phosphorus (983.99 mg / 100g). In addition, analyzed the sources of raw materials as a directly source of calcium and phosphorus is shells (calcium, 32.3%) and bones meal (calcium, phosphorus, 30.06% and 13.75%). From the information gathered, the chemical composition of the material that has been selected. The study consisted of a pre-mix formulation ingredient selected initially. The operator has formulated premixes 3 formulas. Which is a recipe for pig diets, laying hens diets and broiler diets. The raw materials selected in formulation for pig feed include white beans, perilla meal,

spirulina, black soldier fly worm, giant worm, shell, bone meal, and chickpea. The pre-mixed formula for laying hen diet includes white beans, perilla meal, spirulina, black soldier fly worm, giant worm, shell, and bone meal. The premix can mix with pig and laying feed in the ratio 1 kg/100 kg feed. In addition, the premix will mix in broiler feed in the ratio of 500 g/100kg feed. When estimated the cost of premix for pig feed was 524.25 baht/kg and premix for laying hens was 529.45 baht/kg as well as the cost of broiler premix was lower than laying hens premix as 264.73 baht/kg.

