

**SIMULASI PEMBUATAN PAKAN SIDAT DENGAN ALTERNATIF
DAUN KELOR DAN DEDAK PADI**

SKRIPSI

Diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sains pada
Program Studi Kimia



oleh

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ABSTRAK

Daun kelor (*Moringa oleifera*) dan dedak padi digunakan sebagai bahan penyusun pakan sidat (*Anguilla* sp). Tujuan penelitian ini adalah untuk mengetahui potensi daun kelor dan dedak padi sebagai bahan pakan sidat. Penelitian ini berbasis studi literatur dan simulasi komposisi pakan dengan menggunakan software Winfeed 2.8. Daun kelor dan dedak padi serta bahan penyusun pakan lainnya yaitu tepung ikan, tepung kedelai, dan tepung terigu dapat dijadikan sebagai bahan pakan sidat berdasarkan kandungan nutrisi, asam amino, dan mineral yang dapat memenuhi kebutuhan sidat. Komposisi pakan yang dapat memenuhi kebutuhan sidat pada saat tepung ikan disubstitusi dengan daun kelor yaitu pada penggunaan daun kelor 0, 5, 10, dan 14 %. Hasil simulasi komposisi pakan untuk daun kelor 0%, komposisi bahan penyusun pakan lainnya yaitu dedak padi 8,72%, tepung ikan 44,64%, tepung kedelai 37,51%, dan tepung terigu 5,13%; untuk daun kelor 5% yaitu dedak padi 6,86%, tepung ikan 39,64%, tepung kedelai 42,04%, dan tepung terigu 2,46%; untuk daun kelor 10% yaitu dedak padi 4,77%, tepung ikan 34,64%, dan tepung kedelai 46,59%; untuk daun kelor 14% yaitu dedak padi 0,88%, tepung ikan 30,64%, dan tepung kedelai 50,48%. Sedangkan penggunaan dedak padi yang dapat memenuhi kebutuhan sidat ketika daun kelor dibuat tetap 5% yaitu 0, 5, dan 9%. Hasil simulasi komposisi pakan untuk daun kelor 5%, dan dedak padi 0% komposisi bahan penyusun pakan lainnya yaitu tepung ikan 39,64%, tepung kedelai 42,8%, dan tepung terigu 8,56%; untuk dedak padi 5% yaitu tepung ikan 39,64%, tepung kedelai 42,24%, dan tepung terigu 4,12%; untuk dedak padi 9% yaitu tepung ikan 39,64%, tepung kedelai 41,8%, dan tepung terigu 0,56%. Biaya pembuatan pakan paling murah dan memenuhi kebutuhan sidat jika daun kelor diperoleh dengan cara membeli adalah pada daun kelor 5% dan dedak padi 9% yaitu Rp2.606.400. Sedangkan jika daun kelor diperoleh secara langsung dari pohon, maka biaya pembuatan pakan paling murah dan memenuhi kebutuhan sidat adalah pada daun kelor 5% dan dedak padi 9% yaitu Rp2.306.400.

Kata kunci: ikan sidat, komposisi pakan, pakan, *Moringa oleifera*, simulasi

ABSTRACT

Moringa oleifera leaves and rice bran are used as ingredients for eel feed (*Anguilla* sp). The purpose of this study is to determine the potential of Moringa leaves and rice bran as an eel feed ingredient. This research is based on literature study and simulation of feed composition using Winfeed 2.8 software. Moringa leaves and rice bran and other feed constituents, which is fish meal, soybean flour, and wheat flour can be used as eel feed ingredients based on the nutritional content, amino acids and minerals that can meet the needs of eel. The composition of feed that can meet the needs of eel when fish meal is substituted with Moringa leaves is the use of Moringa leaves 0, 5, 10, and 14%. The simulation results of the feed composition for 0% moringa leaves, the composition of other feed ingredients, namely 8.72% rice bran, 44.64% fish meal, 37.51% soybean flour, and 5.13% wheat flour; for 5% Moringa leaves, namely 6.86% rice bran, 39.64% fish meal, 42.04% soybean flour, and 2.46% wheat flour; for 10% Moringa leaves, namely 4.77% rice bran, 34.64% fish meal, and 46.59% soybean flour; for 14% Moringa leaves, namely 0.88% rice bran, 30.64% fish meal, and 50.48% soybean flour. Meanwhile, the use of rice bran that can meet the needs of eel when Moringa leaves are made remains 5%, namely 0, 5, and 9%. The simulation results of the feed composition for 5% Moringa leaves, and 0% rice bran. The composition of other feed ingredients is 39.64% fish meal, 42.8% soybean flour, and 8.56% wheat flour; for 5% rice bran, namely fish meal 39.64%, soy flour 42.24%, and wheat flour 4.12%; for 9% rice bran, namely 39.64% fish meal, 41.8% soybean flour, and 0.56% wheat flour. The cheapest cost of making feed and meet the needs of eel if the Moringa leaves are obtained by buying is 5% Moringa leaves and 9% rice bran, which is IDR 2,606,400. Meanwhile, if the moringa leaves are obtained directly from the tree, then the cheapest cost of making feed and meet the needs of the eel is 5% Moringa leaves and 9% rice bran, which is IDR 2,306,400. f the eel is 5% Moringa leaves and 9% rice bran, which is IDR 2,306,400.

Keywords: eel, feed composition, feed, *Moringa oleifera*, simulation

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