



## UMM Lecturer Find "Biscuits For Rabbit": Rabbit Feeding Formula Without Grass

Tanggal: 2010-08-07

Muchammad Sobri, S.Pt. MP., Lecturer Department of Animal Husbandry, Faculty of Agriculture, Animal Husbandry, University of Muhammadiyah Malang managed to find a new formula to feed the rabbit, namely Biscuits Rabbit. These findings form of rabbit feed formulation in the form of mash / flour from non-forage feedstuffs (without grass, legume, and carrots) that is commonly used feed ingredients for poultry is engineered like grass (artificial grass and the value of nutrients has been increased). Underlying these findings is the knowledge of about the control feed quality of forage (grass/ legume) the bunny rabbit breeders and enthusiasts are very low, so this cause mortality (mortality) of rabbits is very high and low levels of productivity.

Forage nutrient less good quality control (harvest time), the presence of fungi and aflatoxins and insecticides cause many problems in farm rabbits. The ability of farmers knowledge in quality control of this low forage and grazing practices on the farm / field is still high compared with forage plant cultivated intensively rabbit is still low for reasons of limited land. For fans of urban rabbits to graze certainly very difficult because the fields and rice paddies have been converted to shops, housing and industry. For that we need to look for solutions permasalahan on a more flexible, have high productivity and minimize the death rate (mortality) is by making high quality biscuits Rabbit and durable.

### Muri Records

Bunny Biscuits Represents Continuation of Development and Idea of Previous Findings. Authenticity of this invention have been checking through the internet search efforts, the catalog but not done with such MURI Team in mid-late 2008. These findings parallel or a development of the invention that has been proven keterbaruannya, orisinalitasnya and uniqueness that is "Rabbit Without Formula Feeding Grass which has received the Charter Award from WORLD RECORD MUSEUM INDONESIA (MURI) No: 3513/R.MURI/XII/2008. This invention has been published in various print and electronic media (internet and television) since 2009 until now no objections and complaints from the public.

### Commercial Potential

Rabbit Confectionery Products Market opportunities are huge, because this highly anticipated product if rabbit breeders and fans throughout Indonesia. Excess Biscuits Rabbits are recreational, easy application, low mortality, the growth of high weight, high zise litter, and friendly to the environment. The fans / penghoby rabbits in urban and surrounding areas do not depend anymore to look for grass, in fact usually overgrown grass land already converted to housing, shops and factories. This product is very good prospective value of entertainment, art, economics, unique and represents the latest technological innovations rabbit feed. Market opportunities correspondent proved very high when the product is published and discussed in Batu Rabbit Breeders Association (Gapoktan), Employers Cutting / Sate Rabbit, Agriculture Department Malang, Print Media (Daily Java Post, Voice Reform, and Surya Suara Merdeka) and station Dialog interactive television held on Livestock Rabbits Rabbits In particular hobbyist.

### Patents

This invention relates to method development and formulation of feed (feed) to rabbits livestock kususnya this invention does not use the material feed mixer (complete feed) rabbits without the use of elements and forage grass that is packed in the form of biscuits.

The first domesticated rabbit / maintained in Africa, the rabbits begin human consumption in Asia 3000 years ago and in Europe 2,000 years ago. Rabbits began to be cultivated / farmed in 1900 in the United States, used for food, pets, hobbies and for research. The potential market available rabbit enough good local market, Java and outside Java either as pets or for the scale of a larger business that is for cooking with basic ingredients rabbit (satay, steak and shredded), rabbit decoration and craft of byproducts rabbit. The tropics in particular, Indonesia has a high temperature coupled with high humidity which is different from other tropical regions, this allows both complications illnesses caused by viruses, bacteria, parasites, fungi and aflatoxin.



Forage (grass, legume) is obtained from the farmers general standard of cleanliness and quality of nutrients are not met. This caused farmers from grazing, the grass should be cut before flowering ( $\pm 40$  days) but the reality is cut after flowering, fruiting / seed until the plants are very old. Grass that is cut too young also can lead to many problems of bloating and diarrhea because of low crude fiber content. For farmers who use agricultural wastes / vegetables, besides containing low nutrient pollution also occurs fungus, aflatoxin and insecticides. Feed-feed fact still be an alternative for rabbit breeders and enthusiasts on the grounds of plantation lands and rice fields that had already changed many menjai function housing, shops and industries.

From the above background Confectionery maker Rabbits with feed raw materials without hijau (grass / leguminosa) needs to be done, these products are made without disturbing the physiology and can increase productivity. Biscuit bunny is very suitable to be cultivated in urban as pets or for commercial purposes either for fattening, breeding and ornamental rabbits.

The purpose of this patent-oriented research is to produce a ration that is suitable for the tropics that is presented in the form of biscuits. Biscuit bunny is in addition to easy in its application is also used to maintain quality, good stability quality of nutrients and energy keep security. Biscuit bunny who bernutrient this balance can increase productivity value (consumption of feed, palatability, weight gain, feed pressing Conversion ratio (FCR), performen reproduction, litter size) and and reduce mortality.

Making ration aims to produce a Rabbit Confectionery Products formulated to increase the nutrient level of stability and has the power savings. Rabbit Confectionery Products that have been stable and durable nutrient produced specifically developed and formulated for the principal purpose of life, growth, pregnant and lactation. This Rabbit Confectionery Products have this level of high quality standard: the level of preference (palatability), the level of productivity, the rate of death (mortality), the display of reproduction and number of children in one birth (litter size).

## Summary of the Invention

The rabbit breeders and enthusiasts are generally very limited about the knowledge of feed, while feed rabbits need feed that is highly qualified to be clean, controlled nutrient needs, free of microbiological contamination, pesticides and aflatoxin. If qualifications are not met will be a lot of tropical diseases problems that arise, such as bloating, diarrhea and other fatal namely a high mortality rate, more-more children a new rabbit aged 1 till 2 months of record have antibodies to the lowest point namely 0.

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In previous independent studies, has produced feed materials using a rabbit without a good forage grass, legume, and carrots, but using raw materials sourced in the animal feed used for poultry. The use of poultry feed raw material seems so expensive compared to commonly used feedstuffs rabbit, grass, legume, carrot and agricultural wastes that impressed cheap. But when compared with the level of productivity, economic value and health risks (mortality) of poultry-based feed for rabbits away very profitable these days, except when the rabbit breeders and enthusiasts have enough knowledge to intensive cultivation of forage and fodder management hijau the right way and taking the value of forage quality. While rabbit breeders and enthusiasts in Indonesia largely as an additional livelihood / sideline or as an alternative and less business there is particular concern about the management of the feed. Lack of knowledge and management is a serious problem for the rabbit that is the problem of low productivity and high mortality rate. More-over land in Indonesia, particularly di Jawa been converted to housing and industry, it is the reason farmers / fan rabbit berbudidaya difficulty or find grass, legume and other forage, especially in urban pet rabbit as an alternative business or for entertainment purposes ( pet.)

Rabbit Confectionery Products Research, formulated to increase the nutrient level of stability. Nutient Ketidaksetabilan is due to biscuit-making process which can decrease the value / content of some nutrients due to heat effect, the degree of acidity or chemical and other mechanical processes, decrease the quality of some of these nutrients by increasing the content of these nutrients in the formula. Biscuit bunny was produced with the aim of having a long shelf life. Ketengikan damage and is usually caused by the storage process, bacteria, fungi / aflatoxin and oxidation. At the study is to avoid using antibacterial polluted bacteria that are not beresidu to avoid polluted fungi using the antifungal-containing materials / Anti molds, preventing the impact of contaminants aflatoxins in rabbits using compounds that cookies will absorb toxins from fungi (aflatoxins) the . Meanwhile, to avoid ketengikan a result of the



oxidation process using an antioxidant that is Se, Vit. E and C, of ??all the additional micronutrients and feed additive is formulated in a variety of levels to find the resistance / power savings from these rabbits biscuits.

Rabbit Confectionery Products Research is the second year of research developing rabbit biscuits that have been stable and long-lasting nutrient in I which is formulated for the purpose of basic living, growing, pregnant and lactation. Rabbit Confectionery Products are manufactured and formulated with a standard level of nutrient requirements that impact on the appearance of the level of preference (palatability) is good, the level of productivity (growth, FCR) is optimal, the rate of death (mortality) is low, the look of reproduction and number of children in one birth (litter size) are normal.

The results of this research is expected to produce biscuits rabbits that produce high productivity and reduce mortality with national standard / International in order to enter free trade in general and healthy society in particular. This research breakthrough in the study the problem of animal feed (rabbit), biscuit-shaped in the tropics and especially concentrate on controlling or manufacture of nutrient requirements and health standards. So far the tropics in general and Indonesia in particular there is no standard requirement (Nutrient Requirements Table) as well as the United States with the NRC and France with the AEC. With this research are expected to add to richness in the field of Science and Technology (Science and Technology) in Indonesia and can be forwarded again to the maintenance of Intellectual Property Rights (IPR) as previously allied research.