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EFFECT OF COMPLETE FEED CONTAINING VARIETIES OF STONE BANANA STEM ON KACANG GOAT PRODUCTIVITY

Aswandi

Agricultural Extension Collage Manokwari, Jl. SPMA Reremi Manokwari. West Papua Province, Indonesia

ABSTRACT

The objective of this research was to observe the effect of complete feed containing banana stem on kacang goat productivity. Twelve male kacang goats were used with average initial body weight 14.42 ± 1.98 kg and ages between 10-15 months. Complete feed made in the form of pellets with a diameter of 7 mm and length 3 cm. Construction of enclosure measuring 12m x 6m and the construction of the stage as high as 140 cm-story and plot pens measuring 1 x 1 m with a height of 130 cm. Rumen fluid p^H, blood glucose, acetic acid, ammonia (NH_3), volatile fatty acid (VFA), body weight, complete feed intake, dry matter intake, digestibility of dry matter, energy consumption, energy digestibility, feed conversion complete, carcasses and carcass parts are measured. Data were analyzed by t-test. Results showed that the rumen fluid pH, NH_3, CF_3 between treatments were not significantly different CF_0 ($P < 0.05$), whereas propionic acid, butyrate, blood glucose and total VFA differ high significantly ($P< 0.01$). CF_3 treatment produces propionic acid, Butyrate, blood glucose and total VFA better than the control. Complete feed containing wheat banana stem stone kacang goat productivity is better than complete feed control.

Keywords: banana stem stone, complete feed, kacang goat

INTRODUCTION

Availability of feed non-ruminant and ruminant animals is a problem in developing countries such as in Indonesia. For non-ruminant livestock, many feed ingredients are imported while for ruminants which depend entirely on local materials and often it is difficult to get a feed ingredient as the availability is always not continuous. Searching feed material in the form of by-product agro-industry continues. Cultivation of banana is one of the agro industry business as this plant is the easiest plant to grow and thrive well in Indonesia. Banana weevil is the banana plant stem under the soil surface (bulbs). The chemical composition of banana weevil consists of dry matter (DM) 6.20-13.87%, protein 2.99-3.4%, fiber fat 0.96-7.0%, crude fiber 9.99-16. 1% (Gerona *et al*., 1987). Banana weevil flour containing 66.2% carbohydrates and 5.88% protein. Based on the potential nutritional raw materials, the banana weevil can be used as a material source of energy for ruminant livestock as the feed material contains 20% less crude protein, crude fiber less than 18% (Hartadi *et al*., 1997). Complete feed using local raw materials / agricultural waste in the form of banana weevil has advantages such as readily available materials andcheaper price, lower production costs, easier to distribute and nutrient can be determined in accordance with the needs of livestock. Complete feeds have a competitive advantage compared to commercial feed manufactured large industrial scale because it is more efficient in production and transportation cost, easy storage and can reduce operating cost, especially labor (Sunarso *et al*., 2007). Kacang goat has the advantage that the production is pretty good, easy to adapt to unfavorable environment, proliferate rapidly and is well known in Indonesian society in general. The objective of this research was to observe the effect of complete feed containing banana stem on kacang goat productivity.

MATERIALS AND METHODS

Complete feed the best of the second phase of the research starchy banana weevil stone made in the form of pellets with a diameter of 7 mm, with a length of 2 cm. Goats beans used in this study were taken from the area around the study site.

*Corresponding e-mail address: as.wandi73@yahoo.co.id

Research variable

Research variables include: Added daily body weight with method of Williamson and Payne (1993). Consumption of complete feed consumption of dry matter, dry matter digestibility, energy consumption, energy digestibility, complete feed conversion, rumen fluid pH, blood glucose, ammonia (NH3), volatile fatty acid (VFA) partial and total method of Goering and Van Soest (1970), carcass and parts of the carcass measured by the method of Forrest *et al*. (1975).

Experimental design

The experiment was conducted using a completely randomized design with treatments in the form of two types of complete feed, consisting of CF0 (control) with CF3 starchy tuber varieties of bananas Stone. Each treatment in the study was repeated six times, so overall there were 12 experimental units.

Data collection technique

For volatile fatty acids, 1ml rumen fluid as collected and poured into a centrifuge tube and added 0.03 g sulfosalisilate and then centrifuged for 10 minutes at a speed of 10,000 rpm. From the resulting solution, 0.40 ml was taken into chromatogram. The VFA and the concentration of NH3 in rumen fluid was measured following the method of Goering and Van Soest (1970).

The concentration of rumen fluid pH, measured by inserting the tip into the liquid rumen pH meter results from the shelter for 5 seconds, then read on the monitor digitally generated numbers.

Body weight gain, goats weighing is done the experiment beans once a week, at 8 am, before the new feeding, using a digital hanging scale capacity of 50 kg with a precision of 20 g. Body weight is the total weight encroachment during the collection of data is reduced with initial body weight of goat experiment. Body weight gain was measured by the method of Williamson and Payne (1993).

Feed residues are removed from the feed once a day immediately before new feed is given at 08:00. Water were given ad libitum. During the period a total collection of faeces collected using gauze are mounted below the floor of the cage stage. Feces were collected until the end of the study. Furthermore, the wind dried placed in a room, then each treatment samples were collected for analysis of proximate.

Complete feed consumption was calculated from the total feed given during the study reduced the total residual feed during the study. Consumption of feed dry matter is determined by multiplying the total consumption of feed dry matter content

Dry matter digestibility of feed calculated total dry matter intake reduced total dry matter in the feces divided dry matter intake, multiplied by 100%. The energy consumption of feed is determined by the total dry matter of feed consumed multiplied by energy content in the feed. Digestibility of energy in total energy consumption divided minus energy in feces multiply the energy consumption of 100%

Complete feed conversion was calculated from the dry matter intake compared with weight gain. Blood glucose was measured by using the tool (Accu chek) digital, by as much as 1 cc of blood is drawn from the jugular vein by using a sterile disposable syringe, then dropped 1 drop on the Sleat which has been installed, the blood glucose levels can be read directly on the monitor.

Body weight gain, calculated with reference methods Williamson and Payne (1993), final body weight minus the initial weight. Daily weight gain, body weight gain during the study divided by the length of time of the study. Carcass weight and parts of Caracas, do the slaughtering experiment at the end of the study.

Carcass weight and the weight of the parts of carcass, measured denagan method (Forrest *et al*., 1975)., Neck: start of the vertebrae of the cervical to-1 to vertebrae cervical-7, Shoulder: start of the vertebrae of the cervical 7th until mid costae 5th and 6th, Breast: from sternum straight back up to the projection of the 6th lumbar vertebrae, leg chump on vertebrae from 9th to joint patella.

Data analysis

Data obtained from all study variables were analyzed using the third phase of t-test, with the application of the MS program, excel guided by instructions of Santosa and Ashari (2005). The composition of feed complete feed dry matter content was calculated based on various compositions of raw materials. The data collected were analyzed by t-test, to know the difference between treatments.

RESULTS AND DISCUSSION

It is indicated that the view of CF_0 and CF_3 treatment were not significantly different (*P> 0.05*) with the difference between the CF_3 with CF_0 of 5.75%, pH values lower rumen fluid produced CF_3, indicating that the acid content (especially VFA) results Fermentative digestion in the rumen was higher.

The findings of the study variables rumen fluid pH *in vivo* treatment of CF_3 and CF_0 are still in the optimum range, so it can be expected that the growth of rumen microbes can still run well. Based on rumen fluid pH variable, it can be stated that although the pH of the rumen fluid at lower CF_3 of CF_0, but if low pH is associated with the production of volatile fatty acids (VFA) and total, the CF_3 is still better than the CF_0

Difference in rumen fluid pH values in both treatments complete feed is related to differences in the chemical composition of complete feed is tested. CF_3 complete feed composed of rock flour banana weevil-rich non-structural carbohydrates, whereas CF_0 contain more fiber, forage composition of 70% king grass, with the chemical composition of the feed crude fiber 67.23%, 28.71% NDF and ADF 38, of 87%. CF_3 contained only 30% forage, containing 23.71% crude fiber, with the NDF content of 52.67% and 48.72% ADF.

Feed that contain high non-structural carbohydrates in the rumen to stimulate the growth of lactobacilli bacteria and rumen fluid pH will lead to lower down, as presented by McCormick *et al*. (2001) who stated that ruminants fed a lot of structural carbohydrates (fiber) will result in rumen fluid pH tends to move towards 7.5, whereas if fed with soluble carbohydrate rumen fluid pH will bring will move toward 5.0. Thus it can be ascertained that the difference in pH values between CF_0 and CF_3 is closely related to differences in composition chemical or digestible carbohydrate content between the feed is tested in goat.

T-test results showed that the treatment did not differ CF_3 vs CF_0 ($P< 0.05$) on rumen fluid NH3, with a difference of 1.4%, the average concentration of 3.86 mM NH_3. CF_3 while CF_0 3.75 mM, NH_3 treatment CF_3 higher than CF0. It confirmed the results of previous researchers (Sutardi, 1977; Muktarudin and Liman, 2006; Chikagwa *et al*., 2009).

NH_3 on the research findings is lower compared with previous research, if confirmed by experiments complete protein content of feed protein content was low at an average of 10.46%, as F the NH_3 concentration reflects the amount of protein contained in feed and rumen mikoroba ability to degrade the feed protein. NH_3 levels either complete the digestion of feed and CF_3 between CF_0 is tested is lower, but NH_3 is still in the optimum range for rumen microbial growth.

Test results shows that the treatment did not differ CF_3 vs CF_0 ($P> 0.05$) on the composition of acetic acid, with a difference of 3.31% ie 55.84 to 52.26 mM. The findings of acetic acid can be concluded that the complete feed containing rock flour banana weevil, which is rich in easily digestible carbohydrates can indeed reduce the composition of acetic acid.

Differences in the concentration of acetic acid in rumen fluid between the treatment of complete feed CF_0. CF_3 view found in this study could occur due to possible differences in soluble carbohydrate content between the two complete feed is tested. Soluble carbohydrate in the diet can cause a decrease in acetic acid composition, according to the declared France *et al.* (1993) that feed the dominant soluble carbohydrates (high fiber), will lead to the production of acetic acid increased, whereas concentrations of soluble carbohydrate (glucose, fructose, sucrose, and polysaccharides (starch) will result in increased concentrations of propionate and butyrate, while acetate decreased Owens *et al*. (2008) also states that the feed containing straw (structural carbohydrates) produce acetate production increased, while those containing larger concentrations will result in increased production of propionic acid, while acetic acid decreased.

The t-test results showed that the treatment is different CF_3 very real view of CF_0 ($P< 0.01$) of propionic acid composition, with a difference of 23.76%, the average composition of propionic acid CF_0, CF_3: 17.76 mM respectively, 28 , 83 mM, complete feed containing CF3 Stone banana weevil flour rich in compounds that are easily digested carbohydrates, thus producing propionic acid is higher than the CF_0, as reported by previous researchers (Castellejos *et al.*, 2008; Chikagwa *et al*., 2009; Cherdthog *et al*., 2011).

Based on data generated propionic acid, it was concluded that feed concentrates from grains and tubers contain digestible carbohydrates can increase the propionic acid composition, with respect to the banana weevil rock rich in carbohydrates (starch) can also generate sufficient propionic acid, which are reported as previous researchers mentioned above, so that it can be said that the varieties of banana weevil stones is also quite effective functioning of concentrate with other sources of feed ingredients in terms of producing propionic acid, which is expressed Huhtanen *et al*. (2007) feed that contains lots of fiber components (green) is more dominant will get the highest ratio of acetic acid was higher than propionate and butyrate, are more suitable for the purpose of producing milk (dairy cattle), whereas Shan *et al.* (2007) concentrate feed consisting of starch and legume leaves can increase the concentration of propionate and butyrate, acetate and propionate lower ratio and butyrate, to feed meat yield.

Based on the study of the correlation type of feed consumed on the composition of acetic acid and propionic acid produced, the composition CF_0 treatment increased acetate, propionate and butyrate, while down, next on the composition of acetic acid CF_3 treatment decreased, while propionate increased.

T-test results showed that treatment of CF_0 and CF_3 very different view significantly (P< 0,01) of butyric acid composition of goat nut, with a difference of 16.57%. The average composition of butyric acid CF_0, CF_3: Successive 11.75 mM, 16.42 mM, it appears that complete feed containing wheat banana weevil stones can enhance butyric acid composition as that produced butyric acid CF3 higher than the CF0, with respect to the composition of butyric acid produced from the study, researchers gave some of concentrate in animal experiments. Castellejos *et al*. (2007) produced 12 mM butyric acid; Chikagwa *et al*. (2009) butyric acid from 10.3 to 11.1 mM; Cherdthong *et al*. (2011) butyric acid is concentrate feed forage 7.3 mM 6.8 mM.

Based on the variable butyric acid is produced, it can be said that the banana weevil Stone can enhance butyric acid produced higher reported by previous investigators. The resulting differences in butyric acid caused CF_0 and CF_3 components of the feed composition, CF_0 domination source of fiber (green) 70% king grass, with a crude fiber content of 28, 71%, 67.23% NDF and ADF 38.87%, while the fiber CF_3 roughly 23.75%, 55.03% NDF and ADF 48.72% more likely non structural carbohydrates of the soluble plant cells are sugars, mainly glucose, fructose and sucrose, polysaccharides, and starch.

T-test results showed that the treatment is different CF_3 very real view of CF_0 (P< 0.01) for total VFA, with the difference amounting to 8.78%, higher than the CF_3 ie, 106.19 mM 89.04 mM, thus the banana weevil Stone can increase the concentration of volatile fatty acid (VFA) total goat nuts. This is due to the composition of the feed composition of CF_0 source of fiber (green) 70% king grass, with a crude fiber content of 28, 71%, thus affecting the composition of the NDF and ADF 67.23% 38.87%, while crude fiber CF3 lower at 23, 75%, 55.03% NDF and ADF 48.72%, with respect to the line that expressed Donnem *et al*. (2011) VFA production affected source materials, physical properties and chemical components of feed material; Popova *et al*. (2011) states the total VFA production influenced the nature of carbohydrates, the rate of food leaving the rumen and feeding frequency.

The results of treatment of total VFA production CF0 CF3 89.04 mM and 106.19 mM; Castellejos *et al*. (2007) total VFA 94, 71 mM.. Based on total VFA variables resulting from the complete feed containing varieties of banana weevil rock pretty well and still in the optimum range for microbial activity in the rumen, which is expressed as Sutardi *et al.* (1983) a sufficient range of concentrations of VFA rumen microbial growth of 80-160 mM; Nkosi and Meeske (2010) is 70-130 mM in goat.

Blood Glucose. Test Results - CF_3 t shows that the treatment is very different from the real view of CF_0 (P<0.01) on blood glucose, a difference of 8.33%, the average blood glucose treatment CF_0 40 mg /dl; CF_3 52 mg/dl. The resulting blood glucose higher than CF_3 treatment CF_0, indicating that the rock flour banana weevil can provide better energy than the CF_0, as to which Harper *et al*. (1980) states that the source of blood glucose from carbohydrates between contained in the feed.

The findings of the blood glucose content in the two treatments was in the range of blood glucose levels are normal for goats, as stated by Frank *et al.* (2007) that a normal blood glucose levels in ruminant animals is lower than in non-ruminant animals 40-60 mg / dl; Lanzas *et al*. (2007) is 40 mg / dl in cows 60 mg / dl. Based on the findings of the blood glucose content can be concluded that the blood glucose content was higher in cattle feed to get treatment CF3 carbohydrates can be digested and utilized better than CF0.

T-test results showed that the treatment is different CF3 very real view of CF_0 (t α 0.01) of complete feed consumption goat nuts, with a difference of 9.06%, higher feed intake CF_3 of the CF_0. Average daily feed consumption in the treatment of CF_0 and CF_3 respectively 708.01 and 849.66 g/head/day, amounting to 631.90 g/head/day or (4.37%) of body weight and 751, 95 g/head/day or (5.20%) of body weight, consumption of dry matter and CF_3 CF_0 is higher than the dry matter requirement of guideline (Kearl, 1982).

Feed intake and dry matter CF3 in the study were higher than some previous researchers report (Salem *et al*., 2003; Simon *et al.*, 2004; Rudiah, 2008; Simanihuruk, 2009; Suparjo *et al*., 2011).

The findings of complete feed intake and dry matter consumption of goat bean yield CF_3 treatment consumption feed and dry matter intake is higher than the control, it is supported by the physical properties and composition of the banana weevil flour which reached 40% of total feed complete, will certainly affect the crude fiber content feed, making it possible to increase feed intake is complete, thus the major factor causing higher feed intake and dry matter in the CF_3 associated with low fiber content and physical properties of banana flour weevil which contributed 40% of the total feed.

T-test results showed that the treatment is different CF_3 very real view of CF_0 ($P<0.01$) on digestibility of dry matter, with a difference of 10.51%, higher than the CF_0 is 487.44 or (72.90%) compared to 394, 72 g / head / day or (68.59%) higher than the CF3 treatment CF0, whereas previous researchers reported: Hartadi *et al*. (1984) dry matter digestibility range goats of 393.1 g / head / day; Sanon *et al*. (2008) 387-492 g/head/day; Sauve *et al.* (2009) at 448-450 g/head/day.

Dry matter digestibility results obtained in the study, if confirmed by the results of previous research reports, that the dry matter digestibility of complete feed containing wheat banana weevil stone is higher than that obtained by previous researchers, this is possible because the fermentation process can be run better, NDF and ADF content of the manifestations that have better CF_3, lower crude fiber with CF0, as expressed Tilaman *et al.* (1998) suggests a larger ration NDF 0% will push the level of consumption and digestibility of dry matter. The structural components such as cellulose, lignin cell wall (NDF and ADF) negatively affect the nutrient digestibility of the ration, while the soluble carbohydrate (starch) can increase the digestibility of nutrients; Lanzas *et al*. (2007) stated that feed containing (starch) is high such as bulbs / seeds and non-structural carbohydrate concentrations classified (glucose, fructose, sucrose, and starch polysaccharides).

T-test results showed that the treatment is different CF_3 very real view of CF_0 ($P<0.01$) to the energy consumption of kacang goat, with a difference of 31.41%, the average energy consumption of 3.33 MJ CF0 / head / day or 0, 79 Mcal / head / day while the CF3 of 6.38 MJ / head / day (1.51 Mcal / head / day), if confirmed by energy needs, that the treatment under the standard drift CF0 energy needs, while the CF3 treatment in the range energy requirements based on the guidelines Kearl (1982), thereby CF3 that treatment will be able to meet the energy requirements for sheep nuts, because that allows CF3 has a higher energy content than the controls, supported by a complete feed digestibility of energy higher than that of CF_3 is CF_0 77.57% sequentially and 58, 28%.

Consumption and digestibility of energy produced from goat nuts CF_3 is higher than that reported Haque *et al.* (2008) range from 6.75 to 7.66 MJ intake / head / day and digestibility from 5.84 to 6.10 MJ/head/day, whereas the digestibility of energy consumption and lower CF_0. Consumption and energy digestibility can be said that the complete feed containing wheat banana weevil may play a role in stone to raise our energy consumption and digestibility of goat nuts, it is supported by one of the factors, including carbohydrate content contained in the complete feed at a higher CF_3 treatment of the CF_0.

Test results shows that the treatment is very different from the real view of CF_0 ($P<0.01$) on feed conversion completed goat nuts, CF_3 treatment was higher than CF_0 with a difference of 30.70%. Average feed conversion of 15.54 while the complete CF_0 8.23 CF_3, of complete feed conversion generated very real CF_3 lower, thus it can be stated that the CF_3 more efficient in feed to produce body weight gain.

Complete conversion of the feed value of the findings can be interpreted that the CF_0, to produce 1 kg of body weight needed goat nuts 15.54 kg dry matter, whereas the complete feed containing CF_3 banana weevil varieties of stone, to produce 1 kg of body weight is only required 8 goat bean, 23 kg dry matter. Showed a complete feed

containing wheat varieties banana weevil Stone over at converting feed to produce per unit body weight goat nuts, with respect to feed conversion value Tillman *et al*. (1998) defines the lower the value of the livestock feed conversion was more efficient in utilizing feed, while Prawoto *et al.* (2001) states that the conversion of feed and feed ingredients affected by ration formulation and nutrient content.

The findings feed conversion complete on research CF_3, CF_3 treatment that the conversion value under the range obtained by previous researchers, it is possible occurs because the banana weevil CF_3-containing stones are rich in carbohydrates in the form of starch (starch) can be quickly digested and utilized by goats nuts and composition of 40% of the total feed, so the content of complete feed is also high in carbohydrates is equal to 71.39% and 67.10% of CF_0, can have a significant impact on the rate of body weight gain of cattle goat nuts, will affect feed conversion, if the data in terms of body weight gain produced in CF_3 is also higher than in controls.

Increase body weight. Test Results - CF_3 t shows that the treatment is very different from the real view of CF_0 ($P<0.01$) daily body weight gain of kacang goat, with a difference of 35.48%, with the average daily body weight gain of 49.58 g CF_0/head/days while the CF_3 treatment of 104.11 g/ head/day, when several researchers confirmed previous reports of Simon *et al*. (2004) 54-64 g / head / day; Rantan *et al*. (2005) 60-97 g / head / day; Rudiah (2008) from 82.14 to 98.21 g / head / day; Simanihuruk (2009) from 80.86 to 106 g / head; and Suparjo *et al*. (2011) from 58.95 to 101 g/head / day.

The resulting weight of the kacang goat CF_3 treatment is higher than the CF_0, indicating that the treatment of CF_3-containing flour banana weevil Stones that are rich in carbohydrates can contribute better to the body weight gain kacang goat

Live body weight gain may be a reflection of the quality of feed given, the results obtained from the fact that a complete feeding starchy banana weevil-rich rocks that are easily digested carbohydrates can increase body weight gain goat nuts, when examined a manifestation of the level of material consumption goat dried beans from CF0 treatment of 631.90 and 751.95 of CF_3 g/head /day, dry matter digestibility of treatment was significantly different ($P<0.05$) CF_0 394.72 g/head/day, CF3 487.44 g/head/day, consumption of dry matter and dry matter digestibility is higher than the CF_3 between CF_0. Indicates that the nutrient intake and is absorbed by the beans of the CF3 goats will be greater than CF0, which is expressed as Setiadi (2003) feed is an important factor in supporting the growth of livestock, feed given must contain sufficient protein, carbohydrates, vitamins, minerals, non-toxic, like cattle, inexpensive and easy to digest

Carcass weights. T-test results showed that the treatment is different CF_3 very real view of CF_0 (t α 0.01) of the goat carcass weight of beans, with a difference of 15.93%. Average carcass weight of 40 CF_0, 43%, while the CF_3 at 45.25%, the average carcass weight of sheep nuts CF_3 treatment significantly higher than the CF_0, due to the banana weevil CF_3-containing rock rich in carbohydrate content in the form of starch (starch), with the composition of the rock component of the banana weevil flour by 40% of the total feed complete, and physical properties also support the fragile tuber flour, allowing the consumption and digestibility of dry matter is higher than the control diet, and other variables supported by energy consumption and energy digestibility also higher, there is increased development of tissue growth by increasing disposition on the part of carcass meat goat nuts higher than the CF_0, thus certainly will affect the daily body weight gain and ultimately will result in parts of the carcass weight is higher as well.

Carcass weight of CF3 treatment is higher than some previous reports, thus it can be concluded that complete feed containing varieties of banana weevil can increase the weight of the stone nuts goat carcass, This suggests that the complete feed containing wheat banana weevil rock rich in carbohydrates can increase the growth rate of goats peanut better, which is expressed as Paramasivam *et al*. (2002) body composition is influenced by the rate of growth of cattle, cattle that grow faster will convert feed into body weight gain in the unit more efficient, thereby increasing the weight in carcass and subsequently affect the weight of the carcass.

Parts of carcass weight. T-test results showed that treatment of CF_3 is very real and distinct CF_0 (t α 0.01) on carcass weight parts of the neck (neck), shoulder (neck), Brest (chest); leg chump on (thigh); ribs; loin, fore shank and flank. Average carcass weight of the parts resulting from the treatment of CF_3 is higher than the CF_0 shown. Showed that the complete feed containing wheat banana weevil rocks, rich in carbohydrates to give a positive response to the growing weight of the parts carcass, the results of this study are expressed in line Legesse *et al*. (2006) found the quality of food, sex affects the growth lemusir loin, ribs, back ribs, neck and neck; then Titi *et al.* (2007) states the component parts of carcasses of sheep and goats in the part: leg, loin, neck,

and shoulder, were significantly different at the level of 5%, and Hailu *et al.* (2005) that the weight of shoulder and neck goats are higher than in females, whereas the weight of other parts of the carcass did not give a significant influence. Alexandear *et al.* (2010) also reported that feeding forage (fiber), compared with the provision of commercial concentrates, an increase in weight of the leg, shoulder and the ribs better

Differences in the carcass weight produced markedly higher than the CF_3 between CF_0, this difference is a result of the network composed of meat carcass parts that influenced the rate of growth, which is expressed as Looper *et al.* (2005) states that the weight of carcass components affected the nation, gender, genetics, growth rate, weight cutting and treatment of feed; Rianto *et al.* (2006) states that the composition of the body parts of animals affected by the rate of growth, then Hailu *et al.* (2005) also suggested that factors affecting growth, carcass and its parts including the genetic, environmental, maintenance management, most determine the genetic and feed sufficient quantity and quality, for which the results obtained in this study that the treatment of content-rich CF_3 soluble carbohydrate (digested) by the goat bean, which is supported by the digestibility of dry matter produced is also higher at 487.44 g /head/day, whereas the CF_0 394.72 g / head/day.

CONCLUSION

CF_3 treatment produces pH, NH_3, propionic acid, Butyrate, blood glucose and total VFA best goat nuts compared to the control treatment. Complete feed containing wheat banana weevil pea stone sheep productivity is better than complete control of feed.

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