BIBLIOGRAPHY

KILLI, CONNIE W. APRIL 2013. Carcass Characteristics of Growing- Finishing Hogs Fed With Sweet Potato Leaves and Vines Plus Activated Charcoal Containing Wood Vinegar as Feed Additive. Benguet State University, La Trinidad, Benguet.

Adviser: Myrna B. Walsiyen, MSc.

ABSTRACT

The study was conducted to determine the carcass characteristics of growing-finishing hogs fed with sweet potato leaves and vines plus activated charcoal containing wood vinegar.

It aimed to determine the effect of the different treatments to carcass traits in terms of carcass weight, dressing percentage, carcass length, backfat thickness, loin eye area, and the weights of the major cuts and entrails; sensory evaluation in terms of appearance, aroma, tenderness, juiciness, taste, and overall acceptability of the meat when cooked; and the proximate analysis of the meat

Results revealed that there were no significant differences between treatments to carcass traits in terms of carcass weight, dressing percentage, carcass length, backfat thickness, loin eye area, and the weights of the major cuts and entrails.

On the other hand in terms of sensory evaluation, statistical analysis revealed significant differences in the appearance of the meat, highly significant differences in aroma. No significant differences in juiciness, tenderness, taste and acceptability. The appearance of the product derived from the hogs that were not given activated charcoal containing wood vinegar had a descriptive rating of "moderately desirable" while the hogs fed with activated charcoal containing wood vinegar had a descriptive rating of "very desirable". In terms of aroma, meat from t were not given activated charcoal containing wood vinegar was rated as "likes moderately" while meat from the hogs fed with activated charcoal containing wood vinegar had a rating of "likes very much". In terms of juiciness and tenderness, both meats derived from the two treatments were rated as "very tender" and "very juicy". In terms of taste, meat from the hogs fed with activated charcoal containing wood vinegar was rated as "very good" while meat from the hogs that were not given activated charcoal containing wood vinegar was rated as "moderately good". For the acceptability, the meat derived from the hogs fed with activated charcoal containing wood vinegar was rated as "likes very much" while the meat from the hogs that were not given activated charcoal containing wood vinegar as "likes moderately".

Finally in the proximate analysis, the meat obtained from the hogs given activated charcoal containing wood vinegar had an ash and protein content of 1.00 and 18.17, respectively. On the other hand, the ash and protein content of the meat derived from the hogs that were not given activated charcoal containing wood vinegar were 1.06 and 18.08, respectively.

INTRODUCTION

As of January 1, 2012, the country's swine inventory stood at 11.9 million head. This was 3.58 percent lower than last year's inventory of 12.3 million head. Stocks in the backyard farms went down by 5.73 percent. About 67 percent of the swine population was raised in backyards while the rest were in commercial farms. In 2011, the total volume of pork imports was registered at 140,846.93 metric tons. It went down by 6.81 percent from last year's level of 151,143.29 metric tons (BAS, 2012).

In the Cordillera alone, the demand of pork is very high (Catones, 2010). Pork is one of the best sources of protein however people today are very conscious on the meat they eat. People want to eat pork that is organically produced which has no chemical residues. In this case farmers are going back to the traditional way of feeding their pigs with camote leaves and vines. However, this ration is unbalanced so they still have to add feed additives to enhance their animal's performance. Recently, the Miyazaki and Midori Pharms Corporation started to produce a feed additive which is now known as activated charcoal containing wood vinegar.

Activated charcoal and wood vinegar contains organic acids. The activated charcoal and wood vinegar are both obtained from the bark of an evergreen oak (*Castanopsis cuspidate* and *Quercus acuta*) by carbonization. In Japan it is approved as a feed additive by the Japanese government (Watarai *et al.,* 2008).

Information gathered from this study may help swine raisers, meat processors and consumers. It may also serve as reference for students and other researchers in coming up with their related studies.

Generally, this study was conducted to determine the carcass characteristics of growing-finishing pigs fed with sweet potato leaves and vines plus activated charcoal containing wood vinegar.

Specifically, it aimed to determine the effect of the different treatment to carcass traits in terms of carcass weight, dressing percentage, carcass length, backfat thickness, loin eye area, and the weights of the major cuts and entrails; sensory evaluation in terms of appearance, aroma, tenderness, juiciness, taste, and overall acceptability of the meat when cooked; and the proximate analysis of the meat

The study was conducted on February, 2013 at the BSU Piggery Project, Benguet State University, La Trinidad, Benguet.

REVIEW OF LITERATURE

According to Watarai *et al* (2008) ctivated charcoal and wood vinegar liquid (Mokusaku) is obtained from evergreen broadleaf tree bark. It is approved as a feed additive in Japan by the Japanese government.

Furthermore, activated charcoal containing wood vinegar has effects on microorganisms in intestinal organs. This improves the intestinal environment. Soft charcoal adsorp Pathogenic Microorganism (PthMio) and control also propagation of PthMio (Koiwa and Watarai, 2011).

Watarai and Tana (2008) stated that the activated charcoal is useful in the removal of verotoxin-producing Escherichia coli and verotoxin. Moreover, organic acids have an inhibitory affect on the growth of enteropathogenic bacteria.

Activated Charcoal

According to Watarai and Tana (2005), activated charcoal is a universal adsorbent because it can bind with variety of molecules. It has been reported that activated charcoal is useful in removal of bacteria and bacterial toxins, both *in vitro* and *in vivo*. It is also effective in the absorption and controlling propagation of pathogenic microorganisms.

Wood Vinegar Liquid (Mokusaku)

Mokusaku is a liquid obtained from oil, juices, sap and other liquid contents of organic materials such as wood, coconut shell, bamboo, grass and other plants being heated in a chamber. The chamber is heated by burning firewood placed at the base of the chamber, when these organic materials were heated; their liquid contents evaporate as steam (gas or smoke). The steam passes through a tube (cooling chamber) where this will

be allowed to cool. When the steam is cooled, the vapor will turn into a liquid. The liquid is what is now known as Mokusaku. Mokusaku is composed of a lot of organic chemical substances. Studies in Japan had shown that there could be more than 300 chemical substances (Yokomori, 2011).

Feed additives are compounds added to swine diets for the purpose of enhancing animal performance, either directly or indirectly. These compounds may elicit a response of the pig's energy, amino acids, and vitamins and mineral requirements. However, the response is dependent on the age of pigs, disease level, genetics, environmental factors and type of diet or feedstuffs (Calabias, 2012).

Probiotics

Sainsbury (1998) summarized the uses and benefits of probiotics as follows: (a) probiotics can promote growth and productivity in a natural way; (b) it may protect against salmonella infections; (c) they can protect against toxins produced by harmful forms of *E. coli*; (d) it stimulates immunity to infections by boosting interferon production, immunoglobin concentration and macrophage activity; (e) probiotics suppresses clostridia infection in which are often associated with intensive livestock's production. Probiotics are microorganisms (mainly lactic acid producing bacteria and yeast combination) added to rations to improve the intestinal microbial balance of the animal (PCARRD, 2005). These bacteria exert their beneficial effects through competitive exclusion and lactic acid production. In addition to competitive exclusion is reduction in gut PH, which makes the intestinal environment unfavorable for certain pathogenic bacteria. There has also been increasing evidence that an acidic environment is conductive to increased enzymatic

activity within the digestive system that leads to improved production performance (PCARRD, 2002).

Acidifier

Acidifier is made up of organic acid mixture when incorporated in the ration. They exert their effect in the gastrointestinal environment by lowering the stomach pH. Low stomach pH prevents the growth band proliferation of pathogenic microorganisms, thus promoting better feed efficiency (PCARRD, 2000).

Acidifiers are believed to enhance growth by improving gut health through reduction of pH and buffering capacity of diets, improvement of pancreatic secretions that increase nutrient digestibility, or promotion of beneficial bacteria growth while inhibiting growth of pathogenic microbes (Jacela *et al*.,2009).

MATERIALS AND METHODS

Materials

The materials used in the study were six five-month old hogs, knives, chopping board, basin, weighing scale, measuring tape, bolo, blow torch, pen and a record book.

Methods

This study made use of hogs from a previous feeding experiment. The different treatments were as follows:

T_0 - without activated charcoal containing wood vinegar

T_1 – with activated charcoal containing wood vinegar

After 120 days of feeding the pigs with their respective rations, six hogs were picked as sample for carcass evaluation. The sample hogs were not given feeds for 12 hours prior to slaughtering. However, drinking water was given to them. After fasting, weight of each animal was taken and slaughtering followed. The experimental animals in each treatment were subjected to uniform slaughtering procedures. The procedures were as follows:

1. Stunning. This was the process of making the animal unconscious using a stunner.

2. Sticking. This was bleeding the animal by piercing with a pointed instrument such as knife.

3. Singeing. This was the removing of the unshaved hair of the animal using a flame.

4. Evisceration. This was the removal of the internal organs from the body of the animal such as the heart, lungs, stomach, the intestines, kidneys, pancreas and spleen.

5. Weighing of the carcass. This was the process of weighing the parts of the body of the animal excluding the head, feet and entrails.

6. Fabrication. This was the process of cutting the parts of the carcass into wholesale cuts such as the head, shoulder, belly, ham and loin

Organoleptic Test

From the carcass of the pigs from each treatment, meat samples were obtained and these were cooked per treatment. The samples were steamed without condiments. After cooking, these were sliced into bite sizes and were placed into containers with code names ready to be evaluated. The panel of tasters was composed of twenty students. Meanwhile each member of the panel of tasters was given a score card to write down his/ her ratings. During the evaluation, each member of the panel of tasters was requested to drink water after each taste to wash off any remains of the meat tasted previously that might affect his/ her ratings to the succeeding meat samples.

Nutrient Analysis

Meat samples derived from the loin were brought to the Department of Science and Technology (DOST), Km. 6, La Trinidad, Benguet for proximate analysis.

Data Gathered

1. Slaughter and Carcass Data

a. Slaughter weight (kg). This was the weight of the fasted animal prior to slaughtering using a livestock scale.

b. Carcass weight (kg). This was the weight of the carcass excluding head, feet, entrails and hairs.

c. Weight of wholesale cuts (kg). This was obtained by weighing each of the different wholesale cuts such as the head, shoulder, belly, ham and loin after fabricating the carcass.

d. Weight of entrails (kg). This was obtained by weighing the stomach, large and small intestine, liver, kidney, spleen and lungs individually before and after cleaning process.

2. Carcass Measurements

a. Carcass length (cm). This was taken by measuring the first rib to the base of the tail of the suspended carcass.

b. Back fat thickness (cm). This was the thickness of the back fat measured at the area opposite the first rib, last rib and the last lumbar vertebra of the splitted carcass.

c. Loin eye area (in^2). This was the cross sectional area of the *longissimus dorsi* found between the tenth and eleventh rib using the formula:

$$LEA = L \times W \times 0.8$$

3. Organoleptic test/ Sensory Evaluation . This refers to the evaluation of the cooked meat as rated by a panel of tasters. The parameters used were as follows:

a. Appearance of the product. This was evaluated as follows:

Scale	Descriptive rating
1	Very desirable
2	Moderately desirable
3	Slightly desirable

b. Aroma. This was evaluated as follows:

Scale	Descriptive rating
1	Likes very much
2	Likes moderately
3	Likes slightly

c. Tenderness. This was evaluated as follows:

Scale	Descriptive rating
1	Very tender
2	Moderately tender
3	Slightly tender

d. Juiciness. This was evaluated as follows:

Scale	Descriptive rating
1	Very juicy
2	Moderately juicy
3	Slightly juicy

e. Taste. This was evaluated as follows:

Scale	Descriptive rating
1	Very good
2	Moderately good
3	Slightly good

f. Acceptability. This was evaluated as follows:

Scale	Descriptive rating
1	Likes very much
2	Moderately like
3	Dislike

Data Computed

1. Dressing Percentage. This was computed by dividing the carcass weight by the slaughter weight multiplied by 100.

2. Percentage of wholesale cuts. This was computed by dividing the cut weight by the carcass weight multiplied by 100.

3. Percent of edible entrails. This was computed by dividing the weight of edible entrails by the slaughter weight multiplied by 100.

Data Analysis

Data gathered were tabulated and analyzed using the T-test for Completely Randomized Design.

RESULTS AND DISCUSSION

Slaughter and Carcass Weights and Dressing Percentage

The mean slaughter and carcass weights and dressing percentage of the hogs in the two treatments are shown in Table 1. After 12 hours prior to slaughtering, statistical analysis revealed that there were no significant differences in terms of slaughter and carcass weights. This implies the homogeneity of hogs used in the study. The hog fed without activated charcoal containing wood vinegar has a mean slaughter weight of 67 kg which has a carcass weight of 45.110. This is lower to the carcass weight of 61.40 that was reported by Ibarra (1983) at a slaughter weight of 87.80 kg. The hog fed with activated charcoal containing wood vinegar has a mean slaughter weight of 66.333 kg and has a mean carcass weight of 44.987 kg. This is lower to the carcass weight of 61.40 that was reported by Ibarra (1983) at a slaughter weight of 87.80 kg.

In terms of dressing percentage, statistical analysis revealed that there was no significant difference between the two treatment means. The mean carcass yield of the hog that were not given activated charcoal containing wood vinegar (control group) and the hogs given with activated charcoal containing wood vinegar were 67.256 % and 68.039 %, respectively. The result reveals that the dressing or killing- out percentage of the hogs, were more or less the same. This is relatively lower than the dressing percentage of 69.93% which was reported by Ibarra (1983) from hogs with a slaughter weight of 87.80 kg.

Table 1.Slaughter and carcass weights and dressing percentage of the hogs in the two

treatments

TREATMENT	SLAUGHTER WEIGHT (kg)	CARCASS WEIGHT (kg)	DRESSING PERCENTAGE (%)
Without activated charcoal containing wood vinegar	67.000[a]	45.110[a]	67.256[a]
With activated charcoal containing wood vinegar	66.333[a]	44.987[a]	68.039[a]

*Means with the same superscript are not significant different from each other at 5% level, DMRT

Carcass Measurements

Table 2 presents the carcass measurements namely carcass length, backfat thickness and loin eye area of the hogs. True to all the above measurements, statistical analysis revealed that there was no significant differences between the treatment means. This means that the carcass lengths, backfat thickness and loin eye area of hogs used in the study were more or less the same. It is also implied that adding activated charcoal containing wood vinegar into pig's diets did not affect such carcass measurements. The overall mean carcass lengths of the hogs used in the study was 69.917cm; 1.905 cm for backfat thickness and 5.836 inches^2 for the loin eye area. The backfat thickness of the hogs used in this study is relatively higher to the backfat thickness that was reported by Ibarra (1983) which has a backfat thickness of 2.21 in^2 at a slaughter weight of 87.80 kg. This loin eye area of the hogs used in this study is relatively lower to the loin eye area that was reported by Ibarra (1983) which is 6.45 at a slaughter weight of 87.80 kg.

Weight of Wholesale Cuts

The weights of the five wholesale cuts obtained from the hogs in the two treatments expressed as percent of carcass weight are presented in Table 3. The 5 major wholesale cuts are the head, shoulder, belly, ham and loin. Statistical analysis revealed that there were no significant differences between the treatment means. This means that the weights of the major cuts obtained from the hogs in the two treatments were more or less the same. It also implies that adding activated charcoal containing wood vinegar to hog diets has no effect on the weights of the head, shoulder, belly, ham and loin.

Table 2. Carcass length, backfat thickness and loin eye area

TREATMENT	CARCASS LENGTH (cm)	BACKFAT THICKNESS (cm)	LOIN EYE AREA (in^2)
Without activated charcoal containing wood vinegar	66.500[a]	2.089[a]	5.898[a]
With activated charcoal containing wood vinegar	65.333[a]	1.722[a]	5.774[a]

*Means with the same superscripts are not significantly different from each other at 5% level, DMRT

Table 3. Weight of wholesale cuts expressed as percent of carcass weight

WHOLESALE CUTS	TREATMENTS	
	WITHOUT ACTIVATED CHARCOAL CONTAINING WOOD VINEGAR	WITH ACTIVATED CHARCOAL CONTAINING WOOD VINEGAR
Head (%)	11.204[a]	10.265[a]
Shoulder (%)	28.407[a]	29.454[a]
Belly (%)	19.768[a]	19.648[a]
Ham (%)	28.338[a]	27.744[a]
Loin (%)	24.607[a]	24.151[a]

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

Weights of the Edible Internal Organs

Table 4 presents the mean weights of the edible internal organs which include the empty stomach, small and large intestines, liver, kidney, spleen, lungs, heart, and pancreas. Statistical analysis showed that there were no significant differences among the weights of the edible internal organs of the hogs in the two treatments. This means that the weights of the internal organs of the hogs in the two treatments were more or less the same. It also means that adding activated charcoal containing wood vinegar into the pig's diet did not affect the weights of the weights of the internal organs as mentioned in Table 4.

Sensory Evaluation

The ratings of the cooked meat samples derived from the hogs in the two treatments as rated by panel of tasters are presented in Tables 5- 10. The cooked meat samples were evaluated in terms of appearance, aroma, tenderness, juiciness, taste and acceptability.

In terms of appearance (Table 5), statistical analysis revealed a significant difference between the two treatment means. The meat of the hogs fed with activated charcoal containing wood vinegar approved to have a better appearance than the meat of the hogs that were not given activated charcoal containing wood vinegar. It follows then that in the descriptive rating, the meat of the hogs fed with activated charcoal containing wood vinegar was rated as very desirable while the meat of the hogs that were not given activated charcoal containing wood vinegar was rated as moderately desirable. Results reveal that adding activated charcoal containing wood vinegar to hog diets produces better appearance to the meat when cooked.

Table 4. Weight of edible internal organs as percent of slaughter weight

EDIBLE ENTRAILS	TREATMENTS

	WITHOUT ACTIVATED CHARCOAL CONTAINING WOOD VINEGAR	WITH ACTIVATED CHARCOAL CONTAINING WOOD VINEGAR
Stomach	0.801[a]	0.752[a]
Large intestines	1.666[a]	1.597[a]
Small intaestines	1.762[a]	2.189[a]
Liver	1.839[a]	1.998[a]
Kidney	0.268[a]	0.265[a]
Spleen	0.157[a]	0.152[a]
Lungs	1.062[a]	0.737[a]
Heart	0.399[a]	0.336[a]
Pancreas	0.140[a]	0.142[a]

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

In terms of aroma (Table 6), statistical analysis revealed that the meat derived from the two treatments highly differ from each other. The meat of the hogs fed with activated charcoal containing wood vinegar had a better aroma and in the descriptive rating the members of the panel of tasters liked it very much. On the other hand the meat of the hogs given feeds without activated charcoal containing wood vinegar was liked moderately by the members of the panel of tasters.

In terms of tenderness and juiciness (Tables 7 and 8), statistical analysis revealed no significant differences between treatment means. Both the meat of the hogs in the two treatments was rated by the panel of tasters as very tender and very juicy. The results reveal that adding activated charcoal containing wood vinegar into the diets of pigs did not affect the tenderness and juiciness of the meat.

Table 5. Ratings of the cooked meat samples in terms of appearance

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.683[a]	Moderately desirable
With activated charcoal containing wood vinegar	1.417[b]	Very desirable

*Means with different superscript are significantly different from each other at 5% level, DMRT

Table 6. Ratings of the cooked meat samples in terms of aroma

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.750[ab]	Likes Moderately
With activated charcoal containing wood vinegar	1.417[ab]	Likes Very Much

*Means with different superscripts are highly significant from each other at 5% level, DMRT

.However in terms of taste (Table 9), the meat of the hogs given activated charcoal containing wood vinegar was approved to have a better taste compared to the meat of the hogs that were not given activated charcoal containing wood vinegar. The members of the panel of tasters rated the meat of the hogs fed with activated charcoal containing wood vinegar as very good and the meat of the hogs that were not given activated charcoal containing wood vinegar was rated as moderately good.

Finally in terms of acceptability (Table 10), the results reveal that the meat of the hogs that were given activated charcoal containing wood vinegar was liked very much by the members of the panel of tasters. On the other hand, the meat of the hogs that were not given activated charcoal containing wood vinegar was liked moderately by the panel of tasters.

Table 7. Ratings of the cooked meat samples in terms of tenderness

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.483[a]	Very Tender
With activated charcoal containing wood vinegar	1.467[a]	Very Tender

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

Table 8. Ratings of the cooked meat samples in terms of juiciness

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.733[a]	Very Juicy
With activated charcoal containing wood vinegar	1.550[a]	Very Juicy

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

Proximate Analysis

Results of the analysis of the meat samples obtained from the hogs in the two treatments as analyzed at the DOST- CAR, La Trinidad, Benguet are presented in Table 11 and Appendix A- D.

Based on the results, it is revealed that the protein contents of the meat samples obtained from the hogs in the two treatments were more or less the same. From the control groups or those that were not given activated charcoal containing wood vinegar, the protein content obtained on the average, was 18.165% and 18.075% from the hogs that were not given activated charcoal containing wood vinegar. In terms of ash content, the meat samples derived from the hogs given activated charcoal containing wood vinegar had an average ash content of 1.06% which was slightly higher than the ash content of the meat

samples derived from the hogs in the control group or those that were not given activated charcoal containing wood vinegar which was 0.95%.

Table 9. Ratings of the cooked meat samples in terms of taste

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.583[a]	Moderately Good
With activated charcoal containing wood vinegar	1.417[a]	Very Good

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

Table 10. Ratings of the cooked meat quality in terms of acceptability

TREATMENT	MEAN	DESCRIPTIVE RATING
Without activated charcoal containing wood vinegar	1.650[a]	Likes Moderately
With activated charcoal containing wood vinegar	1.550[a]	Likes Very Much

*Means with the same superscript are not significantly different from each other at 5% level, DMRT

Table 11. Proximate analysis of the meat samples as analyzed at the DOST, La Trinidad, Benguet

NUTRIENT CONTENT	TREATMENTS	
	Without activated charcoal containing wood vinegar	With activated charcoal containing wood vinegar
ASH, % w/w	1.00	1.06
CARBOHYDRATE, % w/w	3.69	4.58
CRUDE FAT, % w/w	6.83	7.07
CRUDE PROTEIN, % w/w	18.17	18.08
MOISTURE, % w/w	71.55	69.22
ENERGY, kcal	148.50	154.50

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study was conducted to determine the carcass characteristics of growing-finishing hogs fed with sweet potato leaves and vines plus activated charcoal containing wood vinegar. Specifically, it aimed to determine the effect of the different treatments to carcass traits in terms of carcass weight, dressing percentage, carcass length, backfat thickness, loin eye area and the weight of the major cuts and entrails; sensory evaluation in terms of appearance, aroma, tenderness, juiciness, taste and overall acceptability of the meat when cooked; and the proximate analysis of the meat.

The results revealed that there were no significant differences in terms of slaughter weight, carcass weight, dressing/ killing- out percentage, carcass length, backfat thickness, weight of wholesale cuts, and weight of entrails.

In terms of the sensory evaluation, statistical analysis revealed significant differences on the appearance of the product. Meat derived from the hogs fed with activated charcoal containing wood vinegar had a very desirable appearance compared to the meat derived from the hogs that were not given activated charcoal containing wood vinegar which has a moderately desirable appearance. Highly significant differences were observed in terms of aroma. Meat derived from the hogs fed with activated charcoal containing wood vinegar had a better aroma than the meat derived from the hogs fed with diets without activated charcoal containing wood vinegar. There were no significant differences observed in terms of tenderness, juiciness, taste and acceptability of the meat. Both the treatments had a rating of very tender in terms of tenderness. Also, both treatments had a rating of moderately juicy in terms of juiciness. However in terms of taste the meat of the

hogs fed with activated charcoal containing wood vinegar had a rating of liked very much compared to the meat of the hogs that were not given activated charcoal containing wood vinegar which was rated as liked moderately. In terms of acceptability, both treatments had a rating of likes moderately.

In terms of nutrient composition, the meat sample derived from the hogs fed with activated charcoal containing wood vinegar has a higher ash content (1.06%) than the meat from the hogs that were not given activated charcoal containing wood vinegar (0.995%). In terms of crude protein, the meat samples derived from the hogs that were not given activated charcoal containing wood vinegar had an average content of 18.165% while the meat samples derived from the hogs fed with activated charcoal containing wood vinegar had an average content of 18.075%.

Conclusion

Based on the results of the study, it is therefore concluded that adding activated charcoal containing wood vinegar to hog diets had no effect on the carcass weight, dressing percentage, carcass length, backfat thickness, loin eye area, and weight of major cuts and entrails. However, in the sensory adding activated charcoal containing wood vinegar to hog diets produces meat of better appearance and aroma to the meat. Meanwhile activated charcoal containing wood vinegar also produces higher ash content of the meat.

Recommendation

Based on the results and statistical analysis, adding activated charcoal containing wood vinegar to hog diets has no effect on the carcass traits of growing- finishing hogs.

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