

BEYOND THE HARVEST: SOCIAL PRACTICES OF UTILIZING CORN COBS AS ANIMAL FEED FOR A SUSTAINABLE ECONOMY IN TAMBAK BAYAN VILLAGE, PERCUT SEI TUAN

Maya Sari Rambe¹, Berda Nellyaratri Br Ginting², Ariel Martin Marpaung³, Astri Dewi Sianturi⁴, Ribka Intan Marini Sitorus⁵, M. Ricky Ardiansyah Putra⁶

¹ Program Studi Pendidikan Antropologi, Fakultas Ilmu Sosial, Universitas Negeri Medan, Indonesia; mayarohil6@gmail.com

² Program Studi Pendidikan Antropologi, Fakultas Ilmu Sosial, Universitas Negeri Medan, Indonesia; berdanellyaratri2610@gmail.com

³ Program Studi Pendidikan Antropologi, Fakultas Ilmu Sosial, Universitas Negeri Medan, Indonesia; arielmarpaung666@gmail.com

⁴ Program Studi Pendidikan Antropologi, Fakultas Ilmu Sosial, Universitas Negeri Medan, Indonesia; astrisianturi24@gmail.com

⁵ Program Studi Pendidikan Bisnis, Fakultas Ekonomi dan Bisnis, Universitas Negeri Medan, Indonesia; Ribkaintanmarinisitorus@gmail.com

⁶ Program Studi Pendidikan Antropologi, Fakultas Ilmu Sosial, Universitas Negeri Medan, Indonesia

Corresponden E-mail: mayarohil6@gmail.com

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ABSTRACT

Utilizing local resources is a crucial aspect in supporting sustainable economic development in rural areas. One potential that has not been optimally utilized is agricultural waste, particularly corncobs, which are often discarded or burned after harvest. However, corncobs have economic value when processed and used as animal feed. In Tambak Bayan Village, Percut Sei Tuan District, the practice of utilizing corncobs as animal feed has developed as a community response to limited forage and the high price of commercial feed. This practice is not only related to the technical aspects of animal husbandry, but also reflects economic adaptation strategies, local knowledge, and social relations that are built in rural communities. This study aims to examine the social practice of utilizing corncobs as animal feed and its contribution to the sustainable economy of the Tambak Bayan Village community. In addition, this study also analyzes social factors that influence the sustainability of this practice, such as cooperation patterns, the inheritance of local knowledge, and the survival strategies of farming and livestock households. The research method used is a qualitative approach with a case study method, through participatory observation, in-depth interviews, and field documentation. The research stages include preparation, fieldwork implementation, data analysis, report preparation, and dissemination and publication of research results. The targeted outputs in this research include the final research report, publication of a scientific article in the *Anthropos Journal: Journal of Social and Cultural Anthropology* (SINTA 3), and copyright of the research report. This research is at the initial Technology Readiness Level (TKT), namely at the stage of formulating research questions and reviewing basic principles, with the hope that it can become the basis for developing an agricultural waste management model based on social practices of rural communities in the next stage.

1. INTRODUCTION

Economic development sustainable in rural areas No can released from method public local utilise source power available in the environment surrounding area. In the context of agriculture and animal husbandry, waste results agriculture often viewed as remainder production that is not own mark use (Mujahidin et al., 2022). In fact, from perspective social, economic, and ecological, waste agriculture keep potential big For developed as source Power valuable alternative. One of type waste a lot of agriculture produced in rural areas is cob corn. In practice general, tuna corn often thrown away or burned after harvest, so that cause problem environment at a time waste source power (Scott, 2019). Condition This show that utilization waste agriculture Not yet fully integrated in system economy rural in a way sustainable.

Research shows that cob corn own potential For utilized as feed cattle through the processing process simple, like shredding and fermentation (Farus, 2020). Utilization cob corn as feed cattle No limited to one type animals, but rather can utilized For various livestock, such as cows, oxen, goats and poultry like duck, although in in practice public more Lots use it For cattle ruminants. In general nutrition, tuna corn contain fiber coarse, cellulose, hemicellulose, and a number of carbohydrate structural role as source energy for cattle ruminants. Content high fiber make cob corn suitable as feed additionally, especially after through the processing process like fermentation that can increase digestibility and value use nutrition. Research (Usman et al., 2025) in SOLMA journal proves that utilization waste corn as feed cattle can increase availability feed alternative as well as reduce dependence breeders to feed commercial, so that impact on efficiency cost production.

Tambak Bayan Village, District Percut Sei Tuan, corn is one of the commodities sufficient agriculture Lots cultivated. Activities agriculture the produce cob corn in amount big every season harvest. In life everyday, some public has utilise cob corn as feed cattle cow, good in a way direct and through processing simple. Practice This appear as response to height price feed manufacturer as well as limitations greens feed, especially in the season drought (Hasanuddin et al., 2025). emphasized that utilization waste stump corn as feed livestock in rural areas capable pressing cost production livestock and strengthening resilience economy House ladder farmers. From the perspective anthropology economics, practice utilization cob corn as feed cattle reflect rationality economy local built through experience and context social society. JC Scott, (Utami, 2020)explains that public rural tend develop a survival strategy life with utilise source the closest and most accessible power controlled in a way social.

In context this, utilization cob corn No only functioning as solution economy, but also become part from system values and knowledge inherited local in life public village. In addition to providing benefit economy, utilization cob corn as feed livestock also contributes to sustainability environment (Fiantika et al., 2022). states that utilization waste agriculture as feed cattle in line with principle economy circular and role in reduce pollution environment consequence accumulation waste organic. Although Thus, the practice This Still often viewed as informal and unstructured activities Lots reviewed in

a way deep from perspective socio-cultural, in particular in relation with practice social public rural areas (Abdullah et al., 2017). Based on condition said, research This important done For study practice social utilization cob corn as feed cattle cows in Tambak Bayan Village, District Percut Sei Tuan, as well as his contribution in support economy sustainable. This research expected capable give description empirical about relatedness between practice social, utilization source Power local, and strengthening economy sustainable in context rural (Adziem & Nurhasanah, 2021). How practice social the people of Tambak Bayan Village in utilise cob corn as feed cattle ? How practice utilization cob corn the contribute to economy sustainable the people of Tambak Bayan Village ?, Factors social What only that affects sustainability practice utilization cob corn as feed livestock in Tambak Bayan Village?.

This research use approach qualitative with method studies case For understand in a way deep practice social utilization cob corn as feed cattle in life public rural. Approach qualitative chosen Because study This No aim measure phenomenon in a way quantitative, but rather dig meaning, values, and social processes that underlie action economy public in utilise source Power local. Through approach this, researcher make an effort understand How practice utilization cob corn built, maintained, and inherited in context social and cultural Tambak Bayan Village community. Rita Fiantika (Rahmaniar et al., 2024) explain that study qualitative aim For understand phenomenon social in a way holistic through description deep sourced from experience subject study in context natural (Ahmad, 2012).

Therefore that, approach This allows researchers For catch reality social as understood by the community That myself, including method they interpret waste agriculture, managing source Power local, as well as building economic strategies based experience and knowledge local. In the context of study this, utilization cob corn No viewed solely as activity technical farms, but rather as practice socially loaded with values, norms, and relationships inter- actor level village. Study method case chosen Because study This focus on one location specifically, namely Tambak Bayan Village, District Percut Sei Tuan, with objective get deep and contextual understanding about practice utilization cob corn as feed livestock. Case study allows researchers For examine phenomenon in a way intensive with consider condition social, economic and cultural local that forms practice the.

With Thus, the method This relevant For reveal dynamics social that is not can explained in a way general, but only can understood through study in-depth in context certain. Approach qualitative is also relevant in study utilization waste agriculture because, as demonstrated b (Ali et al., 2019), success processing waste corn No only determined by aspects technology or technique processing, but is greatly influenced by the level of involvement social society, patterns Work The same between citizens, as well as reception to innovation based source Power local. This is show that dimensions social own role important in determine sustainability practice utilization waste agriculture at the level rural.

Therefore that, the data in study This collected through observation participatory For see in a way direct activity utilization and processing cob corn, interview deep with

farmers and ranchers cattle ruminants like cows, oxen and goats, as well as documentation to activities and conditions related social with practice the combination technique this data collection allows researchers obtain rich and in-depth data about relatedness between practice economy, knowledge local, relations social, and efforts public in build economy sustainable based source Power local (Chandra et al., 2023).

State of the Art and New

Research on utilization waste corn as feed cattle has Lots done, especially from perspective technical, nutritional, and efficiency feed livestock. A number of studies emphasize potential cob corn as material feed relative alternative easy obtained and can processed through technology simple, like chopping, drying, and fermentation. Focus main research the is optimization content nutrition as well as efficiency cost production feed, so that waste agriculture can utilized in a way maximum in support sector animal husbandry. Usman, K (Faizah et al., 2022) for example, to emphasize that waste corn can processed become feed cattle nutritious and contributing to improvement welfare breeders through subtraction cost production.

This research look at utilization waste corn as solution technical to problem limitations feed and height price feed commercial at the level breeders. With thus, the tuna corn positioned as alternative material feed that is capable increase efficiency business livestock farming, especially in rural areas. Meanwhile that, (Fernandez & Khatulistiani, 2021) more emphasize his study on improving quality nutrition cob corn through the fermentation process. The research show that treatment technology certain can increase mark nutrition cob corn so that more worthy used as feed cattle ruminants. Approach This strengthen aspect technology and nutrition in utilization waste agriculture, as well as put cob corn as object innovation feed that can improved the quality through intervention technical.

Another study by expand perspective with linking utilization waste corn with implementation technology appropriate use as well as innovation feed local development - oriented productivity livestock and empowerment breeders. Research the confirm that waste corn own potential big if integrated with approach technology simple and appropriate with condition local. In general, studies This Still put cob corn as object innovation technology assessed feed from aspect efficiency, content nutrition, and economic output in the form of improvement production or decline cost business cattle (Haluti, 2015).

However thus, some big study previously Still positioning public as users or recipient benefit from technology developed feed. Dimensions social, such as practice daily life society, relationships social interfactors, knowledge local, value culture, as well as the underlying social processes sustainability utilization cob corn as feed livestock, not yet Lots reviewed in a way deep.

In fact, in context rural areas, success and sustainability utilization waste agriculture No only determined by sophistication technology or quality nutrition feed, but also by acceptance social, patterns Work The same between citizens, mechanisms share knowledge and adaptation strategies public to change economy. In Lots cases,

practices utilization waste agriculture develop in a way gradually through experience collective, habit hereditary, and interaction social at the level community. Therefore that, understand utilization cob corn only from aspect technical potential ignore factors social which is precisely become support main sustainability practice in society rural.

Novelty study This lies in the use approach anthropology economy For analyze practice social utilization cob corn as feed livestock which includes various type livestock, such as cows, oxen, goats and poultry, as practiced by the people of Tambak Bayan Village (Harmayani et al., 2021). This research No only discuss aspect technical and benefits economy, but also examines How practice utilization cob corn built, negotiated, maintained, and inherited through relation social, knowledge local, as well as adaptation strategies public in face limitations economy and fluctuations price feed cattle.

With put public as actor main, research This expected capable give contribution new in study development rural based source Power local. This study enrich literature about utilization waste agriculture No only as innovation technical, but as practice social that has role important in form and support economy sustainable in rural areas .

2. RESEARCH ROADMAP

This research originate from focus research relevant institutions with development economy sustainable development in rural areas, especially in Tambak Bayan Village, District Percut Sei Tuan, and management source Power local. Focus This described from concern general that waste agriculture like cob corn often thrown away or burned, causing problem environment and waste source power. Focus This descibed from concern general that waste agriculture like cob corn often thrown away or burned, causing problem environment and waste source power (Helmi et al., 2023) Previous research has show potential technical and economic waste this, however part big Still put public as recipient benefit technology and not yet in a way deep study practice social, relationships inter-factors, as well as mark culture local support sustainability practice utilization waste corn.

This research be at the stage beginning from plan research during 1 year period, with research duration for 8 months with term time development for 3 years in accordance with needs of the Anthropology Education Study Program, Faculty Knowledge Social, State University of Medan Location implemented in Tambak Bayan Village, District Percut Sei Tuan. Research position year This is study in a way deep practice social utilization cob corn in Tambak Bayan Village using approach qualitative and studies case For understand meaning, value, and relationship social that forms practice economy society. This fills gap knowledge related aspect socio -cultural support sustainability practice mentioned. Previous research in field This more nature technical and nutritional livestock. Studies by (Novita et al., 2022) focus on aspects nutrition and technology processing waste corn, while (Novita et al., 2022) linking with technology appropriate use and innovation feed local.

Table 1. Plan Research Continuation in 3 Years (2026-2028)

Year	Research Focus	Output Target
2026	Analysis practice social, economic local, and factors social sustainability in Tambak Bayan Village.	Report research, articles journal national accredited, module guide
2027	Development of intervention models social For strengthening institutional local in management waste integrated.	Institutional model, article journal international.
Year 2028	Implementation and evaluation of the model in other regions, analysis impact economy and environment term long.	Report evaluation, book with -ISBN, increasing TKT (Readiness Level) Technology).

Research purposes

This research towards achievement external in the form of guide practical for public village and government area in manage waste agriculture in a way sustainable, as well as article enriching scientific treasury anthropology economy rural areas. Plan increase in TKT will happened in the year third with implementation of management models waste integrated at the level community. Downstream direction covers adoption practice this by the group farmers / livestock breeders in other villages and formulation policy local related management waste agriculture integrated.

Harmony Competence

Competence team researchers in harmony with topic this. Chairman researchers and three member other originate from clump Anthropology Education Science, which is very relevant For analyze practice social, values culture and learning process social public village. One member other originate from Business Education, which supports aspect analysis eligibility economic management business and potential downstreaming business from utilization cob corn. Integration competence This ensure all over consistent roadmap content with methods, outputs, and plans Work study.



Figure 1. LPPM Research Roadmap 2025-2029

3. METHOD

Research Procedures

This research will held in Tambak Bayan Village, District Percut Sei Tuan, which is a rural area with activity agriculture corn and sufficient livestock developing. Subject study covering farmer corn, livestock breeders livestock (cows, oxen, goats and poultry), as well as other parties involved in practice utilization cob corn as feed livestock (Solihin & Koeswandi, 2023). Research is planned ongoing during eight the moon, which consists of on stage preparation during two month, stage implementation study field during four month, stage analysis and preparation report during One month, and stage dissemination and publication results study during One month (Purnama et al., 2022).

Expected Results of the Research

This research use approach qualitative with method studies case, which aims For get understanding deep about practice social utilization cob corn as feed livestock and its contribution to economy sustainable public rural. Approach This allows researchers dig meaning, value, and relationship social that forms practice economy based source Power local (Putri & Natasya, 2021). Through study This expected obtained description empirical about How The people of Tambak Bayan Village utilize cob corn as feed livestock, how knowledge local and customs social form practice mentioned, as well as How practice This contribute to strengthening economy sustainable House ladder farmers and ranchers (Sitompul, 2023).

Indicator Achievement

Research methods This done through five stages main mutual continuous, namely : (1) Preparation Stage Preparation Stage implemented during two month. At this stage this, researcher do identification problem through study literature related utilization waste agriculture, in particular cob corn as feed livestock, as well as study theory anthropology economy and economics sustainable. Researchers also prepare research proposals, design instrument study in the form of guidelines interviews and guides

observation, and do coordination beginning with party village and candidate Informant. Expected results : preparation of proposals and instruments research ready used.

4. RESULTS AND DISCUSSION

Indicator achievements : final research proposal and instruments proper research used. (2) Field Research Implementation Stage, Implementation Stage done during four month. At this stage this, data collection was carried out through observation participatory to practice utilization cob corn as feed livestock, interview deep with farmers and livestock breeders, as well as documentation activity processing and utilization cob corn. Expected results : collection of in -depth and relevant qualitative data. Indicators achievement : transcript interviews, notes observation and documentation field. (3) Data Analysis Stage The data analysis stage is carried out during One month. Qualitative data obtained analyzed use technique analysis thematic, which includes the process of data reduction, data presentation, and data extraction conclusion (Sosiati et al., 2021). Analysis This aim For identify pattern practice social, relationships inter-factors, as well as contribution utilization cob corn to economy sustainable community. Expected results : findings valid and structured research. Indicators achievements: themes and categories analysis that answers formulation problem. (4) Preparation Stage Report ; This stage covers compilation report study in a way systematic and structured based on results data analysis (Sosiati et al., 2021). Report arranged with integrate findings empirical and studies theoretical For answer formulation problem research. Expected results : report study complete. Indicator achievement : draft report research. (5) Dissemination and Publication Stage ; Final Stage covering dissemination results study through presentation in scientific forums as well as publication in journal scientific. This stage aim For disseminate results study to audience academic and community wide (Wu et al., 2022). Expected results : publication scientific and improvement utilization results research. Indicators achievements : articles scientific Ready publication.

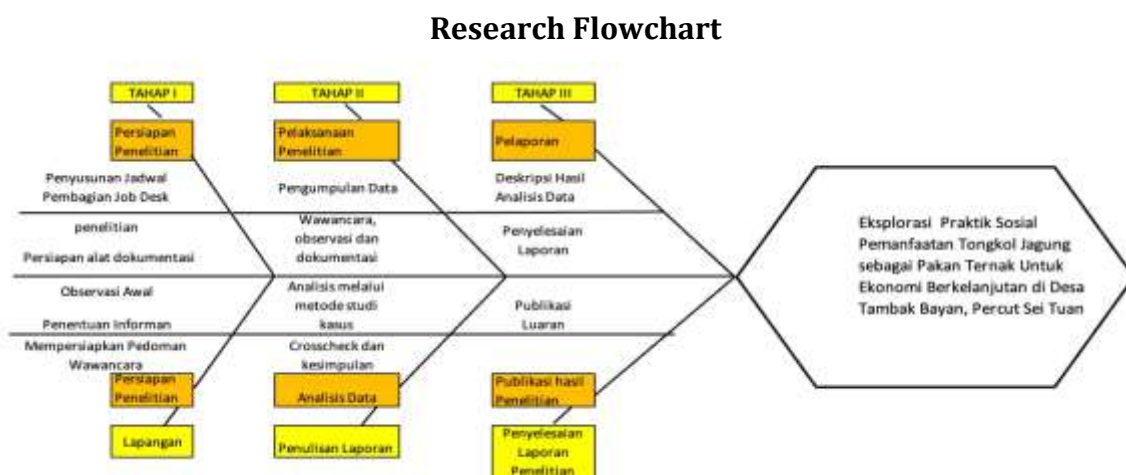


Figure 2. Research Flowchart

Division of Research Team Tasks

Distribution task in study This has arranged in a way systematic For ensure implementation every stages activity study walk in a way effective and coordinated (Zulkarnain et al., 2020). Details roles and responsibilities each member's answer team researchers as well as partners supporters served in table following (Yasmaniar et al., 2023).

Table 2. Division of Research Team Tasks

Activity Stage	Research Procedures	Expected results	Indicator Achievements	Person responsible	Relatedness with RAB
Research Preparation	Literature study, compilation design research and management letter permission study.	Framework conceptual and design study arranged as well as permission official obtained.	Research proposals and letters permission study.	Maya Sari Rambe (Team Leader)	ATK and costs administration
Coordination with Village Partners	Coordination beginning with partners public Tambak Bayan Village.	The awakening Work same and access field.	Agreement location and list of informants.	Maya Sari Rambe & Village Partners	Transportation and consumption
Field Data Collection	Observation field and interviews with informant.	Primary data results observation and interviews.	Notes field and transcript interview.	Berda Nellyarat ri Br Ginting & Ariel Martin Marpaung	Transportation, consumption, documentation
Documentation and Transcription	Documentation activities and transcription	Data ready analyzed.	Documentation and transcripts complete.	Berda Nellyarat ri Br Ginting	Equipment documentation

Data analysis	on interview. Qualitative data processing and analysis.	Findings study systematic.	Matrix analysis and narrative results.	Maya Sari Rambe & Ariel Martin Marpaung	supporting stationery analysis
Compilation Report	Compilation report end study.	Report study complete.	Report end study.	Maya Sari Rambe	Stationery and printing
Publication and Dissemination	Preparation and delivery article scientific.	Article scientific published.	Proof of submission / publication article.	Astri Dewi S & Ribka Intan Marini Sitorus	Cost publication and dissemination

5. CONCLUSION

The utilization of corn cobs as animal feed in Tambak Bayan Village, Percut Sei Tuan District, demonstrates that agricultural waste can be transformed into a valuable local resource that contributes to sustainable rural economic development. Rather than being merely discarded or burned after harvest, corn cobs can be processed and utilized as an alternative source of animal feed, particularly in response to limited forage availability and the increasing cost of commercial feed. This practice reflects the community's capacity to adapt to economic and environmental challenges through the optimization of locally available resources.

The findings further indicate that the sustainability of corn cob utilization is closely associated with local knowledge, community cooperation, and household survival strategies. Knowledge regarding the collection, processing, and utilization of corn cobs is developed through everyday experience and social interaction and can be transmitted across members and generations of the community. At the same time, cooperation among farmers and livestock households strengthens access to agricultural waste, facilitates its utilization, and supports the continuity of this practice. These social dimensions demonstrate that the utilization of corn cobs is not merely a technical activity in livestock production but also represents a social and economic practice embedded within rural community life.

Overall, the utilization of corn cobs as animal feed constitutes a socially embedded economic strategy that connects agricultural waste management, household resilience, and sustainable rural development. The practice has the potential to reduce agricultural waste, lower livestock production costs, and generate additional economic value from locally available resources. However, its long-term sustainability requires further support through improved knowledge of feed-processing techniques and nutritional quality,

stronger community-based cooperation, appropriate technological innovation, and institutional support. These findings provide an initial foundation for developing a community-based agricultural waste management model that integrates local knowledge, social practices, and sustainable economic development in rural areas.

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