PRODUCTION PATTERN AND FEASIBILITY ANALYSIS OF “KALIMANTAN” BUFFALO’S BREEDING FARMS IN THE RIVER AGROECOSYSTEM OF EAST KALIMANTAN PROVINCE.

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**Abstract**

The aim of this research is to identify production pattern and feasibility analysis of “Kalimantan” buffalo’s breeding farm in the upstream Mahakam river agroecosystem. This research done in December, 2016 until May, 2017. Tanjung Terakan farmer group in Muara Wis village, Muara Wis sub district, Kutai Kertanegara district, as respondents based on highest buffalo’s population of upstream Mahakam river agroecosystem in this area and established. This is survey research with questionnaire used to collected data from 13 respondents which are members of Tanjung Terakan farmer group. Descriptive analysis used as data analysis of production pattern, and feasibility analysis indicators, such as Net present value (NPV), Internal rate of return (IRR) dan Net benefit cost ratio (Net B/C ratio) used as feasibility analysis of “Kalimantan” buffalo’s breeding farm in the upstream Mahakam river agroecosystem. The result show that buffalo production pattern in agroecosystem upstream Mahakam river determined by season. When dry season, used extensive buffalo production pattern, but when rainy season used semi-intensive an intensive buffalo production pattern. Indicators of feasibility analysis showed that NPV Rp.2.365.271.000,- with discount factor 12%, IRR value 17,58%, and net benefit cost ratio 1,51. Based on those indicators, concluded that buffalo production business feasible to be done.

**Introduction:**

Indonesia’s beef production is still under supply condition. Government data record in 2019 beef production estimated are 429,000 tons, meanwhile beef demand are 686,000 tons. This condition make the government drive beef import regulation. One of this regulation implementation is buffalo meat imported since 2017. Government through “Bulog” (national logistic agency) done this regulation, in order to give alternatives for people who have not been able to reach beef prices.

The national buffalo meat production in 2017 are 32,260 tons or 6,07% of national beef production, which 42 ton or 0,13% of the buffalo meat supplied from East Kalimantan. This condition showed that buffalo meat production in East Kalimantan have not been developed. This condition is contrary with the buffalo potential in East Kalimantan which have the local breed called “Kalimantan” buffalo (*Bubalus bubalis borneonensis*). This buffalo is classified
as river buffalo which one of their agroecosystem at upstream of the Mahakam river in Muara Wis and Muara Muntai sub district. This buffalo designated as national local breed by government through ministry of agricultural decree number 2843/Kpts/LB.430/8/2012. This buffalo breeding farm is one of the additional generate income for East Kalimantan’s farmer or fisherman. This condition is supported with East Kalimantan potential as trade route of livestock commodity since many centuries ago. The “Kalimantan” buffalo often trade to South Kalimantan and Tana Toraja in Sulawesi island. This condition causes selling price of buffalo higher than cattle in East Kalimantan. This potential is challenge for farmers and stakeholders in East Kalimantan.

The challenges comes from buffalo’s breeding farm obstacles that are (1) traditionally production pattern and many cases of inbreeding; (2) reduction area because of land clearing for charcoal mining and palm plantation; (3) lower level of human resources causes low level of inovation adoption and low acces to capital. These obstacles effect on buffalo’s farmers disability to develop their business and dependency on supply from other region. Based on that condition, research need to be done to identify production pattern and feasibility analysis of “Kalimantan” buffalo in river agroecosystem of East Kalimantan.

Research Methods:-
Research Location and Time:-
Research done in Muara Wis sub district which purposive sampling method based on highest population of buffalo in East Kalimantan province. From this location determined intentionally Tanjung Terakan farmer group in Muara Wis village, Muara Wis sub district, Kutai Kertanegara district, as respondents based on highest buffalo’s population of upstream Mahakam river agroecosystem in this area and established. This research done in December, 2016 until May, 2017.

Research Method:-
This research done with survey method used questionaire to interviewed 13 respondents of all member of Tanjung Terakan farmer group. This research method designed as :
1. Observational research, based on data collected
2. Analitical research, based on data analyzed

The research data were primary and secondary data. Primary data collected from respondents about buffalo production pattern and feasibility analysis done. There were :
1. Buffalo production pattern in : procedures, reproductive, housing and feeding
2. Buffalo feasibility analysis, such as : investment cost, production cost, population development and income value

Secondary data were datas area, such as buffalo population, supply and demand of buffalo meat, buffalo slaughtering data, agricultural data, land use, organizational support and economic facilities. Secondary data collected from Government Development Planning Office, Statistical Bureau, Government Agricultural Service Office and Local Government Service Office.

Data Collection Method:-
Primary data collected by depth interviewed to respondents with questioners used and datas observed. Secondary data collected from government report and paper documents, previous research result and report, and also references study. Datas grouped according to needs and analyzed according to plan.

Data Analysis:-
Descriptive analysis and feasibility analysis used as data analysis of this research. Descriptive analysis used to describe production pattern. Feasibility analysis used with indicators : Net present value (NPV), Internal rate of return (IRR) dan Net benefit cost ratio (Net B/C ratio).

Research Result And Discussion:-
Production Pattern Of “Kalimantan” Buffalo’s Breeding Farm in The Upstream Mahakam River Agroecosystem:
The result show that buffalo production patern in agroecosystem upstream Mahakam river determined by season, dry season and rainy season with flood. The season causes differences in buffalo system’s handling. When it’s dry season, all respondents used extensive buffalo production patern, but when rainy season used semi-intensive an
intensive buffalo production pattern. In extensive buffalo production pattern, they are freely released in swamp or the edge of the forest, which 2 – 3 kilometers far away from “kalang”. When it’s rainy season, they returned into kalang. The exception of this pattern, for female and younger buffalo (before 6 months old) which are always in intensive pattern with forages and fenced. For intensive and extensive pattern, forages always given to them at evening, when they have returned into kalang.

Forages used as feed are local forages, which called “kumpai”. Kumpai have highly palatability for the buffalo. Farmers always grazed kumpai which many of them spread in swamp and far away from their home. They are often across the river and use boat to get them. They brought kumpai to kalang used boat. Then kumpai stored on front of the kalang. At the evening kumpai given to buffaloes as feed. When kalang is empty, farmer always clean up use waterpump which suck water from below (Kristanto, 2007).

![Figure 1: Kalang in Dry Season and Flooded Season](image-url)

**Figure 1:**- Kalang in Dry Season and Flooded Season

**Farmers have facilities, such as:**

**Kalang**, is cage which is build above the river or swamp, with height set depend on water level when it’s rainy season. Kalang made from wood, called “ulin”, because of it’s strength and durability. Tanjung Terakan farmer group have 624 m$^2$ of kalang with 414 buffaloes capacity. This kalang owned and handed down to the next generation. Kalang have door and stair which used for the entry and exit of buffaloes into the river.

**Cage**, used for younger (before 6 months old) and female buffaloes. Cage built and owned in private for each member of farmer group. Cages placed in the corner or backside of the kalang. These cages strongly fenced in order to male buffaloes could not get into cage from kalang. Cages have roof with 40 m$^2$ wide of area.

**Guard house**, built for night guard of kalang area with 32 m$^2$ wide of area. This house occupied alternately for all members of farmer group. This house also use for group meeting.

**Motorboat (Jukung Alkon)**, is farmer river mode of transportation used for grazed kumpai crossover the river and fishing. Jukung alkon also used to herded buffaloes get in and get out from kalang into the river or swamp.

**Financial Analysis of “Kalimantan” Buffalo’s Breeding Farm in The Upstream Mahakam River Agroecosystem:**

This financial analysis describe financial condition of buffalo breeding farm system in the upstream Mahakam river agroecosystem, with group system occupied alternately for all members of farmer group.

**Financial Analysis Indicators**

Financial analysis indicators used based on condition of buffalo breeding farm system in respondent location. For that, used financial assumptions and indicators based on condition of buffalo breeding farm system in respondent location.

**Table 1:**- Technical and Economical Coefficient Assumption

| Technical Assumption | Total |
|----------------------|-------|
| Total member group of Tanjung Terakan | 13 men with 131 buffaloes female |
| Long time livestock business | 20 years |
**Kalang’s period (flood season)** 120 days/year

**Calving interval** 18 bulan

**Mortality risk of young buffaloes** 11%

**Mortality risk of adult buffaloes** 2%

**Male and female ratio of young buffaloes** 3 : 5

**Rejected ages** 15 – 16 year

**Gasoline costs for motorboat** Rp.9.000,-/liters

**Labor costs** Rp.100.000,-/HOK

**Drug costs** Rp.50.000,-/head/year

**Selling price**

- **a. Male 3 years ages** Rp.17.500.000,-/head
- **b. Female 3 years ages** Rp.15.000.000,-/head
- **c. Rejected male** Rp.24.000.000,-/head
- **d. Rejected female** Rp.20.000.000,-/head
- **e. Younger male** Rp.9.000.000,-/head
- **f. Younger female** Rp.9.000.000,-/head

**Discount factor** 12%

**Source**: primary data analysis, 2017

### Investment Cost dan Operational Cost

**Investment Cost**

Investment costs of buffalo breeding farm consist of kalang construction costs, procurement costs of buffaloes (male and female), motorboat purchase costs, fencing area costs and other operational costs.

Total investment costs for 131 mating female buffaloes with 10 buffaloes ownership for each farmer is Rp.4.006.028.000,-. Total investment divided into individual investment cost and group investment cost. Individual investment cost consist of jukung alkon and private cage costs, which owned by each group member. Each group member had one 80m² private kalang. Group investment cost consist of kalang construction costs, procurement costs of buffaloes, fencing costs of pastured area when dry season, and guard house costs. The biggest group investment cost is procurement costs for 152 buffaloes, consist of 131 mating female buffaloes in mating ages, and 21 young male buffaloes, which were costs Rp.2.332.500.000,-. The second one was kalang construction costs for Rp.1.248.000.000,- or 31.15% of total investment cost. Other group investment costs were construction and procurement costs of infrastructure, such as fencing costs, guard house costs, generator set costs, waterpump costs, and sickles costs for Rp.425.528.000,- or 10.62% of total investment cost. All investment costs shows in table 2

**Table 2**: Investment Cost of Buffalo Breeding Farm

| No | Items | Unit | Unit Costs (Rp.000,-) | Total | Costs (Rp.000,-) |
|----|-------|------|----------------------|-------|-----------------|
|    | Scale of 131 head of mating females |       |                      |       |                 |
| I  | Livestock procurement |       |                      |       |                 |
|    | a. Young females (3 years) | head  | 15.000               | 131   | 1.965,000       |
|    | b. Mating males (3 years) | head  | 17.500               | 21    | 367,500         |
|    | Total of procurement cost |       |                      |       | 2.332,500       |
| II | Kalang construction |       |                      |       |                 |
|    | a. Local government grand (4x100m) | m²    | 750                  | 400   | 300,000         |
|    | b. Local government grand (8x8 m) | m²    | 750                  | 64    | 48,000          |
|    | c. Cage group (8x20 m) | m²    | 750                  | 160   | 120,000         |
|    | d. Private cage (4x20 total 13 units) | m²    | 750                  | 1.040 | 780,000         |
|    | Total of procurement costs |       |                      |       | 1,248,000       |
| III| Infrastructure procurement |       |                      |       |                 |
Zero year

|                      | units | 1   | 7.000 | 13 | 91.000 |
|----------------------|-------|-----|-------|----|--------|
| a. Motorboat purchase costs |       |     |       |    |        |
| b. Guard house costs (4x8 m) | m²    | 2.000 | 32 | 64.000 |
| c. Fencing costs | M      | 57  | 3.000 | 171.000 |
| d. Generator set costs | units | 2.500 | 1 | 2.500 |
| e. Sickle costs | units | 39  | 26 | 1.014 |
| f. Waterpump costs | units | 750 | 1 | 750 |

Total of Infrastructure procurement costs

Total of investment costs in zero year

Fifteenth years

|                      | unit | 7.000 | 13 | 91.000 |
|----------------------|------|-------|----|--------|
| a. Motorboat purchase costs | |     |     |        |
| b. Generator set costs | unit | 2.500 | 1 | 2.500 |
| c. Sickle costs | unit | 39 | 26 | 1.014 |
| d. Waterpump costs | unit | 750 | 1 | 750 |

Total of Infrastructure procurement costs

Total Investment Costs

Source: primary data analysis, 2017

Operational Cost

Operational cost of buffalo breeding farm spent when buffalo in kalang. Operational cost consist of labor costs, herding costs, cage cleaning costs, gasoline costs, health costs and kalang’s maintenance costs. Details of operational costs shows in table 3.

Table 3: Operational Projection Cost of Buffalo Breeding Farm

| Items                  | Satuan | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8 s/d 20 |
|------------------------|--------|---------|---------|---------|---------|---------|---------|---------|----------|
| Population             |        |         |         |         |         |         |         |         |          |
| Mating females         | head   | 131     | 131     | 131     | 131     | 131     | 131     | 131     | 131      |
| Mating males           | head   | 21      | 21      | 21      | 21      | 21      | 21      | 21      | 21       |
| Younger females        | head   | 0       | 70      | 70      | 0       | 70      | 70      | 0       | 70       |
| Younger males          | head   | 0       | 54      | 54      | 0       | 54      | 54      | 0       | 54       |
| Females (3 tahun)     |        | 0       | 0       | 0       | 69      | 69      | 0       | 69      | 69       |
| Males (3 tahun)       |        | 0       | 0       | 0       | 53      | 53      | 0       | 53      | 53       |
| Young females          | head   | 0       | 0       | 69      | 69      | 0       | 69      | 69      | 0        |
| Young males            | head   | 0       | 0       | 53      | 53      | 0       | 53      | 53      | 0        |
| Total population       | head   | 152     | 276     | 398     | 396     | 398     | 398     | 396     | 398      |

Variable Costs:

| Items                           | Satuan | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8 s/d 20 |
|---------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|----------|
| Days of work activities         | dow    | 780     | 780     | 780     | 780     | 780     | 780     | 780     | 780      |
| Grazing in the morning          | dow    | 463     | 463     | 463     | 463     | 463     | 463     | 463     | 463      |
| Clean up private cage           | dow    | 48      | 48      | 48      | 48      | 48      | 48      | 48      | 48       |
| Total of labor                  | dow    | 1.291   | 1.291   | 1.291   | 1.291   | 1.291   | 1.291   | 1.291   | 1.291    |
| Labor costs                     | Rp.000,- | 129.149 | 129.149 | 129.149 | 129.149 | 129.149 | 129.149 | 129.149 | 129.149   |
| Total of gasoline               | Liter  | 3.120   | 3.120   | 3.120   | 3.120   | 3.120   | 3.120   | 3.120   | 3.120    |
| Gasoline costs                  | Rp.000,- | 28.080  | 28.080  | 28.080  | 28.080  | 28.080  | 28.080  | 28.080  | 28.080   |
| Drug costs                      | Rp.000,- | 3.800   | 3.800   | 3.800   | 3.800   | 3.800   | 3.800   | 3.800   | 3.800    |
| Kalang maintenance costs        | Rp.000,- | 5.000   | 5.000   | 5.000   | 5.000   | 5.000   | 5.000   | 5.000   | 5.000    |
| Total variable costs            | Rp.000,- | 166.029 | 169.136 | 172.145 | 172.082 | 172.137 | 172.137 | 172.082 | 172.137  |
### Fixed Costs

|                | Rp.000,- | 21.312 | 21.312 | 21.312 | 21.312 | 21.312 | 21.312 | 21.312 | 21.312 |
|----------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depreciation costs |          |        |        |        |        |        |        |        |        |
| Total production costs | Rp.000,- | 187.341| 190.448| 193.457| 193.395| 193.450| 193.450| 193.395| 193.450|

### Production and Income

Production and income of buffalo breeding farm depend on ages, sex and total of buffaloes sold out. Income projection of buffalo breeding farm describe in Table 4.

Table 4: Production projection and income average of buffalo breeding farm

| No | Year | Type                | Total | Selling Price (Rp.000,-) | Value (Rp.000,-/year) | Total (Rp.000,-/tahun) | Income Farmer/year (Rp.000,-) |
|----|------|---------------------|-------|--------------------------|------------------------|-------------------------|-------------------------------|
| 1  | 4    | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 2  | 5    | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 3  | 7    | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 4  | 8    | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 5  | 10   | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 6  | 11   | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 7  | 13   | Rejected Females    | 66    | 20,000                   | 1,320,000              | 2,361,599               | 181,661                       |
|    |      | Rejected Males      | 11    | 24,000                   | 576,000                | 576,000                | 576,000                       |
|    |      | Young Females       | 3     | 15,000                   | 450,000                | 450,000                | 450,000                       |
|    |      | Young Males         | 42    | 17,500                   | 756,776                | 756,776                | 756,776                       |
| 8  | 14   | Rejected Females    | 67    | 20,000                   | 1,340,000              | 2,360,099               | 181,546                       |
|    |      | Rejected Males      | 10    | 24,000                   | 576,000                | 576,000                | 576,000                       |
|    |      | Young Females       | 2     | 15,000                   | 313,776                | 313,776                | 313,776                       |
|    |      | Young Males         | 43    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 9  | 16   | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 10 | 17   | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 11 | 19   | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
| 12 | 20   | Mating Females      | 131   | 20,000                   | 2,620,000              | 6,200,099               | 476,931                       |
|    |      | Mating Males        | 21    | 24,000                   | 504,000                | 504,000                | 504,000                       |
|    |      | Young Females       | 69    | 15,000                   | 1,828,324              | 1,960,099               | 150,777                       |
|    |      | Young Males         | 53    | 17,500                   | 313,776                | 313,776                | 313,776                       |
|    |      | Younger Females     | 70    | 9,000                    | 630,000                | 630,000                | 630,000                       |
|    |      | Younger Males       | 54    | 9,000                    | 486,000                | 486,000                | 486,000                       |

**Source**: primary data analysis, 2017

Average of buffalo sold were 122 heads/year, consist of young female were 69 heads and young male were 53 heads. Based on buffaloes selling price on that time, average income were Rp.150,777,000,-/farmer/year. For 20
years, based on that value, average income would be Rp. 2,197,130,000,-/farmer or Rp.109.857,000,-/farmer/year or Rp.9,155,000,-/farmer/month.

Cash Flow

Cash flow for buffalo breeding farm consist of cash inflow and cash outflow. Cash inflow from buffaloes total sold out started from fourth years with average of calving interval is 18 months.

Table 5: Cash flow of buffalo breeding farm

| Years | Profit (Rp.000,-) | Investment (Rp.000,-) | Production Cost (Rp.000,-) | Total Cost (Rp.000,-) | Net Profit (Rp.000,-) | Cash Flow (Rp.000,-) |
|-------|------------------|-----------------------|---------------------------|----------------------|----------------------|----------------------|
| 0     | 0                | 3,910,764             | 3,910,764                 | (3,910,764)          | (3,910,764)          |                      |
| 1     | -                | 187,341               | 187,341                   | (187,341)            | (4,098,105)          |                      |
| 2     | -                | 190,448               | 190,448                   | (190,448)            | (4,288,552)          |                      |
| 3     | -                | 193,457               | 193,457                   | (193,457)            | (4,482,009)          |                      |
| 4     | 1,960,099        | 193,395               | 193,395                   | 1,766,705            | (2,715,304)          |                      |
| 5     | 1,960,099        | 193,450               | 193,450                   | 1,766,650            | (948,654)            |                      |
| 6     | -                | 193,450               | 193,450                   | (193,450)            | (1,142,104)          |                      |
| 7     | 1,960,099        | 193,395               | 193,395                   | 1,766,705            | 624,601              |                      |
| 8     | 1,960,099        | 193,450               | 193,450                   | 1,766,650            | 2,391,251            |                      |
| 9     | -                | 193,450               | 193,450                   | (193,450)            | 2,197,802            |                      |
| 10    | 1,960,099        | 193,395               | 193,395                   | 1,766,705            | 3,964,506            |                      |
| 11    | 1,960,099        | 193,450               | 193,450                   | 1,766,650            | 5,731,156            |                      |
| 12    | -                | 193,450               | 193,450                   | (193,450)            | 5,537,707            |                      |
| 13    | 2,361,599        | 193,395               | 193,395                   | 2,168,205            | 7,705,912            |                      |
| 14    | 2,360,099        | 193,450               | 193,450                   | 2,166,650            | 9,872,561            |                      |
| 15    | -                | 95,264                | 288,714                   | (288,714)            | 9,583,848            |                      |
| 16    | 1,960,099        | 193,395               | 193,395                   | 1,766,705            | 11,350,553           |                      |
| 17    | 1,960,099        | 193,450               | 193,450                   | 1,766,650            | 13,117,203           |                      |
| 18    | -                | 193,450               | 193,450                   | (193,450)            | 12,923,753           |                      |
| 19    | 1,960,099        | 193,395               | 193,395                   | 1,766,705            | 14,690,458           |                      |
| 20    | 6,200,099        | 193,450               | 193,450                   | 6,006,650            | 20,697,108           |                      |
| Total | 28,562,693       | 4,006,028             | 3,859,557                 | 3,954,821            | 24,607,872           | 20,697,108           |
| Average (Rp.000,-/responden) | 2,197,130 | 308,156 | 296,889 | 304,217 | 1,892,913 | 1,592,085 |
| NPV (Rp000,-) | 2,365,271 |
| IRR | 17.58% |
| Net BCR | 1.51 |

Source : primary data analysis, 2017

Table 5 show that these buffalo breeding farm is projected to give net profit Rp.20,697,108,000,- at 131 head of mating females scale of business within 20 years, with averages are Rp.1,592,085,000,-/respondent at 10 head of mating females scale of business within 20 years. Assumed that buffaloes sold at 3 years ages with male and female ratio is 63 : 100. Cash flow in zero year to sixth years still negatives, because of high investment costs and profit from buffaloes sold begun in fourth years. Total of sold buffaloes will increase eleven times within 20 years.

Feasibility analysis indicators show that NPV Rp.2,365,271,000,- at discount factor 12% and IRR 17.58% also net benefit cost ratio 1.51. Based on those indicators and assumptions, show that these buffaloes breeding farm business is feasible.
Conclusions And Suggestions:-

Conclusions:-
1. Buffalo production pattern in agroecosystem upstream Mahakam river determined by season. When dry season, used extensive buffalo production pattern, but when rainy season used semi-intensive an intensive buffalo production pattern.
2. Indicators of feasibility analysis showed that NPV Rp.2.365.271.000,- with discount factor 12%, IRR value 17.58%, and net benefit cost ratio 1.51. Based on those indicators, concluded that buffalo production business feasible to be done.

Suggestion:-
Recommendation from this research is need to develop the farmer’s ability by trained them in order to develop their ability in buffalo reproductive and productive management in order to develop “Kalimantan” buffalo performances.

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