

Recent reproduction status of Pampangan Swamp Buffalo of South Sumatera

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Abstract. The purpose of this study is to learn the reproductive performance of productive of female buffalo in Rambutan Regency, South Sumatera Indonesia, including, length of gestation, birth interval, conception rate (CR) and fertility index. The research method used survey. Primary data was obtained from direct observation on 100 head. The data obtained were analyzed descriptively. Primary data was obtained by survey with questionnaire tools. The result showed that the buffalo reproduction performance was still low. Service per conception 1.04 ± 0.4 ; Anestrus Postpartum 7.46 ± 3.83 months; calving interval distance 17.82 ± 4.86 months; and Conception Rate 48,5% In conclusion, Reproduction performance that Pampangan Buffalo in Rambutan Regency is Normal. To increase buffalo productivity, buffalo breeding program is continuously based on reproduction control.

1. Introduction

Swamp buffaloes have come to be used potentially for meat and milk as well as for their primary contribution as draught animals. In many Asian countries, the genetics of the swamp buffalo has been improved, for example by creating a cross breed with the river buffalo for increased milk production. The limitations of productive performance in female swamp buffalo include many unique features such as inherent late maturity, prolonged intercalving interval, decreased in ovarian function (especially in summer), poor estrus, and difficulties detecting estrus that cause problems in predicting the time of ovulation for artificial insemination [2]. Historically, in Indonesia buffalo husbandry has been practiced by small family units using free range grazing methods and natural spontaneous mating [5]. Swamp buffalo (*Bubalus bubalis*), which lives in southern Sumatra Indonesia or known as the "Pampangan Swamp Buffalo" by local residents. Pampangan swamp buffalo is a buffalo variety native at district south Sumatera, Indonesia. There were prominent characteristics in the Pampangan swamp buffalo which had a high and large body shape, black skin, head and ears with long hair, short horns coiled to the back and down, then circular in a spiral shape, elbow-shaped body, a slim lead as the type of dairy cows, udder is well developed and symmetrical, and calm temperament [4].

Based on data, in 2018 the population of buffalo in South Sumatera reached 32,820 and the number tended to decrease compared to 2016 which reached 37,405 [2]. The decline in population can be caused by various factors including production systems and disruptions to reproductive efficiency. Reproductive efficiency has important role in increasing population, late sexual maturity, long postpartum anoestrus, poor expression of oestrus (Silent hint), poor conception rates and long calving intervals, this is possible

because of the buffalo's ability to live with low forage and harsh environment causes nutrient intake to be very low and this will greatly affect reproductive efficiency [7]. The objective of this study was to investigate the recent reproductive performance status of Pampangan buffaloes.

2. Materials and Methods

The material used in this study was farmers who were raising 40 buffaloes with a total of 100 productive female buffaloes. The research method used in the survey method. Primary data was directed by sampling, by asking questions in a structured manner with questionnaire tools.

The variables observed were the performance of swamp buffalo reproduction, i.e., Service per Conception (S/C), Anestrus postpartus, Days Open (DO), and Conception Rate (CR). The data obtained from the study are tabulated followed by descriptive analysis.

3. Result and Discussion

The performance of Buffalo Reproduction data in Rambutan Regency as in Table 1. The average Service per Conception of buffalo in Rambutan Regency (1.4 ± 0.4) times. The S/C value is allegedly supported, among others, because marriages occur naturally, that is, male cattle can know much better than breeders in detecting the lust of female buffaloes. This S/C value is still ideal because the pregnancy is less than two times in a marriage. Likewise, according to [6], namely the number of services to bunting (S/C) which is optimum 1.8 months. According to [8], other factors that influence the S/C value are the accuracy between conducting detection of lust (estrus) with insemination. S/C scores in Rambutan Regency are good, meaning that the value of the number of mated per pregnancy shows higher fertility.

Tabel 1. Performance of pampangan Buffalo Reproduction in Rambutan Regency

Reproduction Performance	Average + St.dev
<i>Service per Conception</i> (times)	1,4 ± 0,4
Anestrus Postpartum (month)	7.46 ± 3.83
<i>Days Open</i> (month)	3,8 ± 0,7
Calving Intervals (month)	17,82 ± 0,9
<i>Conception Rate</i> (percent)	48,5

Based on Table 1, shown that the average anestrus postpartus buffalo in Rambutan Regency is (7.46 ± 3.83) months. The anestrus postpartus associated with The ovarian activity. The ovarian activity was found to be resumed within 22 to 29 days after calving [3]. Ovarian inactivity is more frequent in buffaloes on low level of feeding compared to those on high level and also reported higher in summer than other seasons [1]. The average buffalo Days Open in Rambutan Regency is (3.8 ± 0.7) months. The Days Open value is allegedly caused by several factors such as the ideal S/C value, an ideal postpartum estrus. Along Days Open is caused by improper detection of lust which results in long marriages of the mother after giving birth. This Days Open is a parameter that usually plays a vital role in achieving the target of birth intervals. Along Days Open causes long of birth interval [1].

The average Calving Interval of buffalo in Rambutan Regency ($17.82 + 0.9$) months. Calving intervals are thought to be influenced by the duration of pregnancy and the dry period. The longer the dry period and the longer the pregnancy, the longer the breeding distance will be. Based on this statement the spacing of calves in Rambutan Regency is low. According to [3], the success of livestock raising is related to its reproductive measured by its ability to produce calves in a certain period, meaning that the shorter the reproductive distance, the better its reproductive performance.

Conception Rate (Table 1), it is known that the Conception Rate of buffalo in Rambutan Regency is 48.5%. The factors that influence Conception Rate are the timing of marriage and the timeliness of marriage, in Rambutan Regency marriage occurs naturally where male cattle can know well in detected lust in females. Based on the statement, the Conception Rate value in Rambutan Regency is good. Generally, Swamp Buffalo can reach the success rate of Conception Rate above 45% [6]. The average

S/C value influences the Conception Rate number in the livestock group, Based on these results, it can be concluded that reproductive management at the research location is included efficiently. According to [4] fertility status is determined by the amount of Conception Rate, Service per Conception and the Days Open.

4. Conclusion

The reproductive performance of female swamps buffalo (based on S/C, DO and CR) , indicating that Pampangan Boffalo reproductive efficiency is Normal.

5. References

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