VARIASI ALEL DNA MIKROSATELIT KROMOSOM Y PADA POPULASI SAPI PERANAKAN ONGOLE (Bos indicus)

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Cow is one of the commodities giving a big contribution in a national meat supply. In 1999 up to 2001 the supply of imported cows in Indonesia reaches 15-22% from the overall cow consumption (General Director of Farming Production, 2002). The increasing number of veal in each year is not accompanied by the supply provided by the local cows so that it results in the decreasing number of local cows in the market and the decreasing of its genetical quality. P.O cows is one of them. One of the government efforts to decrease the number of demand of local cows is by increasing its genetical quality. That kind of effort can be developed by means of molecular technology using microsatellite sign. By means of this tool, the cows microgenetic can be traced. This genetical variation is very much needed in order to develop the cows breeding. By doing so, it is possible for us to breed the new varieties of cows by means of reproduction. This is considered important as one of the consideration to do outbreeding.

This study aims at getting clear description of the alel DNA variation based on the DNA characteristics of the microsatellite of its Y chromosom on the Ongole (P.O) cows breeding. This is a descriptive study using the complete blood cell as DNA source a genus of 18 P.O individuals. The data of this study are the DNA alel microsatellite which are then analyzed by using an alel frequency, heterogenity, Hardy-Weinberg (HWE) balance testing and polymorphic information content locus (PIC).

The result of the study shows that the amplification of DNA in microsatellite locus of Y chromosom on the cows population get the microsatellite alel. The number of alel in those five locus is two. From the study analysis we get that the highest frequency of alel is about (0.33), the highest heterogenity is (54.10%), the highest Polymorphic Information Content (PIC) is about (0.37), and the highest Hardy-Weinberg balance score is (HWE) (0.86). Based on the criteria then the number of locus of INRA126 which is considered polymorphic used as the guidance of variable determination on the genetical quality of P.O cows.