RESULT PERFORMANCE OF INFUSION GENETIC *Pinus merkusii* JUNGH. et de VRIESE IN SUMEDANG, WEST JAVA AND SEMPOLAN, EAST JAVA

by
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ABSTRACT

Genetic base of *Pinus merkusii* population improvement in Java is considered very narrow and thus it needs to be spread through new genetic material infusion from natural population. The spread genetic base will guarantee the genetic result in long period, decrease inbreeding effect and the risk of unwanted interference.

The aim of these observation is for funding variability, genetic parameter and genetic growth interference of *Pinus merkusii* JUNGH. et de Vriese of genetic infusion result in Sempolan and Cijambu. The observation is carried out in half silb progeny trial experiment unit of *Pinus merkusii* in KPH Sumedang, RPH Cijambu, 7d compartment, at Jantho subline (T-9702); Takengon (T-9704); Blangkejern (T-9705) and KPH Jember, RPH Sumberjati, 31 compartment, Jantho subline (T-9707); Takengon (T-9708); Blangkejern (T-9709). The design that it use is Incomplete Block Design (IBD). The data analysis uses Genstat program.

The observation result shows that : 1. The genetics variability of diameter and foxtail (Takengon, Sumedang); diameter and foxtail (Blangkejern, Sempolan); the height and foxtail (Takengon, Sempolan); the height and diameter (Jantho, Sempolan); the result is variate, however for diameter, height and foxtail (Blangkejern, Sumedang); the height (Blangkejern, Sempolan); the diameter (Takengon, Sempolan); foxtail (Jantho, Sempolan); the result is not variate, the exiating genetic variability unables to expand the genetic base of improvement program *Pinus merkusii* in Java island. 2. The heritability of height and foxtail (Blangkejern, Sumedang); the height ang diameter (Jantho, Sempolan) is relatively high; the height, diameter and foxtail (Takengon, Sumedang); foxtail (Blangkejern and Takengon, Sempolan) relatively moderat however the height (Blangkejern, Sumedang); the height, diameter and foxtail (Takengon, Sumedang); the height and diameter (Blangkejern and Takengon, Sempolan); diameter and foxtail (Jantho, Sempolan) relatively low. 3. the genetic interference that is happen in genetic infusion result is big enough by showing the existence of families that is in highes class in Sempolan location but it is not in highes class in Sumedang. The exiastance of interference shows the possible indication for the environment genotip interaction.

The key word : *Pinus merkusii*, genetic infusion, Blangkejeren, Takengon, Jantho

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