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The results showed that F1 progeny of guppy were exhibited with a new phenotype colour traits that come from their parent colour combination thru selective breeding experiments. However, the ratio of dominant and recessive alleles of four genes (Storo? ew & Apriatin, 2016) illustrated in Figure 11 stated the possible phenotypes of base body colour that are represent in F1 progeny of guppy thru this selective breeding are different from the parent. This indicate the genotype allele that are represented in F1 progeny of guppy thru selective breeding of Group 1, Group 2, Group 3 and Group 4 were refer to Table 6 are overlapping with maternal and paternal of parent fish. The changed of genotype allele in F1 progeny of guppy due to segregation of four alleles from a parent selective breeding to a form a new hybrid individual (Merriam, 2001).

Based on Figure 17, the F1 progeny of guppy in Group 3 showed the genotypes are Mm GG Ee Xx and Mm GG ee Xx were it is incomplete dominance inheritance thru parent selective breeding. Incomplete dominance is a form of intermediate inheritance in which one allele for a specific trait is not completely expressed over its paired allele (www. thoughtco.

com). So, the result showed the F1 progeny of guppy were exhibit with a phenotype of mixture or somewhere between the dominant and recessive phenotype in parent selective breeding. Some researcher like Tave (1995) have studied on inheritance between normally pigmented and pink body colours in Nile tilapia. Where he stated that these phenotypes are controlled by a single autosomal gene with complete dominant gene action called the B

gene. There are included with a dominant B allele produces normal pigmentation and recessive b allele produces pink.

However, the B allele is completely dominant over the b allele BB and Bb genotypes both produce the dominant normally pigmented phenotype. The recessive pink phenotype is produced only when a fish is homozygous recessive (bb). Generally, Mendel’s principles can be used to understand how genes and their alleles are passed down from one generation to the next (Merriam, 2001). It is visualized with acceptance of Punnett square where these principles can predict the potential combinations of offspring from two parents of known genotype or infer an unknown parental genotype from coinciding the resultant offspring.

However, prediction of genotypes in the F1 generation of guppy were rely on genetic model which are the Punnett square. Nevertheless the current study was not able to produce progeny beyond the F1 generation due to time constraint or limitation since it was only a 2 semester (12 months) project. In addition, guppy must reach their maturity for about 6 months to reach their actual size for breeding acceptance.

However, the reproduction of Poecilia reticulata wisely happen throughout the year except in December and January (Shahjahan et al., 2013).