

What is your strategy for breeding disease resistant tigers?

-My strategy was not to breed parents of homozygous (DD) because it has a huge possibility of inheriting a Dd (heterozygous) or even a DD (homozygous) pair.

How can you produce disease resistant offsprings if you start with two parents who are not resistant?

-If the parents both are heterozygous, they would both have Dd. Therefore if you use the punnet square to figure out the chances, 50% of the breeding would give offsprings that are resistant.

Which Allele is dominant and which allele is recessive?

-The dominant allele is the non resistant allele and the recessive allele is the resistant allele.

How do parents who have a phenotype which is not resistant produce offspring who have phenotype that is resistant?

-If the parents who have a phenotype which is not resistant, they might still have a heterozygous pair of having Dd. Then, according to the punnet square, 25% of the pairs possible would be inheriting the gene of dd to the offspring, making them resistant.

What is a punnet square and how do you use it to predict outcomes of breeding?

Each of the 4 squares signifies the outcome of breeding

| | | |
|-------------------|----|----|
| Parent 1/Parent 2 | D | D |
| D | DD | DD |
| d | Dd | Dd |