

Genotyping Rabbits

By Amy Hinkle



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Genotyping a rabbit is not as hard as it may seem. All that is needed is basic knowledge of rabbit color genetics, breeding records, and the rabbit's pedigree with the correct colors written on it. See my list of genotypes for aid if needed.

1. Figure out the rabbit's color
2. Write down the genotype for that color, if there is a dominant gene, leave a space next to it to fill it in.
3. Look at the sire's color and find the genotype for that
4. Fill in any blanks-like if the rabbit has to carry a recessive gene because the sire has it
5. Do steps 3 and 4 for the dam
6. Look at the breeding records-what colors did the rabbit have or sire? For example, if the rabbit is black, but there was a blue in a litter they produced, then the rabbit has to carry dilute. Fill in any missing blanks from this information that is possible.

Now what is written for the rabbit's genotype is what is known. But, if the gsires, gdams, ggsires, and ggdams are looked at then it can be guessed what else is carried.

Here's an example:

1. Rabbit's color: Black
2. Genotype: aa B_ C_ D_ E_
3. Sire's color: Blue, Genotype: aa B_ C_ dd E_
4. Fill in blanks, the rabbit must carry dilute as that is the only thing the sire can pass on from that "set": aa B_ C_ Dd E_ enen
5. Dam's color: chocolate tort, Genotype: aa bb C_ D_ ee
6. Fill in blanks, the rabbit must carry nonextension and chocolate because that is the only thing the dam can pass on from those "sets": aa Bb C_ Dd Ee
7. Breeding records show that the rabbit has sired litters with the following colors: black, blue, chocolate, blue tort, and a REW
8. Fill in, the rabbit must carry REW (c): aa Bb Cc Dd Ee

Ta-da! The rabbit's genotype!

Of course, the genotype may not always be fully known, but at least it gives a clue. One can also do test breedings to determine what the rabbit carries. For example: if it is a blue rabbit that is thought to possibly carry REW, then breed the blue rabbit to a REW so you have a 50% chance at getting REW babies. Of course, if there are only three or four babies and no REW, you still can't rule it out. After about ten babies or so it would be safe to make an assumption in this case. And of course, if there is a REW baby, you know the rabbit does carry it.