Breeding Your Lab

Biggest qustion is what color will I get if I decide to breed my Lab. Labradors come in three colors: black, chocolate, and yellow. Yellow Labradors are often mistakenly called "golden Labradors." The term yellow refers to a range of color from nearly white to gold to fox-red. Black, chocolate, and yellow are the only correct colors. While mis-marked purebred Labradors are possible, be wary of those selling "rare" Labradors of other colors at exorbitant prices. There are yellow Labradors that are so pale they appear white, but they are still considered "yellow" and will usually have some color, even if it is only on the ear tips. "White" (very light yellow) Labradors are not unusual nor rare and should not command a significant price hike. The same goes for "fox red" (very dark yellow) Labradors. "Silver" Labradors are purely a scam and are either crosses with Weimaraners or very light chocolates. An actual silver Labrador (a dilute chocolate) would be treated as a mismarked dog and *not* command a high price. Variations in the color of yellow Labradors, however, are not penalized, but treated the same as any other yellow Labrador.

The question is often asked about what color to expect when breeding Labradors. Well, you can get yellows from blacks and blacks from yellows. Similarly, you can get chocolates from blacks or yellows and vice-versa. It all depends on what color genes the parents carry. The only absolutes are that if both parents are yellow, the resulting puppies are always yellow, never black or chocolate; if both parents are chocolate, you can get yellow or chocolate puppies but never black ones. Aside from the color itself, there are no differences. Many people feel that black Labs are better hunters, yellow dogs are lazier, and chocolate dogs are hardheaded and stubborn. None of this is true. The reason is pure genetics. Coat color in normally colored Labs is determined by two genes unrelated to anything else about the dog. It is perfectly possible to get all three colors in the same litter, therefore the notion that there is a color based difference in temperament and/or ability just doen’t make much sense.
Two sets of genes, not one, control a Lab's coloration. One set of genes controls whether the Lab will be dark (either black or chocolate) or light (yellow). Dark is dominant over light. Thus a Lab whose genotype is EE (homozygous dominant) or Ee (heterozygous) will be dark; only Labs that are ee (homozygous recessive) can be light.

The second set of genes only come into play if the Lab is dark (either EE or Ee). This set controls whether the Lab is black (the dominant trait) or chocolate (the recessive trait). Thus, a dark dog (ie. EE/Ee) that is BB (homozygous dominant) or Bb (heterozygous) will be black, while the only way a dog can be chocolate is for it to be dark (EE/Ee) AND bb (homozygous recessive).

So now, the possibilities for black dogs are EEBB, EEBb, EeBB, or EeBb. The possibilities for a yellow dog are eeBB, eeBb, or eebb. And the possibilities for a chocolate dog are EEbb or Eebb. Remember that puppies will get one E/e from the dam and one from the sire, as well as one B/b from the dam and one from the sire to make up their complete "code". If you had two parents that were both EeBb (black in appearance), you can get all three colors in the resulting litter! Furthermore, when you realize that a

pair of yellows can only give their puppies the ee combination, you understand why two yellows only produce yellows. In a similar fashion, two chocolates can only bequeath bb to their puppies, so two chocolates can never produce a black puppy.

The eebb is an interesting case, as this is a yellow dog with chocolate pigmentation on its nose and eyerims. A dog that is bb always has this pigmentation. Under the current standard, a yellow with chocolate pigmentation is disqualified.

This is a yellow Labrador with chocolate pigmentation (eebb), is called a Dudley. It can also refer to a Lab with absolutely no pigmentation on the nose or eyerims (all pink in color), but in actuality, this is extremely rare, and probably a genetic abnormality. Some Labs will have a pinkish nose, this happens with many breeds, actually. It is called "winter nose" or "snow nose." Many yellow Labs will have dark noses in the summer that fade somewhat in the winter and repeat the cycle the next year. It is not understood why this happens. You can see it in many northern breeds such as Huskies and Malamutes as well. This is not considered a fault in any of these breeds and is not penalized. To differentiate between Labs with faded noses and Dudleys, check the eyerims and gum tissue of the dogs. A Dudley will have only light pink or tan skin; the other dogs will have black pigment in these areas.