



FIGURE 14.24. Construction of nearly isogenic lines (NILs). After several generations of backcrossing a “low” line to a “high” line, each backcross will carry a small fraction of genome from the “low” line, interspersed as short segments within a “high” background. If we select for low trait values during the experiment, these will be enriched for QTLs that reduce the trait (*red dots*). Genetically identical NILs are then derived by inbreeding—for example, by repeated mating between siblings.