Leaf rust caused by Puccinia triticina Eriks. is a common and widespread disease of wheat in Egypt and worldwide. Durable genetic resistance to leaf rust in wheat has been difficult to achieve, since the virulence of leaf rust pathogen to specific leaf rust resistance genes form high variability in wheat cultivars aiming to make a genetic prediction of leaf rust resistance, six crosses i.e. Lr25/Gemmeiza 7, Lr25/Giza163, Lr25/sids1; Lr35/Gemmeiza7, Lr35/sakha 61 and Lr35/Sakha93 were carried out. These Egyptian Wheat varieties showed high infection type at both seedling and adult while Lr25 showed resistance and Lr35 was susceptible at seedling stage, but at adult plant stage they showed low rust severity under greenhouse and field conditions subsequently. The segregation in the F2 plant populations at both seedling and adult plants stage tending to the side of partial resistance and dominance with digenic pairs. Lr25 or Lr35 have low rust severity because of the rarity of leaf rust isolates with virulence to Lr25 or Lr35. Wheat cultivars with the combination of Lr25 or Lr35 displayed high levels of partial leaf rust resistance. From this stand point, these cultivars don’t contain Lr25 or Lr35. The dominant nature of some of the slow rusting resistance genes in crosses are of a great interest in breeding for rust durable resistance. This type of resistance will be easier in segregating generations as smaller population sizes would be required than when used lesser effects.