The resistance of Algiers, Besert and Dinar, varieties of North African origin, was analysed in detail and compared with that of Delta, a variety previously established as having stable resistance. There appeared to be little or no similarity in the resistance response of the first three varieties to Mayetiola destructor. In test crosses of Algiers and Dinar to Delta, the responses of the varieties were seen to be independent of each other, although there was some indication that Dinar and Besert might have some resistance factors in common. An increase in the level of susceptibility was noted when experiments were carried out at about 10 deg F.