The use of dieldrin for the control of houseflies started in 1949 when March and Metcalf successfully controlled *M. d. domestica* with 4-8% formulations of this chemical and workers at Phoenix and Arizona found it to be extremely effective against houseflies (Schoof et al., 1951). However, within a year of its introduction dieldrin became ineffective against flies in Arizona and Denmark (Brown, 1958). Two years later Muller and Spindler (1954) reported dieldrin-resistant flies from Switzerland and by 1954 dieldrin-resistance was widespread in Italy and United Kingdom.

The Egyptian housefly, *M. d. vicina* also showed increased tolerance to dieldrin in several parts of the Middle East countries, Africa, Ceylon, South-east Asia and Japan. Elliot and Ramakrishna (1956) observed a 7 times increase in the dieldrin-resistance of *vicina* collected from Bernin-Kebbi, Nigeria, where dieldrin residual sprays had been applied for the preceding one and a half years. Busvine (1954 a) determined the LC₅₀ level of a strain of *vicina* taken from Omdurman, Sudan, where BHC had been used for the previous four years and found the dieldrin resistance to have increased to 300 times the normal. Antimalarial spraying in Liberia increased the dieldrin-resistance of *M. d. vicina* to 200-300 times the normal strain (Peters, 1954) while similar treatments in the Nandi district and Kisumu,
Kenya, gave rise to dieldrin-resistance with 93% and 67% survival to deposits that killed 90% of the flies in areas previously untreated (Brown, 1958).

The development of insecticide-resistance in the Indian forms of houseflies was not reported until 1952 when Pal and Sharma (1953) developed a DDT-resistant strain of *M. d. nebulo* by exposing the flies to sublethal doses of DDT in successive generations of laboratory selection. Abedi (1957) succeeded in inducing aldrin and BHC-resistance in another strain of *nebulo* collected from Aligarh. A strain of *M. d. vicina* collected from Calcutta developed increased tolerance to dieldrin in three generations of laboratory selection (Sen, 1959).

The inheritance of insecticide-resistance in various forms of *M. domestica* has been studied by several workers during the past fifteen years. D'Alessandro et al. (1949), Bruce and Decker (1950), La Face (1952), March (1952) and Norton (1953) have all advocated a multifactorial origin of DDT-resistance in *M. d. domestica* as against Maelzer and Kirk (1953), Lichtwardt et al. (1955), Milani (1954 c and 1955) and Lichtwardt (1956) who have shown that DDT-resistance in *M. d. domestica* is governed by a single gene. Harrison (1951) has however, shown that resistance of houseflies to the immediate paralysing effect of DDT is not always correlated with resistance to the lethal effect. She studied the inheritance of DDT-resistance in the
Torre in Pietra strain of *M. d. domestica* and concluded that while resistance to knockdown was due to a single gene allele, resistance to kill by DDT was multifactorial in origin.

BHC-resistance in houseflies appears to have a genetic origin different from that of DDT-resistance (Busvine, 1951) and is probably due to more than one gene (Busvine and Khan, 1955). Similar results have been provided by F2 populations derived from reciprocal crosses between susceptible and aldrin-resistant strains of *M. d. nebulo* (Abedi, 1958).

The genetics of housefly resistance to dieldrin has been studied by Abdullah (1961) who crossed a highly resistant strain of *M. d. domestica* with a susceptible strain and observed indications of polyfactorial inheritance, a conclusion contrary to that of Guneidy and Busvine (1962) and Georghiou et al., (1962) who found it to be monofactorial in origin.