

BÖLÜM 10

GIDA GÜVENLİĞİ AÇISINDAN PESTİSİTLERİN ÖNEMİ

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1. Giriş

Tarımsal üretimde pestisitlerin binlerce yıllık bir geçmişi vardır ve bunlar bitkileri zararlı böceklerden, otlardan ve hastalıklardan korumak için kullanılmıştır. Sümerler'in bitki hastalıklarını önlemek için kükürt kullandığı ve bunun 4500 yıl önceye dayandığı kaydedilmiştir (1). Arsenik 900'lü yıllarda, daha sonra ise hücre zehirleri olan kurşun arsenat, kriyolit ve boraks böcek yemleri olarak kullanılmaya başlanmıştır. 17. yüzyılda ise nikotin sülfat, tütünden elde edilen bir böcek ilacı olarak ortaya çıkmıştır. Bitki koruma kimyasalları 19. yüzyılın ortasından itibaren daha yaygın bir şekilde kullanılmış ve bu dönemde iki doğal pestisit popüler olmuştur. Bunlar krizantem çiçeğinden çıkarılan piretrum ve tropik bitkilerin köklerinden çıkarılan rotenon'dur (2). Colorado patates böceğine karşı mücadelede Paris yeşili (karışık bakır asetoarsenit) 1871 yılında başarıyla uygulanmıştır. Paris yeşili, 20. yüzyılın ortalarına kadar dünyanın birçok ülkesinde, özellikle sıtma vektörleri olan Anopheles cinsi sivrisineklerin kontrolü için yaygın olarak kullanılmıştır. 1874 yılında, pestisitlerin en iyi bilinen örneklerinden olan DDT sentezlenmiş ve böcek öldürücü özellikleri 1939 yılında keşfedilmiştir. Daha sonra, DDT sadece zararlı böceklere karşı değil, memeliler, kuşlar ve sürüngenler gibi diğer birçok organizma grubu için de etkili ve tehlikeli olduğu ortaya çıkmıştır. 1970'lerden bu yana, DDT ve

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