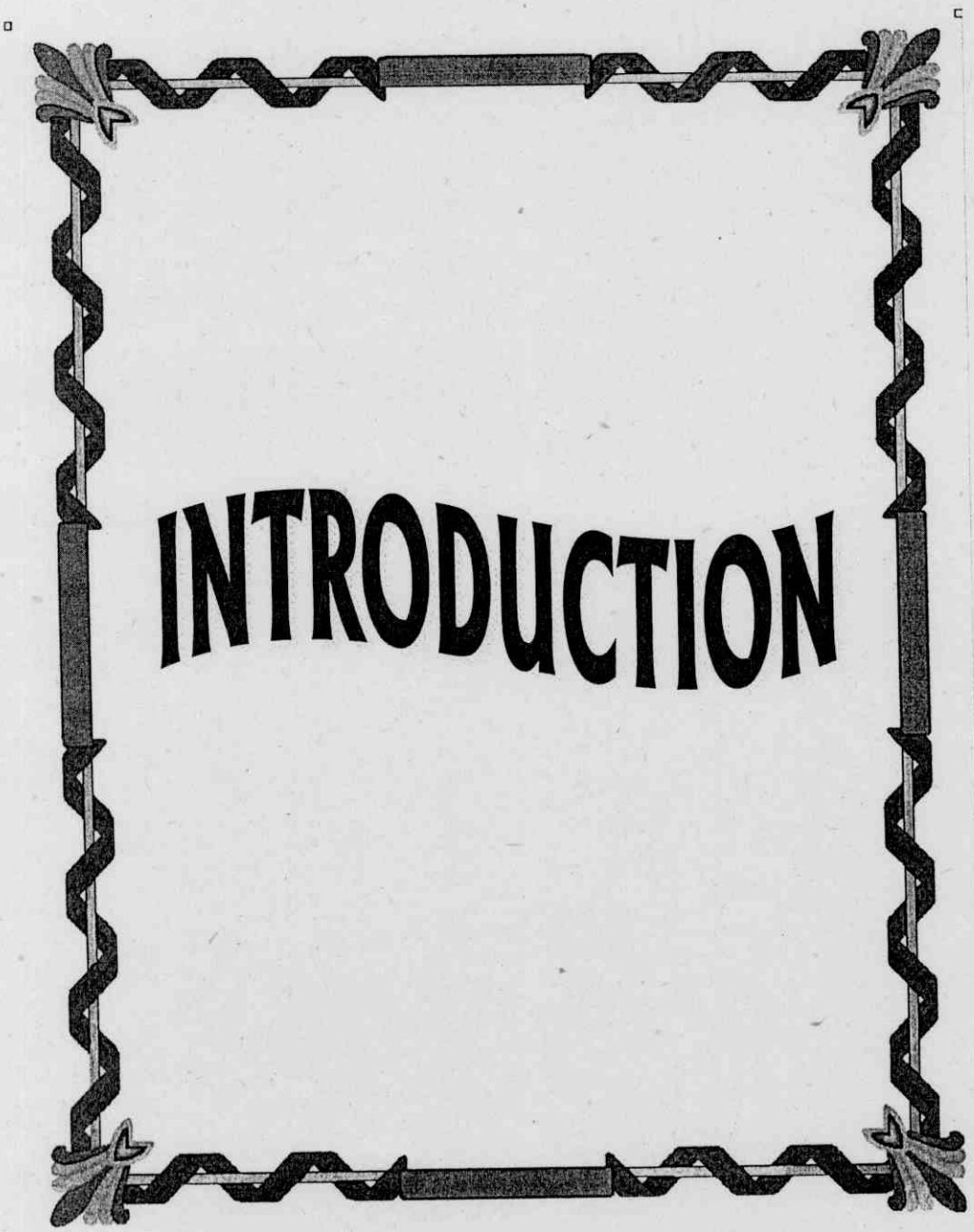
INTRODUCTION

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Pepper is one of the most important vegetable crop all over the world as well as in Egypt. Root knot nematode *Meloidogyne* species, constitute a major group of plant–pathogenic nematode affecting crop production throughout the world. These species have wide host ranges and cause damage to many important economic crops in tropical, subtropical and Mediterranean climates (**Sasser, 1977**; **Lamberti.1979**). In Egypt the most important and widely spread nematodes in different soil types and locations are the root knot nematodes (**Houssny** and **Oteifa, 1956).** Breeding of peppers for resistance to root knot nematode is one of the major objectives in pepper breeding **(Hassan, 1993).**

Plant resistance is considered an extremely feasible method for controlling root knot nematodes **(Thies et al., 1998)**. It is an effective, economical, and environmentaly safe mean of reducing yield losses caused by these nematodes. The genetic resistance has gained further significance since the discovery of the bad effects of pesticides on the environment, and human health **(Fery et al., 1998)**.

The objectives of the present study were to obtain the genetic parameters required to design successful breeding programs for root knot nematode resistance in pepper through genetic analysis of non-reciprocal set of diallel crosses among certain pepper germplasm, to evaluate the performance of the inoculated and uninoculated plants of the different parental

genotypes and related F_1 hybrids, and to study the nature of pepper resistance to root knot nematode. Finding a fast, efficient and dependable selection method using isozyme analysis which can be used by the pepper breeder in breeding programs for root knot nematode resistance, was also one of these objectives.