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PLANT PARASITIC NEMATODES INTERCEPTED FROM IMPORTED PLANTS AND ORGANIC MATERIALS

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Summary. Sixteen genera of plant parasitic nematodes were intercepted from samples of plants and organic materials imported into Oman from different countries. *Aphelenchoides*, *Helicotylenchus*, *Meloidogyne*, *Pratylenchus* and *Tylenchorhynchus* were the most frequently encountered nematode genera.

Importation of plant and organic materials poses the risk of introducing harmful plant parasitic nematodes into a country. For example, important plant pathogenic nematodes such as *Ditylenchus dipsaci* (Kuehn) Filipjev, *Pratylenchus vulnus* Allen *et* Jensen and *Radopholus similis* (Cobb) Thorme might have been introduced into Oman in planting material as they occur only in certain agro-climatic zones of the country where optimum conditions exist for their establishment (Anonymous, 1993; AL Zidgali *et al.*, 1994; Mani and Al Hinai, 1996). Since the establishment of the Nematology Laboratory at the Directorate of Agricultural Research, Rumais in 1990, plants and organic materials imported through Mina Qaboos Seaport and Seeb International Airport have been subjected to rigorous quarantine examinations.

During 1990-97, 65 consignments of fruit plants, containing peat moss or other organic materials as rooting medium and 35 samples of organic materials received from six countries were examined and about 25 per cent were found to be infested with plant parasitic nematodes. Fourteen species of plants and nine kinds of organic materials contained nematodes belonging to 16 genera (Table I). They included certain potentially harmful nematodes like *Helicotylenchus multicinctus* (Cobb) Golden, *Meloidogyne incognita* (Kofoid *et* White) Chitw., *P. brachyurus* (Godfrey) Filipjev *et* Schuurmans Stekhoven, *P. penetrans* (Cobb) Filipjev *et* Schuurmans Stekhoven, *R. similis* (Cobb) Thorne and *Rotylenchulus reniformis* Linford *et* Oliveira. The most frequently intercepted nematode genera were *Aphelenchoides*, *Helicotylenchus*, *Meloidogyne*, *Pratylenchus* and *Tylenchorhynchus*. These interceptions clearly established that economically important plant parasitic nematodes can be transported across physical barriers by man's activities. These interceptions also demonstrate the danger of importing plant parasitic nematodes with plants and organic materials and emphasize the importance of having adequate quarantine arrangements. Hence, all concerned organizations should co-operate while importing or exporting plant materials by strictly following the quarantine rules to prevent

TABLE I - *Plant parasitic nematodes intercepted from imported plants and organic materials.*

Name of plant materials	Nematodes recorded	Origin
Plants:		
Almond (*Prunus amygdalus* Batsch.)	*Helicotylenchus* sp.	Syria
Apricot (*Prunus armeniaca* L.)	*Meloidogyne* sp. juveniles	Syria
	Tylenchorhynchus coffeae Siddiqi *et* Basir	
Banana corms (*Musa* sp.)	*Aphelenchoides* sp.	India
	Filenchus sp.	
	Paraphelenchus sp.	
	Radopholus similis (Cobb) Thorne	
Custard apple (*Annona reticulata* L.)	*Tylenchorhynchus* sp.	India
Fig (*Ficus carica* L.)	*Hemicriconemoides* sp.	India
	Hoplolaimus sp.	
	Meloidogyne incognita (Kofoid *et* White) Chitw.	India
Grapevine (*Vitis vinifera* L.)	*Longidorus* sp.	India
	Meloidogyne sp. juveniles	
	Pratylenchus sp.	
	Rotylenchulus reniformis Linford *et* Oliveira	
	Tylenchorhynchus sp.	
	Xiphinema sp.	
Guava (*Psidium guajava* L.)	*Aphelenchoides* sp.	India
	Ditylenchus sp.	
	Meloidogyne sp. juveniles	
	Pratylenchus sp.	
	Psilenchus sp.	
	R. reniformis	
	Trichodorus sp.	
	Tylenchorhynchus sp.	
Lime [*Citrus aurantifolia* (Christm.) Swingle	*Helicotylenchus* sp.	India
	Xiphinema americanum Cobb	
Litchi (*Litchi chinensis* Gaertu.) Sonn.	*Tylenchorhynchus* sp.	India
Mango (*Mangifera indica* L.)	*Aphelenchoides* sp.	India
	Helicotylenchus cv. microcephalus Sher	
	Helicotylenchus sp.	
	Hemicriconemoides mangiferae Siddiqi	India
	Hoplolaimus indicus Sher	
	M. incognita	
	Meloidogyne sp. juveniles	
	Pratylenchus brachyurus (Godfrey) Filipjev *et* Schu. Stekhoven	
	Pratylenchus sp.	Pakistan
	Tylenchorhynchus sp.	
	Xiphinema sp.	
Oil palm (*Elaeis guineensis* Jack.)	*Dolichodorus* sp.	Brazil
	Helicotylenchus multicinctus (Cobb) Golden	
	Tylenchorhynchus sp.	

TABLE I - *Continued.*

Name of plant materials	Nematodes recorded	Origin
Olive (*Olea europaea* L.)	*Pratylenchus penetrans* (Cobb) Filipjev *et* Schuurmans Stekhoven	Syria
Pomegranate (*Punica granatum* L.)	*M. incognita*	Syria
Sapota [*Manilkara zapota* (L.) Roven]	*Tylenchorhynchus* sp.	India
Organic materials:		
Cococompost	*Helicotylenchus* sp. *Meloidogyne* sp. juveniles *Tylenchorhynchus* sp.	Sri Lanka
Cocopeat moss	*Helicotylenchus* sp. *Pratylenchus* sp. *R. reniformis*	Sri Lanka
Compost	*Aphelenchoides* sp. *Meloidogyne* sp. juveniles	Pakistan
Compost	*Meloidogyne* sp. juveniles *Tylenchorhynchus* sp.	Pakistan
Grenagro pollina	*Ditylenchus dipsaci* (Kuehn) Filipjev *P. brachyurus* *Tylenchorhynchus* sp.	Italy
Neopeat	*Tylenchorhynchus* sp.	Sri Lanka
Organic manure	*Helicotylenchus* sp. *Meloidogyne* sp. juveniles *Tylenchorhynchus* sp.	Pakistan
Organic manure	*Meloidogyne* sp. juveniles *Pratylenchus* sp. *Tylenchorhynchus* sp.	Pakistan
Pak Green	*Meloidogyne* sp. juveniles *Pratylenchus* sp. *Xiphinema* sp.	Pakistan

the introduction of harmful nematodes into new geographical regions.

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