

(2) (1)

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.2009-2008

( ) ( )

2009-2008

69) ( )  
( )

<sup>3</sup> 100/ 1180.8

*Pratylenchus* spp.

. *Tylenchorhynchus* spp. *Rotylenchulus* spp. *Meloidogyne* spp.

*Meloidogyne* spp. *Pratylenchus* spp. :

. *Tylenchorhynchus* spp. *Rotylenchulus* spp.

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## Population Dynamics of Plant Parasitic Nematode Associated with Root of Cotton in Central Province Fields in Syria

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and T. Abou Al Fadil<sup>(1)</sup>

### ABSTRACT

Monthly population fluctuations of plant parasitic nematode population associated with root of cotton in central province fields in Syria were studied over a 2-year period 2008-2009. In both years, the differences between monthly samples were not significant. Average of nematode population density in soil decreased after sowing (May) and near the end of the season (at harvest) in both years and in all of the central province fields, then the numbers of nematode increased slowly again in June to reach a peak at mid-season (July). Ghab region had the higher population density (1180.8 juveniles/100cm<sup>3</sup> soil). An increase in numbers of nematode in soil was accompanied with a decrease in number in roots. Negative correlation was observed between average of the initial population density and reproduction factor. *Pratylenchus*, *Meloidogyne incognita*, *Rotylenchulus*, *Tylenchorhynchus* were dominant nematode species in these fields. Also, the infestation of the first three nematode species was not uniform.

**Key words:** Cotton, *Gossypium hirsutum*, Nematode, *Meloidogyne*, *Rotylenchulus*, *Pratylenchus*, *Tylenchorhynchus*, Soil.

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*Gossypium hirsutum* L.

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*Pratylenchus*.(Koenning *et al.*, 2004)*Rotylenchulus* spp. *Meloidogyne* spp. spp.

.(Gazaway and McLean, 2003)

:

(Johnson

*et al.*,1974; Cabanillas *et al.*, 1999; Crow *et al.*, 2000; Starr *et al.*, 2005)(Monfort *et**al.*, 2007).(Johnson *et al.*,1974; Starr,1988)

Bird Gay

(1981) Lewis Kraus-Schmidt (1973)

*Pratylenchus brachyurus**M. arenaria* *M. incognita**Hoplolaimus columbus**Rotylenchulus reniformis**Scutellonema brachyurum*

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3 100/ 300 100  
*M. incognita* *H. columbus*  
 (1974) Johnson  
*M. incognita*

*Pratylenchus* spp.

*Criconemoides ornatus*

*Helicotylenchus dihystra*

*Hoplolaimus* (1998) Robbins  
1995 *magnistylus*  
Arkansas 1996

1996 1995  
*Rotylenchulus reniformis*  
120-60 60-0

(Westphal and Smart, 2003;  
. Robinson *et al.*, 2005)  
(2006) Kirkpatrick Still  
Monroe Mississippi

120

15

.(  
8 )

10

40

500  
(Pi)

PH ( )

<sup>3</sup> 100

24  
(Hooper, 1986) ( 5 )

(C.I.H.,1972)  
(Mai and Lyon,1982)

(Pf/Pi)

(Celyer *et al.*, 2000) *Meloidogyne*  
=4 30-11 =3 10-3 =2 2-1 =1 =0 :*al.*, 2000)  
100 ≥ 5 100-31

)

...

(

(Kraus-Schmidt and Lewis,1979)

(1 ) <sup>3</sup> 100/ 15.5 10.7  
2009-2008

1 )  
C°30

(2  
(Zirakparvar *et al.*,1980)

<sup>3</sup> 100/ (1)

.2009-2008

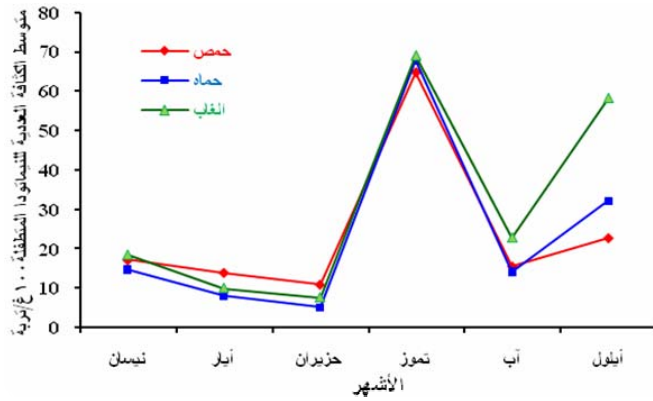
<sup>3</sup> 100/							
22.8	15.6	64.8	11	14	17.2		2008
32.2	14.2	67.8	5.2	8.2	14.8		
58.2	22.8	69	7.6	10	18.4		
<b>37.7 b</b>	<b>17.5 c</b>	<b>67.2 a</b>	<b>7.93 c</b>	<b>10.7 c</b>	<b>16.8 c</b>		
170	25.5	59.4	54.2	19.6	26.6		2009
806	152.2	350	112.2	10.6	38		
992	741.2	1180.8	142	16.4	65		
<b>552.67 a</b>	<b>306.3 ab</b>	<b>529.8 a</b>	<b>102.8 ab</b>	<b>15.5 b</b>	<b>43.2 b</b>		

(Johnson *et al.*,1974; Kraus-Schmidt and Lewis,1979; Noe and .Barkir,1983)

( 3 100/ 1180.8 69 )  
 (1 )  
 2009-2008

(Kraus-Schmidt and

.Lewis,1979)



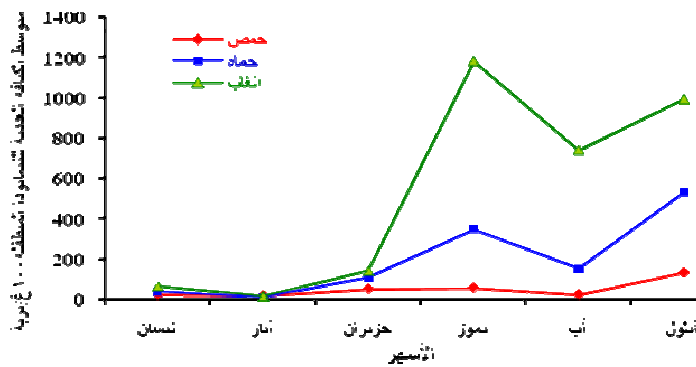
(1)

.2008

(2 )

( 24.1 3.2 ) 2009-2008

.(Starr et al.,2005)



(2)

.2009

(2)

.2009 -2008

2008			100/ (Pi) <sup>3</sup>
	(Pf) <sup>3</sup>	100/	
1.3 a	22.8		17.2
3.2 a	40		14.8
2.9 a	58.2		18.4
2009			100/ (Pi) <sup>3</sup>
	(Pf) <sup>3</sup>	100/	
7.26 b	170		26.6
24.08 a	806		38
15.14 ab	992		65

Meloidogyne Pratylenchus

Tylenchorhynchus Rotylenchulus

( )

(Johnson *et al.*,1974; Cabanillas *et al.*,1999)

3

Meloidogyne

(4 ) ( 5/ 13 25)

(3 ) ( <sup>3</sup> 100/ 386)

Johnson

(4 )

(1974)

(1969)

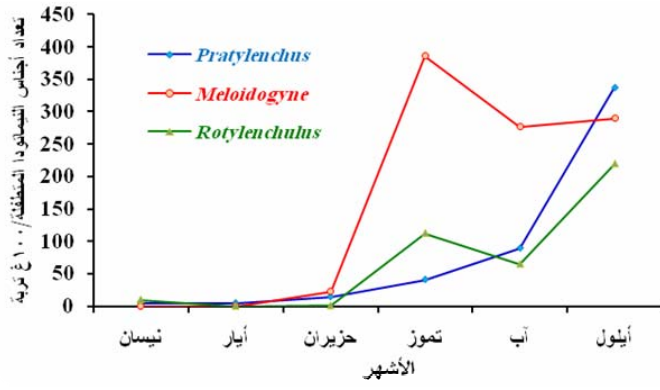
Barker

(1979) Lewis Kraus-Schmidt

1978-1977

*M. incognita*





(3)

(3 )  
(Kraus-Schmidt and

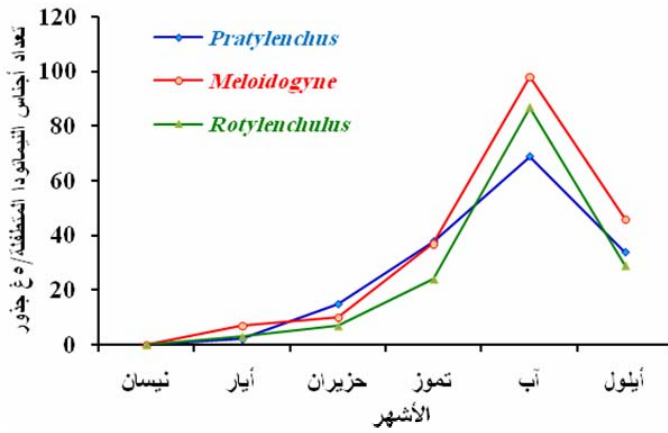
Pratylenchus

Lewis,1979)

(1974) Johnson

*P. brachyurus*

*.P. pentrance*



(4)

### Tylenchorhynchus

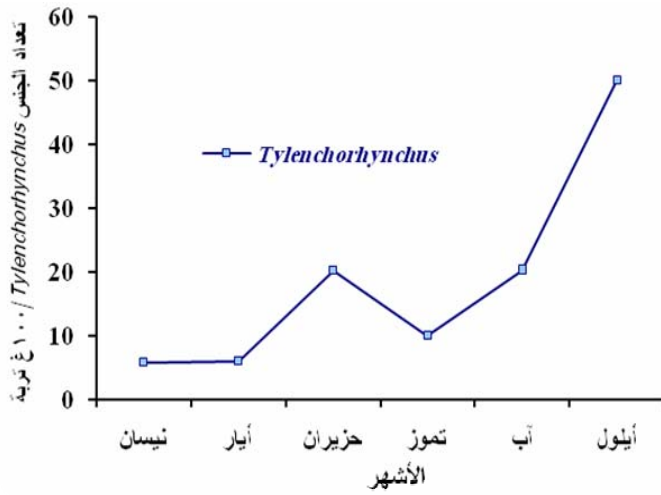
( 3 100/ 10)

(5 )

PH

(Robinson,1999)

(3 )



Tylenchorhynchus

(5)

Pratylenchus

Rotylenchulus

)

(1996)

(32.9)

Koenning

(4 ) (

*M. incognita*

(3 )

%65

(4 )

(3)

				PH	
	%	%	%		
	54	23	23	8.1	
	65	17	18	8.1	
	65	16	19	8.1	

(4)

*Meloidogyne*

أجناس اليمامودا														محافظة المنطقة الوسطى
خارجية الطفل			داخلية الطفل ونصف داخلية الطفل											
<i>Tylenchorkhynchus</i>			<i>Rotylenchulus</i>			<i>Pratylenchus</i>			<i>Meloidogyne</i>					
متوسط معدل الكسفر في المحافظة	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pf)	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pi)	متوسط معدل الكسفر في المحافظة	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pf)	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pi)	متوسط معدل الكسفر في المحافظة	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pf)	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pi)	متوسط معدل الكسفر في المحافظة	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pf)	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pi)	متوسط معدل الكسفر في المحافظة	متوسط التكاثر العددية 100 سم <sup>3</sup> تربة (Pi)	
3.3	46	14	2.2	5.5	2.5	2.1	17.1	8.3	2	6.3	7	80.2	11.4	حصص
6.9	54.7	7.9	13.3	159.4	12	12.4	224.5	18.1	3	25.1	5.9	90	15.3	حماد
3.9	57.9	15	32.9	854.8	26	3.2	252.5	79.3	3	13.4	8	52.3	6.5	الغاب

(Robinson,1999)

Kinloch

(Koenning *et al.*,1996)(1994) Sprengel  
Meloidogyne

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