

An Annotated Bibliography of Weeds as Reservoirs for Organisms Affecting Crops

Ia. NEMATODES

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AN ANNOTATED BIBLIOGRAPHY OF WEEDS
AS RESERVOIRS FOR ORGANISMS
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J. S. Manuel, L. E. Bendixen and R. M. Riedel¹

Introduction

"An Annotated Bibliography of Weeds as Reservoirs for Organisms Affecting Crops. I. Nematodes" was published in 1979. It contains 184 references published between 1927 and 1976. It represents a modest attempt to bring into one comprehensive volume the available results of research done in this particular area during the period covered.

The present publication is intended as a sequel to the one referred to above, updating it through 1980 and including some references missed in the first bibliography. It is hoped that the present bibliography will be found to be a useful reference source, as the first one has been, and that it will facilitate collaboration between nematologists and weed scientists.

The format used in the first publication was adopted for this one. The papers are listed alphabetically by author, year, title, and source followed by specific data. The index includes an alphabetical listing of authors, weeds, and organisms with notations referring to all relevant entries.

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Acknowledgments

The authors greatly appreciate the professional help of Dr. Susan Emerson, Head of the Agriculture Library, and Rosario Poli, Information Specialist, in the computer searches of the articles from the CAB ABSTRACTS.

Bibliography

- 001 Adesiyun, S. O. 1976. Host range studies of the yam nematode, *Scutellonema bradys*. *Nematropica*, 6:60-63.

A host range study of 30 crop plants and weeds revealed that benniseed (*Sesamum indicum*) and cowpea (*Vigna unguiculata*) were good alternative hosts of *Scutellonema bradys* in Nigeria. *Eupatorium odoratum*, *Synedrella* sp., roselle (*Hibiscus sabdariffa*), yam bean (*Sphenostylis stenocarpa*), and pigeon pea (*Cajanus cajan*) were moderate hosts and guinea corn (*Sorghum vulgare* var. *Durra*) and jute (*Corchorus olitorius*) were regarded as poor hosts. Non-hosts were maize and tobacco.

- 002 Ahmed, J. M., S. I. Hussain, and D. J. Raski. 1977. Occurrence, symptomatology and biology of stem and leaf gall nematode, *Anguina microlaenae*, on two new hosts in Iraq. *Plant Dis. Repr.* 61:1086-1087.

Anguina microlaenae was recorded for the first time outside Australia on two weed hosts. It was found in the stem and leaves of *Centaurea rigida* and *Consinia stenocephala* in Iraq.

- 003 Alam, M. M. and A. M. Khan. 1976. New host records of the root-knot nematode in North India. *Indian Phytopath.* 28:540-541.

Meloidogyne incognita from Uttar Pradesh, India, was reported on the following plants for the first time: *Abutilon indicum*, *Commelina nudiflora*, *Corchorus acutangulus*, *Cynodon dactylon*, *Euphorbia geniculata*, *Lippia nodiflora*, *Phyllanthus fraternus*, *Physalis peruviana* and *Setaria verticillata*.

- 004 Alam, M. M., A. M. Khan, and S. K. Saxena. 1975. Some new host records of root-knot nematode, *Meloidogyne javanica*. *Indian Phytopath.* 28:131.

Amaranthus gracilis, *Chenopodium ambrosoides*, *Cucumis melo* var. *agrostis*, *Euphorbia clarkeana*, *Mukia maderaspatana*, *Rosa indica*, and *Setaria glauca* are new hosts for *Meloidogyne javanica*. The new host records for India are: *Achyranthes aspera*, *Calendula officinalis*, *Celosia cristata*, *Chenopodium murale*, *Coleus blumei*, *Hibiscus rosa-sinensis*, *Punica granatum* and *Vernonia cinerea*.

- 005 Alam, M. M., A. M. Khan, and S. K. Saxena. 1976. Additional host records of the root-knot nematode, *Meloidogyne incognita*, in North India. *Current Science* 45:350.

In Aligarh, India, the presence of *Meloidogyne incognita* on *Acacia arabica*, *Acacia farnesiana*, *Calotropis procera*, *Cassia occidentalis*, *Centaurea cyanus*, *Fumaria parviflora*, *Hibiscus rosa-sinensis*, *Ipomoea carnea*, *Ipomoea eriocarpa*, *Launaea asplenifolia*, *Portulaca quadrifida*, *Rumex hastatus*, *Sida cordifolia*, *Spinacia oleracea*, *Vicia hirsuta*, *Antirrhinum majus*, and *Cichorium intybus* was reported. The last two species were new host records.

- 006 Alam, M. M., S. Qamar, A. Naqui, and K. Mahmood. 1975. Three additional hosts of the stubby-root nematode, *Trichodorus mirzai*. Siddiqi, 1960. *Current Science* 44:722.

Commelina nudiflora, *Eclipta alba* and *Setaria verticillata* growing as weeds in the Aligarh Muslim University Campus, India, were reported good hosts of stubby-root nematode, *Trichodorus mirzai*. Moderate to heavy galling in the roots of these weed species was noted.

- 007 Anonymous. 1974. Plant nematology. Central Plantation Crop Research Institute. Annu. Rep. 1974. India. pp. 61-63.

Radopholus similis was reported to be hosted by 23 plant species consisting of crops and weeds. The weed species are *Phaseolus calcaratus*, *Cyamopsis tetragonoloba*, *Pennisetum purpureum*, *Coleus parviflorus*, *Stylosanthis gracilis*, *Amaranthus viridis*, *Vigna unguiculata*, *Physalis minima*, and *Desmodium tortuosum*.

- 008 Antonio, H. and P. S. Lehman. 1978. [A note on the occurrence of nematodes of the genus *Meloidogyne* on weeds in the states of Panama and Rio Grande do Sul.] In: Mendes, B. V. (Ed.) Resumos dos trabalhos científicos e conferencias, III. Reuniao Brasileira de Nematologia, Sociedade Brasileira de Nematologia et da Escola Superior de Agricultura, Mossoro, 1978. Mossoro, R. N. Brazil (1978.) 76 [Pt. Calecao Mossoroene Vol 62.] Centro Nacional de Pesquisa de Soja, EMBRAPA, Casa Postal 1061 -86.100-Londrina, PR, Brazil.

- 009 Arrieta, A., G. Valencia, and S. Velasquez. 1976. [Weed hosts of the root-knot nematode (*Meloidogyne* sp.) in Cordoba Department (Colombia)]. Malezas hospedantes del nematodo de los nodulos radiculares (*Meloidogyne* sp.) en el Departamento de Cordoba (Colombia) [Congr. Asoc. Calomb. Fitopat. Cienc. Afines, Bogota Colombia, 1 Sept. 1976, Abstract] Noticias Fitopatologicas, Colombia (1976) 5 (2):99.

- 010 Babatola, J. O. 1980. Studies on the weed hosts of the rice root nematode, *Hirschmanniella spinicaudata*. Sch. Stek. 1944. Weed Res. 20:59-61.

Weed hosts of the rice root nematode, *H. spinicaudata*, were surveyed in a swamp rice field at Badeggi, Nigeria. Forty-five weed species, mainly grasses and sedges, occurred very frequently and were very good hosts of the nematode. A wild rice, *Oryza longistaminata*, was a preferred host.

Reported weed hosts are:

Cyperaceae

<i>Cyperus compressus</i>	<i>Eleocharis</i> sp.
<i>Cyperus difformis</i>	<i>Fimbristylis dichotoma</i>
<i>Cyperus distans</i>	<i>Fimbristylis umbellata</i>
<i>Cyperus lanceolatus</i>	<i>Kyllinga erecta</i>
<i>Cyperus rotundus</i>	<i>Mariscus</i> sp.
<i>Cyperus tennispica</i>	

Gramineae

Brachiaria distichopulla
Brachiaria mutica
Corchorus brownii
Cynodon dactylon
Cynodon plectostachyus
Digitaria debilis

Echinochloa colonum
Echinochloa pyramidalis
Eleusine africana
Eragrostis gigantea
Eragrostis linearis
Oryza longistaminata
Panicum repens
Rottboellia exaltata

Other Families

Ageratum conyzoides
Alternanthera sessilis
Ammania percuriana
Commelina diffusa
Commelina nudiflora
Euphorbia hirta
Hyptis reriipes
Ipomoea reptans

Jussiaea sp.
Nymphaea lotta
Nymphaea maculata
Oldenlandia corymbosa
Oldenlandia latifolia
Oldenlandia senegalensis
Oxalis sp.
Tephrosia sp.
Thalia geniculata

- 011 Basu, S. D. 1974. Weed hosts of root-knot nematodes in tea estates around Jorhat. Two and a Bud. 21:50.

In tea nurseries around Jorhat, Assani, India, 22 weed species were found infested with *Meloidogyne incognita* and/or *Meloidogyne javanica*. The danger of the presence of infested weeds in tea seedlings and the possible spread of infestation to mature tea are briefly discussed.

- 012 Basu, S. D. 1975. Weed hosts of root-knot nematodes. Two and a Bud. 22.2, 91. Sec. Jul Source: Hort. Abstr. 47, 1004.

Some tea plantation weeds which are hosts of *Meloidogyne incognita* and *Meloidogyne javanica* are listed.

- 013 Basu, S. D. and B. Banerjee. 1978. Effect of infestation of *Meloidogyne incognita* (Kofoid and White) Chitwood on some ancillary plants grown with tea in north east India. Two and a Bud. 25:28-29.

All of the 15 different shade trees and green crop except *Crotalaria anagyroides* were infested with *M. incognita* following inoculation of seedlings in a pot experiment. *Albizzia lebbek*, *Albizzia maranguensis*, *Albizzia moluccana*, *Albizzia odoratissima*, *Albizzia procera*, *Albizzia richardiana*, *Tephrosia candida* and *Tephrosia vogelii* were all good hosts.

- 014 Behringer, B. 1976. Beet eelworm...danger? 2nd Ann. Convention for the Promotion of Sugar Beet Cultivations in South Germany. Zeitschrift fur die Zukerindustrie. 1976. 26:364.

Distribution of sugarbeet nematode (*Heterodera schachtii*), biology, identification, symptoms, host plants, crop rotations, and control of weed hosts are presented.

- 015 Bhatti, D. S., D. C. Gupta, R. S. Dahiya, and I. Malhan, 1974. Additional hosts of the root-knot nematode, *Meloidogyne javanica*. Current Science 43:622-623.

Plants reported to be new hosts of *Meloidogyne javanica* are:

<i>Achyranthes aspera</i>	<i>Euphorbia thymifolia</i>
var. <i>propyristachya</i>	<i>Nicotiana plumbaginifolia</i>
<i>Browallia</i> sp.	<i>Portulaca quadrifida</i>
<i>Cassia sophera</i>	<i>Potamogeton</i> sp.
<i>Cyperus rotundus</i>	<i>Withania somnifera</i>
<i>Dalbergia sisoo</i>	

- 016 Bhatti, D. S. and R. S. Dahiya. 1979. New host records of *Meloidogyne* spp. Indian Jour. Nemat. 7:154.

Calotropis sp., *Pentapetes phoenica*, and *Pongamia glabra* are new host records for *Meloidogyne javanica* and *Cleome viscosa* and *Leucas urticaefolia* for *Meloidogyne incognita*.

- 017 Bird, A. F. and J. P. Milln. 1979. The growth of *Meloidogyne javanica* in some Australian native plants. Search. 10(1/2):48-50.

Sixteen Australian plants were tested for susceptibility to *M. javanica*. The following were good hosts: *Albizzia distachya*, *Acacia melanoxylon*, *Alyogyne hakeifolia*, *Hibiscus trionum*, *Sida rhombifolia*, *Lycium australe*, and *Solanum laciniatum*.

- 018 Cadet, P. and G. Merny. 1978. Penetration and development of *Heterodera oryzae* on different plants. Intern'l. Cong. Pl. Path. (3rd) Munchen, GFR. Abst. Papers. 148.

Of the 16 plants tested, *H. oryzae* juveniles failed to penetrate in millet, *Panicum maximum*, eggplant, and pepper; a few penetrated but failed to develop in cotton, sugarcane, and sorghum; penetrated moderately but only males developed in *Centrosema pubescens* and *Vigna sinensis*; and a few females developed in soybean, *Pueraria phaseoloides*, tomato, and rice cv. Guiss; many females developed in maize and *Narcissus umbellatus*.

- 019 Chambers, A. Y. and J. M. Epps. 1965. Comparative suitability of hosts for reproduction of *Heterodera glycines*. Phytopath. 55:497.

Reproduction was compared on 11 cultivated and weed hosts in greenhouse experiments. Some of the hosts allowed greater reproduction of the nematodes than other.

Results obtained indicated that *Sesbania exaltata* supported about three times as much reproduction per gram of roots as soybean (*Glycine max* "Lee"). Kobe lespedeza (*Lespedeza striata*) maintained over seven times as much reproduction as soybean, Korean lespedeza (*Lespedeza stipulacea* "Rowan"), and snapbean (*Phaseolus vulgaris* "Contender"). *Lamium amplexicaule* supported reproduction equal to soybean. Sericea lespedeza (*Lespedeza cuneata*), hairy vetch (*Vicia villosa*), and white lupine (*Lupinus albus*) were poor hosts.

- 020 Chikaoka, I. 1979. Host plants of *Pratylenchus penetrans*. Japanese Jour. Nemat. 9:49-53.

Of 172 plant species from 48 families, 168 species were found to be hosts of *P. penetrans* in Japan. Members of the Leguminosae, Compositae, and Cucurbitaceae were generally good hosts. Three species of marigold and nutgrass were non-hosts.

- 021 Coates-Beckford, P. L. and R. B. Malek. 1978. Host preferences of the stunt nematode *Tylenchorynchus agri*. Plant Dis. Repr. 62:793-796.

Of the 68 plant species and cultivars each inoculated with 100 *Tylenchorynchus agri* in pot tests, 33 (mostly Leguminosae and Gramineae) were rated as excellent hosts, 5 as good hosts, 7 as fair, and 23 as poor hosts. Weed species considered good hosts were *Tephrosia vogelii* and *Chenopodium quinoa*. Recorded poor hosts were *Sesbania exaltata*, *Coronilla varia*, *Gomphrena globosa*, *Xanthium chinense*, *Crotalaria spectabilis*, *Datura stramonium*, *Ipomoea purpurea*, *Asparagus officinale*, and *Abutilon theophrasti*.

- 022 Cooke, P. 1975. Vegetable galls of Warwickshire. Proc. Cowentry and District Nat. Hist. and Sci. Soc. 4:289-300.

Anguillulina (Ditylenchus) dipsaci was reported infesting *Plantago lanceolata* in Warwickshire, England.

- 023 Cornejo-Quiroz, M. 1977. Host range studies for *Nacobbus aberrans*. Nematropica 7:14.

Good hosts of *N. aberrans* in Peru included the crops *Ullucus tuberosus* and *Chenopodium quinoa* and the weed *Calandria albis*.

- 024 Edwards, D. I. and E. J. Wehunt. 1971. Host range of *Radopholus similis* from banana areas of Central America with indication of additional races. Plant Dis. Repr. 55:415-418

Thirty-six crops and 64 weed species were tested for host status of *Radopholus similis* in Panama and Honduras. Of the 64 weed species tested, 4 were determined to be hosts of *R. similis*. These included: *Desmodium gyrans*, *Desmodium intortum*, *Desmodium uncinatum* and two varieties of razorsedge. *Scleria pterota*, a sedge common in high rainfall areas of Central America, was capable of sustaining a high population of *R. similis*. Field observations indicated that in areas fallowed for 7 months for the control of *R. similis*, the presence of this sedge in the absence of bananas and other known suitable hosts maintained an infestation level of 20%.

- 025 Edwards, D. I. and E. J. Wehunt. 1973. Hosts of *Pratylenchus coffeae* with additions from Central American banana producing area. Plant Dis. Repr. 57:47-51.

Forty-seven plant species were tested as hosts of *Pratylenchus coffeae* in Honduras and Panama. Twenty-six of the plants tested were hosts, 18 of which

were not previously recorded. A list of recorded crop and weed hosts is included. The weed hosts are:

<i>Ageratum mexicanum</i>	<i>Eleusine coracana</i>
<i>Alternanthera brasiliensis</i>	<i>Eupatorium triplinerve</i>
<i>Alternanthera sessilis</i>	<i>Euphorbia geniculata</i>
<i>Amaranthus lividus</i>	<i>Geophila repens</i>
<i>Antirrhinum majus</i>	<i>Gigantochloa apus</i>
<i>Aster</i> sp.	<i>Hypochoeris radicata</i>
<i>Barreria latifolia</i>	<i>Justica simplex</i>
<i>Bellis</i> sp.	<i>Leucas aspera</i>
<i>Bromis inioloides</i>	<i>Lolium rigidum</i>
<i>Calopogonium muconoides</i>	<i>Mimosa pudica</i>
<i>Cassia laevigata</i>	<i>Ocimum sanctum</i>
<i>Cassia obtusifolia</i>	<i>Orthosiphon grandiflorum</i>
<i>Cassia mimosoides</i>	<i>Oxalis acetosella</i>
<i>Coleus scutellarioides</i>	<i>Oxalis</i> sp.
<i>Convallaria majalis</i>	<i>Paspalum conjugatum</i>
<i>Coronopus didymus</i>	<i>Pastinaca sativa</i>
<i>Crassocephalum crepidioides</i>	<i>Piper betle</i>
<i>Crotalaria incana</i>	<i>Pogostemon pachouly</i>
<i>Crotalaria juncea</i>	<i>Pollinia ciliata</i>
<i>Crotalaria striata</i>	<i>Portulaca oleracea</i>
<i>Cynodon dactylon</i>	<i>Rubus occidentalis</i>
<i>Cyperus rotundus</i>	<i>Rumex acetosella</i>
<i>Dendrocalamus asper</i>	<i>Shuteria vestita</i>
<i>Desmodium axillare</i>	<i>Solanum nigrum</i>
<i>Desmodium uncinatum</i>	<i>Sonchus oleraceus</i>
<i>Digitaria adscendens</i>	<i>Spergula arvensis</i>
<i>Dolichos lablab</i>	<i>Tagetes</i> sp.
	<i>Tripsacum laxum</i>
	<i>Vernonia cinerea</i>

- O26 Edwards, D. I. and J. M. Epps. 1975. Annotated bibliography of nematodes of soybeans 1969-73. Agr. Res. Ser. U. S. Dept. Agr. ARS-NC-24.

One hundred thirty-four references on the nematodes of soybean are listed. Four articles deal with the development of the soybean cyst nematode isolates on some weeds.

- O27 Elgindi, D. M. and F. F. Mousa. 1971. Root-knot nematodes in recently reclaimed sandy areas of U. A. R. II. New host records for root-knot nematodes, *Meloidogyne* spp. Mededelingen van de Faculteit Landbouwwetenschappen Rijksuniversiteit Gent. 36:1341-1344.

Twenty-four host plants of *Meloidogyne* spp. in a recently reclaimed sandy area in Egypt were reported. New hosts recorded were *Bignonia purpurea*, *Cucumis melo* v. *aegyptiacus*, *Cedrela* sp., *Melaleuca ericifolia*, *Cupressus sempervirens*, *Cucumis pepo* v. *melope*, and *Portulaca oleracea* v. *sativa*.

- O28 Endo, B. Y. 1959. Responses of root-lesion nematodes *Pratylenchus brachyurus* and *Pratylenchus zeae* to various plants and soil types. Phytopathology 49:417-421.

Forty-two species and varieties of plants were tested under greenhouse conditions to determine their suitability as hosts for the nematodes. Of the plants tested, corn (varieties NC-27 and Dixie 17), sorghum, and *Digitaria sanguinalis* were very favorable for reproduction of the nematodes.

- 029 Epps, J. M. and A. Y. Chambers. 1958. New host records for *Heterodera glycines*, including one host in the Labiatae. Plant Dis. Repr. 42:194.

Sesbania macrocarpa, *Lupinus albus*, and *Lamium amplexicaule* were the new hosts for the soybean cyst nematode.

- 030 Epps, J. M. and A. Y. Chambers. 1966. Comparative rates of reproduction of *Heterodera glycines* on 12 host plants. Plant Dis. Repr. 50:608-610.

Sesbania macrocarpa allowed two or four times more reproduction per gram of root than soybean; Kobe lespedeza allowed approximately seven times more reproduction. Korean lespedeza, *Lamium amplexicaule* and wild soybean allowed reproduction about equal to that of soybean. *Sericea lespedeza* and hairy vetch were poor hosts for the soybean cyst nematode.

- 031 Epps, J. M., D. I. Edwards, J. M. Good, and R. B. Rebois. 1973. Annotated bibliography of nematodes of soybean 1882-1968. Agr. Res. Ser. U.S. Dept. Agr. ARS-S-8. 75 pp.

A list of 380 references on nematodes of soybean is given. Of this number eight articles are cited dealing with weed hosts.

- 032 Epps, J. M. and A. M. Golden. 1967. Suitability of Kobe lespedeza for reproduction of isolates of the soybean cyst nematode from nine locations. U.S. Dept. Agric. Plant Dis. Repr. 51:775-776.

Isolates of the soybean-cyst nematode *Heterodera glycines* reproduced on *Lespedeza striata*, variety Kobe, in greenhouse experiment. Some variations occurred in the rates of reproduction, but all isolates were highly pathogenic and could not be differentiated on this host. Kobe lespedeza may be an important host.

- 033 Ferraz, L. C. C. B., R. A. Pitelli and V. Furlan. 1977. Nematoides associados a plantas daninhas na Regiao de Jaboticabal-SP.:Primeiro relato. Trabalho apresentado no 2 Reuniao Regional da S. B. P. C. Jaboticabal.

The paper deals with the association between plant parasitic nematodes and weeds in the region of Jaboticabal, Sao Paulo, Brazil. Twenty-seven weed species were included in the survey. Soil collected at the rhizosphere zone and roots of weeds constituted the samples for nematological studies. Thirteen nematode species were identified, included in nine genera on the weed species.

- 034 Fortuner, R. 1976. Etude ecologique des nematodes des rizieres du Senegal. Cah. ORSTOM, per Biol. 13:179-191.

Hirschmanniella oryzae was found parasitizing several weeds in the Senegal Delta even in areas never cultivated with rice. Reported hosts of two species of *Hirschmanniella* are:

Hirschmanniella oryzae

<i>Aeschynomena indica</i>	<i>Oryza breviligulata</i>
<i>Andropogon gayanus</i>	<i>Phragmites mauritianus</i>
<i>Brachiaria mutica</i>	<i>Pycnus albomarginatus</i>
<i>Cyperus auricomus</i>	<i>Saccharum officinarum</i>
<i>Cyperus maritimus</i>	<i>Scirpus cubensis</i>
<i>Digitaria</i> sp.	<i>Setaria pallidifusca</i>
<i>Diplachne fusca</i>	<i>Sorghum vulgare</i>
<i>Echinochloa colonum</i>	<i>Sporobolus robustus</i>
<i>Eleusine indica</i>	<i>Typha</i> sp.
<i>Nymphaea micrantha</i>	<i>Vetiveria</i> sp.
<i>Oryza barthii</i>	<i>Vossia cuspidata</i>

Hirschmanniella spinicaudata

<i>Cyperus maritimus</i>	<i>Pycnus patens</i>
<i>Cyperus triangulare</i>	<i>Scleria</i> sp.
<i>Helecharis geniculata</i>	<i>Urena lobata</i>

- 035 Golden, A. M. 1975. First occurrence and morphology of a *Meloidoderita* species in the United States. Jour. Nematol. 8:286.

A species of *Meloidoderita* was found together with *Heterodera weissi* on the roots of *Polygonum pensylvanicum* at Beltsville, Maryland.

- 036 Graham, L. 1977. Rebel nematodes marching North. Soybean Digest. 38(2):10-11.

The paper listed the following 13 weed species as hosts *Heterodera glycines*, of the soybean cyst nematode:

<i>Cardamine parviflora</i>	<i>Penstemon</i> sp.
<i>Cassia tora</i>	<i>Phytolacca americana</i>
<i>Cerastium vulgatum</i>	<i>Portulaca oleracea</i>
<i>Cleome serrulata</i>	<i>Stellaria media</i>
<i>Geranium maculatum</i>	<i>Trifolium agrarium</i>
<i>Lamium amplexicaule</i>	<i>Verbascum thapsus</i>
<i>Linaria canadensis</i>	

- 037 Greco, N. 1976. Weed hosts of the nematode *Ditylenchus dipsaci* in Apuliap. Nematologia Mediterranea. 4:99-102.

- 038 Hussain, S. I. and A. J. Al-zarari. 1977. New host records of root-knot and shoot gall nematodes from Iraq. Plant. Dis. Repr. 61:994.

Anguina microlaenae has been found causing galls on leaves of *Capsella bursa-pastoris*. Other new host records of this nematode are *Centaurea rigida* and *Consinia stenocephala*.

- 039 Jatala, P., J. Franco, A. Vilca and W. Cornejo. 1979. Non-solanaceous hosts of *Globodera* in the Andes. Jour. Nemat. 11:210-211.

Field infections in Peru of *Oxalis tuberosa*, *Tropaeolum tuberosum*, *Ullucus tuberosus*, and some malvaceous weeds by *Globodera pallida*, and infection of *Chenopodium quinoa* by *Globodera rostochiensis* were reported.

- 040 Kasimova, G. A. and Ya.Yu. Atakishieya. 1976. Ecological and faunistic characterization of nematodes of weeds of vegetable crops on the Apsheron peninsula (Azerbaijan). *Biologicheskie Nauki*. No. 5:45-51.

In a survey of the nematodes of weeds associated with vegetable crops on 36 farms of the Apsheron peninsula in the Azerbaijan SSR, 621 plants (71 species) were examined during 4 seasons. One hundred-five nematode species were noted and listed, with the hosts indicating plant parts infected and their ecological grouping. Seven species were common to both weeds and vegetables.

- 041 Khan, A. M. and M. M. Alam. 1974. Incidence of the root-knot nematode, *Meloidogyne javanica* (Treub, 1885) Chitwood, 1949 in certain wild and cultivated plants with some new host record. *Geobios* (Jodhpur). 1:146-147.

- 042 Khan, S. A. 1959. Studies on *Pratylenchus zeae* (Nematoda, Tylenchida) on sugar cane in Louisiana. *Dissertation Abstracts* 20:2483-2484.

The distribution, morphology, parasitism, and pathogenicity of a species of *Pratylenchus* was studied on sugar cane and other host plants in Louisiana cane fields in 1958 and 1959. Additional hosts parasitized by a variant of *Pratylenchus zeae* in greenhouse tests were sugar cane seedlings, corn, *Sorghum halepense*, *Digitaria sanguinalis*, *Eleusine indica*, *Echinochloa crusgalli*, and *Sporobolus poiretti*.

- 043 Khurramou, Sh. KH. 1977. Plant parasitic nematodes of southern Uzbekistan. [*Syobadnozhi-unshchie pochvennye entomopatagennye i fitonematody* (Sbornik nauchnykh robot)]. Publ: Leningrad, USSR: Akademiya Nauk USSR. Zoologicheskii Institut. 1977. 32-34.

Thirty-four plant parasitic nematodes were recorded on 30 plant hosts which include cucurbits, vegetables, fruits, fodder crops, and weeds.

- 044 Kir'yanova, E., J. Kirjanova, E. L. Krall, and H. Krall. 1976. The sowthistle cyst nematode *Heterodera sonchophila* n. sp. (Nematoda: Heteroderidae) from Estonia. *Biologia* 25:305-315.

Heterodera sonchophila n. sp. parasitized roots of corn and *Sonchus arvensis* in the Bashkit, ASSR and in the Estonian, SSR. The nematode was very pathogenic to its host plants. *Calcarius lapponicus* and *Rumex acetosella* were reported to be resistant.

- 045 Koen, H. 1967. Notes on the host range, ecology and population dynamics of *Pratylenchus brachyurus*. *Nematologica* 13:118-124.

Pratylenchus brachyurus has a relatively wide host range including many crops and weeds growing on the Transvaal Highveld. Weed hosts include *Sesbania pinnata*, *Amaranthus hybridus*, *Eleusine africana*, *Cosmos bipinnatus*, and *Themeda triandra*.

- 046 Koshy, P. K. and V. K. Sosamma. 1977. Host range of the burrowing nematode *Radopholus similis* (Cobb. 1893) Thorne 1949. *Indian Jour. Nemat.* 5:255-257.

Of the 73 plant species inoculated with the banana race of *R. similis*, 30 were hosts of the nematode. New host records were *Cynopsis tetragonoloba*, *Phaseolus calcaratus*, *Lathyrus sativus*, *Physalis minima*, *Coleus parviflorus*, *Amaranthus viridis*, *Myristica fragrans*, *Curcuma longa*, *Allium sepa*, *Elaeis guineensis*, *Xanthosoma sagittaefolium*, *Oryza sativa*, and *Saccharum officinarum*.

- 047 Krall, E. L. and G. I. Solov'eva. 1976. On the ecology of a new species of leaf gall nematode, *Anguina* n. sp., a parasite of sedges in the north-west of the European part of USSR. Biologicheskije problemy Severa. VII Simpozium. Zoologiya bespozvonochnykh, parazitologiya fiziologiya i biokhimiya zhivotnykh (Tezisy dokladov.). pp. 32-35.

Five species of sedges (including the type host *Carex acuta*) were found to be hosts of a new species of *Anguina* in Karelia, the Leningrad region, Estonia, Latvia, and Lithuania, USSR.

- 048 Lal, A., B. S. Yadav, and R. P. Nandurana. 1978. A record of some new and known weed hosts of *Rotylenchus reniformis* Linford and Oliveira, 1940 from Rajasthan. Indian Jour. Nemat. 6:94-95.

Twenty weed species from Udaipur, India, were screened for *R. reniformis* infestation. Seven species were recorded as hosts for the first time: *Asphodelus tenuifolius*, *Blumea hieracifolia*, *Chenopodium murale*, *Convolvulus arvensis*, *Coronopus didymus*, *Euphorbia thymifolia*, and *Tribulus terrestris*. *Ageratum conyzoides*, *Amaranthus spinosus*, and *Centella asiatica* are new host records for India.

- 049 Lal, R., K. Nagarajan, and G. V. G. Krishnamurthy. 1976. Weed hosts of root knot nematode (*Meloidogyne javanica*) in tobacco nurseries. Indian Tobacco Bull. 8:3-5.

Thirty-two out of 66 weed species growing in tobacco nurseries around Rajahmundry, India, were found infected with *M. javanica*. The root galls were mostly large and all the infected plants had mature females and abundant egg masses. Thirteen weeds were new host records for India.

- 050 Lal, R., K. Nagarajan, and G. V. G. Krishnamurthy. 1977. Additional weed hosts of root-knot nematode (*Meloidogyne javanica*) in tobacco nurseries. Indian Tobacco Jour. 9:3-4.

Of the 25 weeds planted in tobacco nurseries around Rajahmundry and Devarapalli, India, in plots with *Meloidogyne javanica*, 22 species became infected, 12 of which were new host records.

- 051 Lehman, P. S. 1980. Weeds as reservoirs for nematodes that threaten field crops and nursery plants. Nemat. Cir. No. 66. Fla. Dept. Agric. and Consumer Service Div. Plant Ind. 2 pp.

Several nematode species were found associated with weeds in Florida nurseries. *Meloidogyne incognita* was found to cause galls on *Saurus cernuus*, a weed that is common in peat bogs. It was also found infecting *Fatoua villosa*, a weed scattered among container grown plants on raised greenhouse benches. *Pratylenchus penetrans* was found infecting *Digitaria sanguinalis* and *Oxalis corniculata*. *Oxalis stricta* and *Phyllanthus amarus* were found harboring burrowing nematodes, *Radopholus similis*.

- 052 Martin, G. C., G. L. James, J. L. Bissett, and J. I. Way. 1969. New records of infection by the burrowing nematode. *FAO Plant Protection Bull.* 1969. 17:116.

In Rhodesia, *Radopholus similis* was reported infesting the pods of *Arachis hypogea*, roots of *Zea mays*, *Saccharum officinarum*, *Oryza sativa*, *Nicotiana tabacum*, *Glycine max*, *Triticum aestivum*, *Solanum tuberosum*, *Euphorbia hirta*, and *Sonchus oleraceus*.

Less than five nematodes per plant were noted in *Camellia sinensis*, *Gossypium hirsutum*, and *Eragrostis curvula*.

- 053 Michell, R. E. 1972. Comparative studies on the developmental rate, reproductive potential, pathogenicity, host range and morphology of five geographical isolates of *Meloidogyne naasi*. *Dissertation Abstracts International.* 33B:11.

Stellaria media, *Rumex crispus*, sorghum, and creeping bentgrass serve as host differentials for separating races of *M. naasi*.

- 054 Miller, P. M. 1980. Reproduction and survival of *Xiphinema americanum* on selected woody plants, crops, and weeds. *Plant Dis. Repr.* 64:174-175.

Populations of *Xiphinema americanum* on 37 plants in the greenhouse were measured after 59, 118, and 169 days. Of the 37 plants investigated, 13 were weeds. Considered good hosts of the nematode were *Potentilla canadensis*, *Cichorium intybus*, *Taraxacum officinale*, and *Stellaria media*. *Digitaria glomerata*, *Sorghum vulgare*, *Oxalis corniculata*, *Plantago lanceolata*, and *Plantago major* were moderate hosts, whereas *Ambrosia artemisiifolia* and *Erigeron annuus* were poor hosts.

- 055 Mohandas, C., N. K. C. Pattanaik, and J. S. Prasad. 1980. Host range of the rice root nematode, *Hirschmanniella oryzae*. *Indian Jour. Nematol.* 9:177-178.

Common weeds from rice fields were analyzed for *H. oryzae*. The nematode was found parasitizing a number of species, both mono- and dicotyledons.

- 056 Moraes, M. V. de and L. G. E. Lordello. 1972. Weeds as hosts of nematodes of the genus *Meloidogyne* Goeldi. *Resumos 9. Seminario Brasileiro de Herbicidas e Ervas Daninhas, Campinas.*

- 057 Moraes, M. V. de, L. G. E. Lordello, R. R. A. Lordello, and D. A. Piccinin. 1973. [Further investigations on host plants of the coffee root-knot nematode, *Meloidogyne exigua* Goeldi, 1887]. *Novas pesquisas sobre as plantas hospedeiras do nematoide do cafeleiro, Meloidogyne exigua Goeldi 1887. Anais de Escola Superior de Agricultura "Luiz de Queiroz 30:71-75.*

Tests performed on 54 crop and 34 weed species revealed that none was susceptible to *Meloidogyne exigua* although several were susceptible to other *Meloidogyne* species.

- 058 Moraes, M. V. de, L. G. E. Lordello, A. J. Reis, R. A. Thomaziello, R. R. A. Lordello, and W. Goncalves. 1977. Crop rotation trial on land infested with *Meloidogyne exigua*. *Trabalhos apresentados a 11 reuniao de Nematologia,*

Piracicaba, Brazil 14-16 Setembro 1976 Sociedade Brasileira de Nematologia et de Escola Superior de Agricultura "Luiz de Queiroz" USP Publicacao No. 2:257-265.

Meloidogyne exigua is widespread and persists in the soil for a short time (less than six months). It has a limited host range with *Solanum nigrum* the only known weed host.

- 059 O'Bannon, J. H. 1977. Worldwide dissemination of *Radopholus similis* and its importance in crop production. Jour. Nemat. 9:16-25.

Radopholus similis attacks agronomic and horticultural crops and many weeds, and is reported to reproduce on more than 250 plant species. Reported weed hosts are *Crotalaria juncea* (Natal), *Cyperus rotundus* (Hawaii), *Tephrosia vogelii*, and *Indigofera hirsuta* (Florida).

- 060 Ogbuji, R. O. 1978. Weed-hosts of *Meloidogyne incognita* in Nigeria. Nematologia Mediterranea 6:229-230.

Thirty-eight weed species artificially inoculated with a Nigerian population of *Meloidogyne incognita*, and on which the nematode reproduced, were reported.

- 061 Perez L. 1974. Weeds as hosts to nematode parasites in bananas in the Uraba district. Revista Comalfi 1:185-187.

- 062 Riggs, R. D. and M. L. Hamblen. 1962. Soybean-cyst nematode host studies in the family Leguminosae. Ark. Agr. Expt. Sta. Rept. Ser. 110, 18 pp.

In the Leguminosae family, 1,152 entries representing 302 species in 61 genera were inoculated with *Heterodera glycines*. Three hundred and ninety-nine entries in 23 genera were classified as susceptible and 720 entries in 12 other genera allowed limited reproduction. Fifty new records were recorded which included both crops and weeds.

- 063 Riggs, R. D. and M. L. Hamblen. 1966. Further studies on the host range of soybean-cyst nematode. Ark. Expt. Sta. Bull. 718:19 pp.

Heterodera glycines reproduced on 334 of 677 legumes and 62 of 280 non-legumes tested. These represented 103 species in 17 genera of legumes and 48 species in 43 genera of non-legumes.

- 064 Robbins, R. T. and K. R. Barker. 1973. Comparison of host ranges and reproduction among populations of *Belonolaimus longicaudatus* from North Carolina and Georgia. Plant. Dis. Repr. 57:750-754.

The reproduction of four populations (three from North Carolina and one from Georgia, USA) of *B. longicaudatus* on 63 plant species and cultivars was tested in pot experiments. All populations had wide host ranges including weeds, turf grasses, forage crops, fruit crops, ornamentals, and field crops. Weed hosts included *Ipomoea* sp., *Digitaria* sp., *Sorghum halepense*, *Rumex acetosella*, and *Daucus carota*. The Georgia population increased at a greater rate than the other population and, unlike them, reproduced on *Taraxacum officinale*.

- 065 Rodriguez-Kabana, R., P. S. King, G. Buchanan, and D. Murray. 1978. Susceptibility of common weed species to *Meloidogyne arenaria*. Proc. Am. Phytopath. Soc. 4:228.

Under greenhouse conditions, *Cassia occidentalis*, *Desmodium tortuosum*, *Crotalaria spectabilis*, *Sesbania exaltata*, and *Panicum taxanum*, grown in soil infested with *M. arenaria*, were found to be resistant to the nematode. Highest galling indices were obtained for *Chenopodium album*, *Chenopodium obtusifolia*, and *Sida spinosa*. *Datura stramonium*, *Jacquemontia tamnifolia*, and all tested species of *Ipomoea* were good hosts. The poorest host was *Digitaria sanguinalis*.

- 066 Roy, A. K. 1979. Weed hosts of *Meloidogyne graminicola*. Indian Jour. Nemat. 7:160-163.

Twenty-four monocotyledonous and 22 dicotyledonous weeds commonly found in rice fields in Assam were tested as hosts of *M. graminicola*. No reproduction was noted on five monocots and four dicots; however, good reproduction was noted on seven of each group. *M. graminicola* appears to have a narrower host range than *Meloidogyne incognita*.

- 067 Saad, A. T. and M. Tanveer. 1972. Prevalence and host range of *Meloidogyne* species in Lebanon. FAO Plant Prot. Bull. 20:31-35.

Meloidogyne javanica, *Meloidogyne incognita*, and *Meloidogyne arenaria* were found in a survey of field crops, fruit crops, vegetables, ornamentals, and weeds in Lebanon. No specific weed hosts were listed for *M. arenaria*.

Naturally infected weed hosts of *M. incognita* were:

<i>Amaranthus retroflexus</i>	<i>Digitaria sanguinalis</i>
<i>Celosia argentea</i>	<i>Euphorbia peplus</i>
<i>Chenopodium album</i>	<i>Ipomoea purpurea</i>
<i>Cichorium intybus</i>	<i>Portulaca oleracea</i>
<i>Coleus</i> sp.	<i>Sonchus oleraceus</i>
<i>Corchorus olitorius</i>	<i>Sorghum halepense</i>
<i>Datura stramonium</i>	

Naturally infected weed hosts of *M. javanica* were:

<i>Amaranthus viridis</i>	<i>Dactylis glomerata</i>
<i>Ammi majus</i>	<i>Digitaria sanguinalis</i>
<i>Chenopodium album</i>	<i>Foeniculum vulgare</i>
<i>Coleus</i> sp.	<i>Portulaca oleracea</i>
<i>Convolvulus arvensis</i>	<i>Setaria verticillata</i>
<i>Corchorus olitorius</i>	<i>Setaria viridis</i>
<i>Cyperus rotundus</i>	

- 068 Seidel, M. 1976. [Investigations on the host range of *Heterodera longicaudata* Seidel, 1972.] Untiersuchungen zum Wertspflanzenkreis von *Heterodera longicaudata* Seidel 1972. In 2. Vortragstagung zu Aktuellen Problemen der Phytonematologie, Am 27.5, 1976 in Rostock. Manuskriptdruck der Vortrage Biologische Geseellschaft der Deutschen Demokratischen Republik. Sektion Phytopathologie und Wilhelm Piech-Universität, Rostock. Rostock, DDR. 31-40.

Tests carried out with 34 species of Gramineae grown in pots of naturally infected soil indicated that particularly good host plants included all *Lolium* species at varieties tested, *Arrhenatherum elatius*, *Festuca arundinacea*, and *Festuca pratensis*. *Poa annua*, *Alopecurus pratensis*, and *Agropyron repens* were preferred hosts.

- 069 Sen, K. and M. K. Dasgupta. 1976. Further report on the occurrence of *Meloidogyne* spp. on some plants in West Bengal including a few new host records from India. *Indian Jour. of Nematology* 5:128-129.

Small bitter gourd, sponge gourd, radish, jute, calendula, nasturtium, balsam, tuberose, cock's comb and commelina weed were found to be attacked by *Meloidogyne incognita* in West Bengal. *Meloidogyne javanica* was recorded on kohlrabi and *Meloidogyne arenaria* on tuberose and cock's comb.

- 070 Sen, K. and M. K. Dasgupta. 1979. Additional hosts of root knot nematode, *Meloidogyne* spp., from India. *Indian Jour. Nemat.* 7:74.

Meloidogyne incognita was reported on *Curcuma amada*, *Acroclinium roseum*, *Phlox drummondii*, *Linum grandifolium*, poppy, *Veridium decurrens*, and *Chrysanthemum coronarium*. Other new records for India were: *Meloidogyne javanica* on *Phlox drummondii* and *Meloidogyne arenaria* on *C. coronarium*.

- 071 Sharma R. D. and P. A. A. Loof. 1972. Nematodes associated with different plants at the Centro de Pesquisas do Cacao, Bahia. *Revista Theobroma*. 2:38-43.

Eleven genera of plant-parasitic nematodes and 39 of free-living nematodes were found in soil samples from *Ananas comosus*, *Capsicum frutescens*, *Hamelia erecta*, *Morus alba*, *Passiflora edulis*, and *Portulaca grandiflora* taken from various locations in Bahia, Brazil.

- 072 Shepherd, J. A. 1977. Hosts of non-gall-forming nematodes associated with tobacco in Rhodesia. *Rhodesian Jour. Agric. Res.* 15:95-97.

Corn and two strains of *Chloris gayana* proved to be the best hosts of *Rotylenchulus parvus* in field and glasshouse trials, although *Cynodon plectostachyus* and *Sorghum vulgare* also supported the nematode. *Eragrostis curvula*, *C. gayana* (cv. Giant ley), corn, and *S. vulgare* were the best hosts for *Pratylenchus zaeae*. Monocotyledons were good hosts for both nematodes. *Pratylenchus brachyurus* multiplied well on most plants tested, with the exception of *Cynodon plectostachyus*, *Digitaria milaniana*, and possibly *Chloris gayana* and *Panicum maximum*. *Scutellonema brachyurum* numbers increased on most plants but on tobacco, tomato, and corn in particular.

- 073 Shetty, K. G. H., D. N. Gowda and H. R. Reddy. 1977. First report of occurrence of a cyst forming nematode (*Heterodera* sp.) on ragi (*Eleusine coracana* Gaertn). *Current Research* 6:156-157.

All stages of *Heterodera* were found on the roots of *Eleusine coracana* in experimental millet plots at Hebbal Bangalore, India. The plants were unthrifty in patches with leaf chlorosis.

- 074 Smart, G. C., Jr. 1964. Additional hosts of the soybean cyst nematode, *Heterodera glycines*, including hosts in two additional plant families. *Plant Dis. Repr.* 48:388-390.

Ten additional host species of the soybean cyst nematode were reported. These new hosts were: *Stellaria media* in the Caryophyllaceae; *Verbascum thapsus*, *Penstemon digitalis*, *Penstemon albertinus*, *Penstemon glabre*, *Penstemon grandiflorus*, *Penstemon polyphyllus*, and *Penstemon unilateralis* in the Scrophulariaceae; and *Trifolium procumbens* and *Cassia tora* in the Leguminosae.

- 075 Smart, G. C., Jr. 1964. Physiological strain and one additional host of the soybean cyst nematode, *Heterodera glycines*. Plant Dis. Repr. 48:542-543.

The Arkansas isolate of the soybean cyst nematode developed in small, but about equal, numbers on *Penstemon digitalis*, *Penstemon unilateralis*, and soybeans.

- 076 Southey, J. F. and H. Roberts. 1977. New or unusual host plant records for plant parasitic nematodes, 1974-76. Plant Pathology 26:148.

The following plant-nematode association have been recorded: *Aphelenchoides fragariae* on *Ranunculus speciosus*; *Aphelenchoides ritzemabosi* on *Viburnum bodnantense*; *Ditylenchus dipsaci* on *Begonia*; *Meloidogyne hapla* on *Viburnum carlesii*; and *Meloidogyne incognita* on *Ficus benjamina*, all from southern England.

- 077 Sturhan, D. 1976. [Outdoor occurrence of *Meloidogyne* species in Western Germany.] Freilandwerkomen von *Meloidogyne*-arten in der Bundesrepublik Deutschland. Nachrichtenblatt des Deutschen Pflanzenschutzdienstes 28:113-117.

Ligustrum vulgare, *Convolvulus arvensis*, *Rumex hydrolapathum*, and *Rumex obtusifolius* were reported new hosts of *Meloidogyne hapla*. *Meloidogyne graminis* was found in the roots of *Ammophila arenaria*, whereas *Meloidogyne naasi* was in the roots of *Poa annua*.

- 078 Sturhan, D. 1976. [First records of the five *Heterodera* species in the Federal Republic of Germany]. Erstnachweise von fünf *Heterodera*-arten in der Bundesrepublik Deutschland. Nachrichtenblatt des Deutschen Pflanzenschutzdienstes 28:167-169.

Five species of *Heterodera* were recorded in the German Federal Republic for the first time: the cereal and grass cyst-nematodes *Heterodera hordecalis* and *Heterodera bifenestra*, the grass cyst-nematodes *Heterodera mahi* and *Heterodera iri*, and the nettle cyst-nematode *Heterodera urticae*. Maps show their distribution. New host records for *H. hordecalis* were *Ammophila arenaria*, *Elymus arenarius*, and *Puccinellia maritima*.

- 079 Venkitesan, T. S. and J. S. Charles. 1979. The rice root nematode in lowland paddies in Kerala, India. Inter. Rice Res. Newsletter 4:21.

The weeds *Monochoria vaginalis*, *Fimbristylis miliacea*, *Cyperus iria*, *Cyperus elusoides*, and *Vallisneria spiralis* were found infested with *Hirschmanniella oryzae*.

- 080 Vlk, F. and M. Holubcova. 1972. (An investigation into the host range of the onion race of stem eelworm, *Ditylenchus dipsaci* Kuhn). Sbornik Vysoke Skoly zemedelshe V. Praze, Rada A (Faculta Agronomika) Part 1. 167-173. In laboratory experiments, the onion race of *D. dipsaci* attacked radish,

tomato, pea, and to a lesser degree, rye, barley, *Spinacia oleracea*, *Phaseolus vulgaris*, parsley, *Atriplex patula*, *Convolvulus arvensis*, and *Polygonum arviculare*.

- 081 Vovlas, N. and R. N. Inserra. 1979. New host records of *Meloidogyne naasi* from Italy. Plant Dis. Repr. 63:644-646.

Meloidogyne naasi was found infesting four leguminous weeds (*Coronilla scropioides*, *Medicago hispida*, *Melilotus sulcata* and *Vicia villosa*) from a wheat field in Italy. Galls were formed on the weed roots and histopathological examination showed giant cell formation disorder of the vascular systems and necrotic cortical cells.

- 082 Widjaja Wisnuwardana, A. 1978. Highland horticultural weeds acting as host plants of root-knot nematodes, *Meloidogyne* spp. Bull. Penelitian Hortik 6:37-47.

- 083 Yik, C. P. and W. Birchfield. 1979. Host studies and reactions of rice cultivars to *Meloidogyne graminicola*, root-knot nematode. Phytopath. 69:497-499.

The rice root knot nematode has a narrow host range among dicotyledonous plants. Of the 26 plant species tested, *Echinochloa colonum*, *Cyperus compressus*, and *Ranunculus pusillus* were found to host the nematode.

- 084 Young, L. D. and L. T. Lucas. 1977. Host of *Meloidogyne* sp. on American beachgrass. Plant Dis. Repr. 61:776-777.

A *Meloidogyne* species found on *Ammophila breviligulata* along the North Carolina coast, USA, reproduced in the glasshouse on *A. breviligulata*, *Avena sativa*, *Cynodon dactylon*, *Dactylis glomerata*, *Hordeum vulgare*, *Spartina patens*, *Triticum aestivum*, and *Unicla paniculata*.

- 085 Zem, A. C. and L. G. E. Lordello. 1976. [Nematodes associated with weed plants in Brazil]. Anais da Escola Superior de Agricultura "Luiz de Queiroz" 33:597-615.

Eight genera and 18 species of plant parasitic nematodes were found associated with 71 weed species collected from cultivated areas of Brazil. Considerations were given the agricultural production implications of the wide distribution of nematodes associated with the weed plants and pasture grasses.

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AMMOPHILA-ARENARIA MELOIDOGYNE-NAASI PUA	077	1976
AMMOPHILA-BREVILIGULATA AVENA-SATIVA CYN	084	1977

ANANAS-COMUSUS CAPSICUM-FRUTESCENS HAMEL	071	1972
ANDROPUGON-GAYANUS BRACHIARIA-MUTICA CYP	034	1976
ANGUINA-MICRULAENAE CAPSELLA-BURSA-PASTO	038	1977
ANGUINA-MICRULAENAE CENTAUKEA-RIGIDA CON	002	1977
ANGUINA-SP. CAREX-ACUTA* KRALL. SOLUV'E	047	1976
ANONYMOUS. RADOPHOLUS-SIMILIS PHASEOLUS-	007	1974
ANTIIRRHINUM-MAJUS ASTER-SP. BARRERIA-LAT	025	1973
ANTIIRRHINUM-MAJUS CICHORIUM-INTYBUS* AL	005	1976
ANTONIO. LEHMAN. MELOIDOGYNE* ANTONIO.	008	1978
APHELENCHOIDES-FRAGARIAE RANUNCULUS-SPEC	076	1977
APHELENCHOIDES-RITZEMABOSI VIBURNUM-BODN	076	1977
ARACHIS-HYPOGEA ZEA-MAYS SACCHARUM-OFFIC	052	1969
ARRHENATHERUM-ELATIUS FESTUCA-ARUNDINACE	068	1976
ARRIETA. VALENCIA. VELASQUEZ. MELOIDUGYN	009	1976
ASPARAGUS-OFFICINALE ABUTILON-THEOPHRAS	021	1978
ASPHODELUS-TENIUFOLIUS BLUMEA-HIERACIFUL	048	1978
ASTER-SP. BARRERIA-LATIFOLIA BELLIS-SP.	025	1973
ATAKISHIYA. VEGETABLE-CROPS* KASIMUVA.	040	1976
ATRIplex-PATUA CONVULVULUS-ARVENSIS POLY	080	1972
AVENA-SATIVA CYNODON-DACTYLON DACTYLIS-G	084	1977
BABATULA. HIRSCHMANNIELLA-SPINICAUDATA O	010	1980
BALSAM MELOIDOGYNE-INCIGNITA MELOIDOGYNE	069	1976
BANANA AGERATUM-MEXICANUM ALTERNANTHERA-	025	1973
BANANA CYNOPSIS-TETRAGONOLOBA PHASEOLUS-	046	1977
BANANA DESMUDIUM-GYRANS DESMUDIUM-INTORT	024	1971
BANANAS* PEREZ. BANANAS* PEREZ. BANANA	061	1974
BANERJEE. MELOIDOGYNE-INCIGNITA CROTALAR	013	1978
BARKER. BELONOLAIMUS-LONGICAUDATUS FORAG	064	1973
BARLEY SPINACIA-OLERACEA PHASEOLUS-VULGA	080	1972
BARRERIA-LATIFOLIA BELLIS-SP. BROMIS-INI	025	1973
BASU. BANERJEE. MELOIDOGYNE-INCIGNITA CR	013	1978
BASU. MELOIDOGYNE-INCIGNITA MELOIDOGYNE-	012	1975
BASU. TEA MELOIDOGYNE-INCIGNITA MELOIDUG	011	1974
BEGONIA MELOIDOGYNE-HAPLA VIBURNUM-CARL	076	1977
BEHRINGER. HETERODERA-SCHACHTII* BEHRIN	014	1976
BELLIS-SP. BROMIS-INOLOIDES CALOPOGONIUM	025	1973
BELONOLAIMUS-LONGICAUDATUS FORAGE-CROPS	064	1973
BENTGRASS* MICHELL. MELOIDOGYNE-NAASI S	053	1972
BHATTI. DAHIYA. CALOTROPIS-SP. PENTAPETE	016	1979
BHATTI. GUPTA. DAHIYA. MALHAN. MELOIDOGY	015	1974
BIGNONIA-PURPUREA CUCUMIS-MELU CEDRELA-S	027	1971
BIRCHFIELD. MELOIDOGYNE-GRAMINICOLA RICE	083	1979
BIRD. MILLN. MELOIDOGYNE-JAVANICA ALBIZZ	017	1979
BISSETT. WAY. RADOPHOLUS-SIMILIS ARACHIS	052	1969
BLUMEA-HIERACIFOLIA CHENOPDIUM-MURALE C	048	1978
BRACHIARIA-DISTICHOPULLA BRACHIARIA-MUTI	010	1980
BRACHIARIA-MUTICA CORCHORUS-BROWNII CYNO	010	1980
BRACHIARIA-MUTICA CYPERUS-AURICOMUS CYPE	034	1976
BROMIS-INOLOIDES CALOPOGONIUM-MUCUNOIDE	025	1973
BROWALLIA-SP. CASSIA-SUPHERA CYPERUS-RUT	015	1974
BUCHANAN. MURRAY. MELOIDOGYNE-ARENARIA C	065	1978
CADET. MERNY. HETERODERA-ORYZAE MILLET P	018	1978
CAJANUS-CAJAN GUINEA-CORN SURGHUM-VULGAR	001	1976
CALANDRIA-ALBIS* CORNEJO-QUIROZ. NACOB	023	1977
CALENDULA NASTURTIUM BALSAM MELOIDOGYNE-	069	1976
CALENDULA-OFFICINALIS CELOSIA-CRISTATA C	004	1975

CALOPOGONIUM-MULUNOIDES	CASSIA-LAEVIGATA	025	1973
CALOTROPIS-PROCEKA	CASSIA-UCCIDENTALIS	005	1976
CALOTROPIS-SP.	PENIAPETES-PHUENICA PUNGA	016	1979
CAMELLIA-SINENSIS	GOSSYPIUM-HIRSUTUM ERA	052	1969
CAPSELLA-BURSA-PASTORIS	CENTAUREA-RIGIDA	038	1977
CAPSICUM-FRUTESCENS	HAMELIA-ERECTA MURUS	071	1972
CARDAMINE-PARVIFLORA	CASSIA-TORA CERASTI	036	1977
CAREX-ACUTA*	KRALL. SULUV'EVA. ANGUINA-	047	1976
CARYOPHYLLACEAE	VERBASCUM-THAPSUS PENSIE	074	1964
CASSIA-LAEVIGATA	CASSIA-MIMUSOIDES CASSI	025	1973
CASSIA-MIMUSOIDES	CASSIA-OBTUSIFOLIA COL	025	1973
CASSIA-UBIUSIFOLIA	COLEUS-SCUTELLARIUDE	025	1973
CASSIA-UCCIDENTALIS	CENTAUREA-CYANUS FUM	005	1976
CASSIA-UCCIDENTALIS	DESMODIUM-TURTUOSUM	065	1978
CASSIA-SUPHERA	CYPERUS-ROTUNDUS DALBERGI	015	1974
CASSIA-TORA	CERASTIUM-VULGATUM CLEUME-SE	036	1977
CASSIA-TORA	LEGUMINOSAE* SMART. HETEPUD	074	1964
CEURELA-SP.	MELALEUCA-ERICIFOLIA CUPRESS	027	1971
CELOSIA-ARGENTEA	CHENOPODIUM-ALBUM CICHU	067	1972
CELOSIA-CRISTATA	CHENOPODIUM-MURALE COLE	004	1975
CENTAUREA-CYANUS	FUMARIA-PARVIFLORA HIBI	005	1976
CENTAUREA-RIGIDA	CONSINIA-STENOCEPHALA*	002	1977
CENTAUREA-RIGIDA	CONSINIA-STENOCEPHALA*	038	1977
CENTELLA-ASIATICA*	LAL. YADAV. NANDURAN	048	1978
CENTROSEMA-PUBESCEENS	VIGNA-SINENSIS SUYB	018	1978
CERASTIUM-VULGATUM	CLEUME-SERRULATA GERA	036	1977
CHAMBERS. EPPS.	HETERODERA-GLYCINES SESB	019	1965
CHAMBERS. HETERODERA	GLYCINES SESHANIA-M	029	1958
CHAMBERS. HETERODERA	GLYCINES SESBANIA-M	030	1966
CHARLES. RICE	MONOCHORIA-VAGINALIS FIMBR	079	1979
CHENOPODIUM-ALBUM	CHENOPODIUM-UBIUSIFOLI	065	1978
CHENOPODIUM-ALBUM	CICHORIUM-INTYBUS COLE	067	1972
CHENOPODIUM-ALBUM	COLEUS-SP. CONVULVULUS	067	1972
CHENOPODIUM-AMBRUSOIDES	CUCUMIS-MELO EUP	004	1975
CHENOPODIUM-MURALE	COLEUS-BLUMEI HIBISCU	004	1975
CHENOPODIUM-MURALE	CONVOLVULUS-ARVENSIS	048	1978
CHENOPODIUM-UBIUSIFOLIA	SIVA-SPINOSA DAI	065	1978
CHENOPODIUM-QUINUA	CALANDRIA-ALBIS* CUR	023	1977
CHENOPODIUM-QUINUA	GLOBODERA-RUSTOLCHIENS	039	1979
CHENOPODIUM-QUINUA	SESBANIA-EXALTATA CUR	021	1978
CHIKAUKA. PRATYLENCHUS	PENETRANS LEGUMIN	020	1979
CHLORIS-GAYANA	RUTYLENCHULUS-PARVUS CYNU	072	1977
CHRYSANTHEMUM-CORONARIUM	MELUIDOGYNE-JAV	070	1979
CICHORIUM-INTYBUS	COLEUS-SP. CORCHORUS-U	067	1972
CICHORIUM-INTYBUS	TARAXACUM-OFFICINALE S	054	1980
CICHORIUM-INTYBUS*	ALAM. KHAN. SAXENA.	005	1976
CLEUME-SERRULATA	GERANIUM-MACULATUM LAMI	036	1977
CLEUME-VISCOUSA	LEUCAS-URTICAEFOLIA MELUI	016	1979
COATES-BECKFORD.	MALEK. TYLENCHURYNCHUS-	021	1978
COCK'S-CUMB	CUMMELINA-SP.* SEN. DASGUPT	069	1976
COLEUS-BLUMEI	HIBISCUS-RUSA-SINENIS PUMI	004	1975
COLEUS-PARVIFLORUS	AMARANTHUS-VIRIDIS MY	046	1977
COLEUS-PARVIFLORUS	STYLUSANTHIS-GRACILIS	007	1974
COLEUS-SCUTELLARIUIDES	CONVALLARIA-MAJAL	025	1973
COLEUS-SP.	CONVOLVULUS-ARVENSIS CORCHORU	067	1972
COLEUS-SP.	CORCHORUS-OLITORIIUS DATUKA-ST	067	1972

CUMMELINA-DIFFUSA CUMMELINA-NUDIFLORA EU	010	1980
CUMMELINA-NUDIFLORA CURCHORUS-ACUTANGULU	003	1976
CUMMELINA-NUDIFLORA ECLIPTA-ALBA SETARIA	006	1975
CUMMELINA-NUDIFLORA EUPHORBIA-HIRTA HYPT	010	1980
CUMMELINA-SP.* SEN. DASGUPTA. GOURD RAD	069	1976
CUMPOSITAE CUCURBITACEAE* CHIKAUKA. PRA	020	1979
CUNSIKIA-STENOCEPHALA* AHMED. HUSSAIN.	002	1977
CUNSIKIA-STENOCEPHALA* HUSSAIN. AL-ZARA	038	1977
CUNVALLARIA-MAJALIS CURUNOPUS-DIDYMUS CR	025	1973
CUNVULVULUS-ARVENSIS CURCHORUS-ULITORIUS	067	1972
CUNVULVULUS-ARVENSIS CURUNOPUS-DIDYMUS E	048	1978
CUNVULVULUS-ARVENSIS POLYGONUM-ARVICULAR	080	1972
CUNVULVULUS-ARVENSIS RUMEX-HYDROLAPATHUM	077	1976
CUNKE. DITYLENCHUS-DIPSACI PLANTAGU-LANC	022	1975
CURCHORUS-ACUTANGULUS CYNODON-DACTYLON E	003	1976
CURCHORUS-BROWNII CYNODON-DACTYLON CYNOD	010	1980
CURCHORUS-ULITORIUS CYPERUS-ROTUNDUS DAC	067	1972
CURCHORUS-ULITORIUS DATURA-STRAMONIUM DI	067	1972
CURCHORUS-ULITORIUS* ADESIYAN. SCUTTELO	001	1976
CURN CHLORIS-GAYANA RUTYLENCHULUS-PARVUS	072	1977
CURN SUNCHUS-ARVENSIS* KIR'YANOVA. KIRJ	044	1976
CURN SORGHUM DIGITARIA-SANGUINALIS* END	028	1959
CURN SORGHUM-HALEPENSE DIGITARIA-SANGUIN	042	1959
CURNEJO-QUIROZ. NACOBBUS-ABERRANS. ULLUC	023	1977
CURNEJO. OXALIS-TUBEROSA TROPAEOLUM-TUBE	039	1979
CURONILLA-SCROPIUIDES MEDICAGO-HISPIDA M	081	1979
CURONILLA-VARIA GUMPHRENA-GLUBUSA XANTHI	021	1978
CURONOPUS-DIDYMUS CRASSOCEPHALUM-CREPIDI	025	1973
CURONOPUS-DIDYMUS EUPHORBIA-THYMIFOLIA T	048	1978
CUSMUS-BIPINNATUS THEMEDA-TRIANDRA* KUE	045	1967
CUTTON SUGARCANE SORGHUM CENTROSEMA-PUBE	018	1976
COWPEA VIGNA-UNGUICULATA EUPATORIUM-ODOR	001	1976
CRASSOCEPHALUM-CREPIDIUIDES CROTALARIA-I	025	1973
CROTALARIA-ANAGYROIDES ALBIZZIA-LEBBEK A	013	1978
CROTALARIA-INCANA CROTALARIA-JUNCEA CRUT	025	1973
CROTALARIA-JUNCEA CROTALARIA-STRIATA CYN	025	1973
CROTALARIA-JUNCEA CYPERUS-ROTUNDUS TEPHR	059	1977
CROTALARIA-SPECTABILIS DATURA-STRAMONIUM	021	1978
CROTALARIA-SPECTABILIS SESBANIA-EXALTATA	065	1978
CROTALARIA-STRIATA CYNODON-DACTYLON CYPE	025	1973
CUCUMIS-MELU CEDRELA-SP. MELALEUCA-ERICI	027	1971
CUCUMIS-MELU EUPHORBIA-CLARKEANA MUKIA-M	004	1975
CUCUMIS-PEPU PORTULACA-ULERACEA* ELGIND	027	1971
CUCURBITACEAE* CHIKAUKA. PRATYLENCHUS-P	020	1979
CUCURBITS VEGETABLES FRUITS FODDER WEEDS	043	1977
CUPRESSUS-SEMPERVIRENS CUCUMIS-PEPU PURT	027	1971
CURCUMA-AMADA ACROCLINIUM-ROSEUM PHLUX-D	070	1979
CURCUMA-LUNGA ALLIUM-SEPA ELAEIS-GUINEEN	046	1977
CYAMOPSIS-TETRAGONOLUBA PENNISETUM-PURPU	007	1974
CYNODON-DACTYLON CYNODON-PLECTOSTACHYUS	010	1980
CYNODON-DACTYLON CYPERUS-ROTUNDUS DENDRO	025	1973
CYNODON-DACTYLON DACTYLIS-GLUMERATA HURD	084	1977
CYNODON-DACTYLON EUPHORBIA-GENICULATA LI	003	1976
CYNODON-PLECTOSTACHYUS DIGITARIA-DEBILIS	010	1980
CYNODON-PLECTOSTACHYUS SORGHUM-VULGARE E	072	1977
CYNOPSIS-TETRAGONOLUBA PHASEULUS-CALCARA	046	1977

CYPERACEAE CYPERUS-COMPRESSUS CYPERUS-DI	010	1980
CYPERUS-AURICUMUS CYPERUS-MARITIMUS DIGI	034	1976
CYPERUS-COMPRESSUS CYPERUS-DIFFORMIS CYP	010	1980
CYPERUS-COMPRESSUS RANUNCULUS-PUSILLUS*	083	1979
CYPERUS-DIFFORMIS CYPERUS-DISTANS CYPERU	010	1980
CYPERUS-DISTANS CYPERUS-LANCEULATUS CYPE	010	1980
CYPERUS-ELUSINOIDES VALLISNERIA-SPIRALIS	079	1979
CYPERUS-IRIA CYPERUS-ELUSINOIDES VALLISN	079	1979
CYPERUS-LANCEULATUS CYPERUS-ROTUNDUS CYP	010	1980
CYPERUS-MARITIMUS DIGITARIA-SP. DIPLACHN	034	1976
CYPERUS-MARITIMUS CYPERUS-TRIANGULARE HE	034	1976
CYPERUS-ROTUNDUS CYPERUS-TENNISPICA ELEU	010	1980
CYPERUS-ROTUNDUS DACTYLIS-GLUMERATA DIGI	067	1972
CYPERUS-ROTUNDUS DALBERGIA-SISOU EUPHORB	015	1974
CYPERUS-ROTUNDUS DENDROCALAMUS-ASPER DES	025	1973
CYPERUS-ROTUNDUS TEPHRUSIA-VOGELII INDIG	059	1977
CYPERUS-TENNISPICA ELEUCHARIS-SP. FIMBRI	010	1980
CYPERUS-TRIANGULARE HELEOCHARIS-GENICULA	034	1976
DACTYLIS-GLUMERATA DIGITARIA-SANGUINALIS	067	1972
DACTYLIS-GLUMERATA HORDEUM-VULGARE SPART	084	1977
DAHIYA. CALOTROPIS-SP. PENTAPETES-PHUENI	016	1979
DAHIYA. MALHAN. MELUIDUGYNE-JAVANICA ACH	015	1974
DALBERGIA-SISOU EUPHORBIA-THYMIFOLIA NIC	015	1974
DASGUPTA. GOURD RADISH JUTE CALENDULA NA	069	1976
DASGUPTA. MELUIDUGYNE-INCIGNITA CURCUMA-	070	1979
DATURA-STRAMONIUM DIGITARIA-SANGUINALIS	067	1972
DATURA-STRAMONIUM IPOMOEA-PURPUREA ASPAR	021	1978
DATURA-STRAMONIUM JACQUEMONTIA-TAMNIFOLI	065	1978
DAUCUS-CARUTA TARAXACUM-OFFICINALE* RUB	064	1973
DENDROCALAMUS-ASPER DESMODIUM-AXILLARE D	025	1973
DESMODIUM-AXILLARE DESMODIUM-UNCINATUM D	025	1973
DESMODIUM-GYRANS DESMODIUM-INTORTUM DESM	024	1971
DESMODIUM-INTORTUM DESMODIUM-UNCINATUM R	024	1971
DESMODIUM-TORTUOSUM CRUTALARIA-SPECTABIL	065	1978
DESMODIUM-TORTUOSUM.* ANONYMOUS. RADOPH	007	1974
DESMODIUM-UNCINATUM DIGITARIA-ADSCENDENS	025	1973
DESMODIUM-UNCINATUM KAZORSEGE SCLERIA-P	024	1971
DIGITARIA-ADSCENDENS DULICHOS-LABLAB ELE	025	1973
DIGITARIA-DEBILIS ECHINOCHLOA-COLONUM EC	010	1980
DIGITARIA-GLUMERATA SORGHUM-VULGARE UXAL	054	1980
DIGITARIA-MILANJIANA PANICUM-MAXIMUM SCU	072	1977
DIGITARIA-SANGUINALIS ELEUSINE-INDICA EC	042	1959
DIGITARIA-SANGUINALIS EUPHORBIA-PEPLUS I	067	1972
DIGITARIA-SANGUINALIS FUENICULUM-VULGARE	067	1972
DIGITARIA-SANGUINALIS OXALIS-CURNICULATA	051	1980
DIGITARIA-SANGUINALIS* ENDU. PRATYLENCH	028	1959
DIGITARIA-SANGUINALIS* RODRIGUEZ-KABANA	065	1978
DIGITARIA-SP. DIPLACHNE-FUSCA ECHINOCHLU	034	1976
DIGITARIA-SP. SORGHUM-HALEPENSE RUMEX-AC	064	1973
DIPLACHNE-FUSCA ECHINOCHLOA-COLONUM ELEU	034	1976
DITYLENCHUS-DIPSACI BEGONIA MELUIDUGYNE-	076	1977
DITYLENCHUS-DIPSACI UNION RADISH TOMATU	080	1972
DITYLENCHUS-DIPSACI PLANTAGO-LANCEULATA*	022	1975
DITYLENCHUS-DIPSACI* GRECO. DITYLENCHUS	037	1976
DULICHOS-LABLAB ELEUSINE-CURACANA EUPATU	025	1973
ECHINOCHLOA-COLONUM CYPERUS-COMPRESSUS R	083	1979

ECHINOCHLOA-COLONUM ECHINOCHLOA-PYRAMIDA	010	1980
ECHINOCHLOA-COLONUM ELEUSINE-INDICA NYMP	034	1976
ECHINOCHLOA-CRUSGALLI SPOROBOLUS-PUKRETT	042	1959
ECHINOCHLOA-PYRAMIDALIS ELEUSINE-AFRICAN	010	1980
ECLIPTA-ALBA SETARIA-VERTICILLATA* ALAM	006	1975
EDWARDS. EPPS. SOYBEANS* EDWARDS. EPPS.	026	1975
EDWARDS. GOOD. REBUIIS. SOYBEAN* EPPS. E	031	1973
EDWARDS. WEHUNT. PRATYLENCHUS-COFFEAE BA	025	1973
EDWARDS. WEHUNT. RADOPHULUS-SIMILIS BANA	024	1971
EGGPLANT PEPPER CUITON SUGARCANE SURGHUM	018	1978
ELAEIS-GUINEENSIS XANTHOSOMA-SAGITTAEFUL	046	1977
ELEOCHARIS-SP. FIMBRISTYLIS-DICHOTOMA FI	010	1980
ELEUSINE-AFRICANA CUSMOS-BIPINNATUS THEM	045	1967
ELEUSINE-AFRICANA ERAGRUSTIS-GIGANTEA ER	010	1980
ELEUSINE-CURACANA EUPATORIUM-TRIPLINERVE	025	1973
ELEUSINE-CURACANA* SHETTY. GUNDA. REDDY	073	1977
ELEUSINE-INDICA ECHINOCHLOA-CRUSGALLI SP	042	1959
ELEUSINE-INDICA NYMPHAEA-MICRANTHA URYZA	034	1976
ELGINDI. MOUSA. MELUIDOGYNE-SPP. BIGNONI	027	1971
ELYMUS-ARENARIUS PUCCINELLIA-MARITIMA*	078	1976
ENDU. PRATYLENCHUS-BRACHYURUS PRATYLENCH	028	1959
EPPS. CHAMBERS. HETERODERA-GLYCINES SESB	029	1958
EPPS. CHAMBERS. HETERODERA-GLYCINES SESB	030	1966
EPPS. EDWARDS. GOOD. REBUIIS. SOYBEAN* E	031	1973
EPPS. GOLDEN. HETERODERA-GLYCINES LESPED	032	1967
EPPS. HETERODERA-GLYCINES SESBANIA-EXALT	019	1965
EPPS. SOYBEANS* EDWARDS. EPPS. SOYBEANS	026	1975
ERAGRUSTIS-CURVULA PRATYLENCHUS-ZEAE PRA	072	1977
ERAGRUSTIS-CURVULA* MARTIN. JAMES. BISS	052	1969
ERAGRUSTIS-GIGANTEA ERAGRUSTIS-LINEARIS	010	1980
ERAGRUSTIS-LINEARIS URYZA-LONGISTAMINATA	010	1980
ERIGERON-ANNUUS* MILLER. XIPHINEMA-AMER	054	1980
EUPATORIUM-ODORATUM SYNEDRELLA-SP. JUTE	001	1976
EUPATORIUM-TRIPLINERVE EUPHORBIA-GENICUL	025	1973
EUPHORBIA-CLARKEANA MUKIA-MADERASPATANA	004	1975
EUPHORBIA-GENICULATA GEOPHILIA-REPENS GI	025	1973
EUPHORBIA-GENICULATA LIPPICIA-NODIFLORA PH	003	1976
EUPHORBIA-HIRTA HYPTIS-REKTIIPES IPOMOEA-	010	1980
EUPHORBIA-HIRTA SUNCHUS-OLERACEUS CAMELL	052	1964
EUPHORBIA-PEPLUS IPOMOEA-PURPUREA PORTUL	067	1972
EUPHORBIA-THYMIFULIA NICOTIANA-PLUMBAGIN	015	1974
EUPHORBIA-THYMIFULIA TRIBULUS-TERRESTRIS	048	1978
FATOUA-VILLUSA PRATYLENCHUS-PENETRANS DI	051	1980
FERRAZ. WEEDS PITELLI. FURLAN.* FERRAZ.	033	1977
FESTUCA-ARUNDINACEA FESTUCA-PRATENSIS PO	068	1976
FESTUCA-PRATENSIS POA-ANNUA ALOPECURUS-P	068	1976
FICUS-BENJAMINA* SOUTHEY. ROBERTS. APHE	076	1977
FIELD-CROPS FRUIT-CROPS VEGETABLES URNAM	067	1972
FIELD-CROPS IPOMOEA-SP. DIGITARIA-SP. SU	064	1973
FIMBRISTYLIS-DICHOTOMA FIMBRISTYLIS-UMBE	010	1980
FIMBRISTYLIS-MILIACEA CYPERUS-IRIA CYPER	079	1979
FIMBRISTYLIS-UMBELLATA KYLLINGA-ERECTA M	010	1980
FOODER WEEDS* KHURRAMOU. CUCURBITS VEGE	043	1977
FUENICULUM-VULGARE PORTULACA-OLERACEA SE	067	1972
FORAGE-CROPS FRUIT-CROPS ORNAMENTALS FIE	064	1973
FURTUNER. HIRSCHMANNIELLA-ORYZAE AESCHYN	034	1976

FRANCO. VILCA. CURNEJO. OXALIS-TUBERUSA	039	1979
FRUIT-CROPS ORNAMENTALS FIELD-CROPS IPUM	064	1973
FRUIT-CROPS VEGETABLES ORNAMENTALS AMARA	067	1972
FRUITS FODDER WEEDS* KHURRAMOU. CUCURBI	043	1977
FUMARIA-PARVIFLORA HIBISCUS-ROSA-SINENSI	005	1976
FURLAN.* FERRAZ. WEEDS PITELLI. FURLAN.	033	1977
GEOPHILIA-REPENS GIGANTOCHLOA-APUS HYPUC	025	1973
GERANIUM-MACULATUM LAMIUM-AMPLEXICAULE L	036	1977
GIGANTOCHLOA-APUS HYPOCHUERIS-RADICATA J	025	1973
GLOBUDERA-PALLIDA CHENOPODIUM-QUINUA GLU	039	1979
GLOBUDERA-RUSTOCHIENSIS* JATAIA. FRANCO	039	1979
GLYCINE-MAX TRITICUM-AESTIVUM SOLANUM-TU	052	1969
GOLDEN. HETERODERA-GLYCINES LESPEDEZA-ST	032	1967
GOLDEN. MELUIDODERITA HETERODERA-WEISSI	035	1975
GOMPHRENA-GLUBUSA XANTHIUM-CHINENSE CRUF	021	1978
GONCALVES. MELUIDUGYNE-EXIGUA SOLANUM-NI	058	1977
GOOD. REBOIS. SOYBEAN* EPPS. EDWARDS. G	031	1973
GOSSYPIUM-HIRSUTUM ERAGRUSTIS-CURVULA*	052	1969
GUARD RADISH JUTE CALENDULA NASTURTIUM H	069	1976
GOWDA. KEDDY. HETERODERA-SP. ELEUSINE-CO	073	1977
GRAHAM. HETERODERA-GLYCINES CARDAMINE-PA	036	1977
GRAMINEAE BRACHIARIA-DISTICHOPULLA BRACH	010	1980
GRAMINEAE LULIUM AKRHEATHERUM-ELATIUS F	068	1976
GRAMINEAE TEPHROSIA-VOGELII CHENOPODIUM-	021	1978
GRECO. DITYLENCHUS-DIPSACI* GRECO. DITY	037	1976
GUINEA-CORN SORGHUM-VULGARE CORCHURUS-UL	001	1976
GUPTA. DAHIYA. MALHAN. MELUIDUGYNE-JAVAN	015	1974
HAMBLÉN. HETERODERA-GLYCINES* RIGGS. HA	063	1966
HAMBLÉN. LEGUMINOSAE HETERODERA-GLYCINES	062	1962
HAMELIA-ERECTA MÔRUS-ALBA PASSIFLORA-EDU	071	1972
HELEOCHARIS-GENICULATA PYCREUS-PATENS SC	034	1976
HETERODERA-BIFENESTRA HETERODERA-MAHI HE	078	1976
HETERODERA-GLYCINES CARDAMINE-PARVIFLORA	036	1977
HETERODERA-GLYCINES LESPEDEZA-STRIATA*	032	1967
HETERODERA-GLYCINES PENSTEMON-DIGITALIS	075	1964
HETERODERA-GLYCINES SESBANIA-EXALTATA SU	019	1965
HETERODERA-GLYCINES SESBANIA-MACROCARPA	029	1958
HETERODERA-GLYCINES SESBANIA-MACROCARPA	030	1966
HETERODERA-GLYCINES STELLARIA-MEDIA CARY	074	1964
HETERODERA-GLYCINES* RIGGS. HAMBLÉN. LE	062	1962
HETERODERA-GLYCINES* RIGGS. HAMBLÉN. HE	063	1966
HETERODERA-HORDECALIS HETERODERA-BIFENES	078	1976
HETERODERA-IRI HETERODERA-URTICAE AMMOPH	078	1976
HETERODERA-LONGICAUDATA GRAMINEAE LULIUM	068	1976
HETERODERA-MAHI HETERODERA-IRI HETERODER	078	1976
HETERODERA-ORYZAE MILLET PANICUM-MAXIMUM	018	1978
HETERODERA-SCHACHTII* BEHRINGER. HETERU	014	1976
HETERODERA-SONCHOPHILA CORN SONCHUS-ARVE	044	1976
HETERODERA-SP. ELEUSINE-CORACANA* SHETT	073	1977
HETERODERA-URTICAE AMMOPHILA-ARENARIA EL	078	1976
HETERODERA-WEISSI POLYGONUM-PENSYLVANICU	035	1975
HIBISCUS-ROSA-SINENSI PUMICA-GRANATUM VE	004	1975
HIBISCUS-ROSA-SINENSIS IPOMOEA-CARNEA IP	005	1976
HIBISCUS-SABDARIFFA YAM-BEAN SPHENOSTYLI	001	1976
HIBISCUS-TRIUNUM SIDA-RHOMIBIFOLIA LYCIU	017	1979
HIRSCHMANNIELLA-ORYZAE AESCHYNOMENA-INDI	034	1976

HIRSCHMANNIELLA-ORYZAE RICE* MOHANDAS.	055	1980
HIRSCHMANNIELLA-ORYZAE* VENKITESAN. CHA	079	1979
HIRSCHMANNIELLA-SPINICAUDATA ORYZA-LUNGI	010	1980
HIRSCHMANNIELLA-SPINICAUDATA CYPERUS-MAK	034	1976
HULUBCUVA. DITYLENCHUS-DIPSACI UNION RAD	080	1972
HORDEUM-VULGARE SPARTINA-PATENS TRITICUM	084	1977
HUSSAIN. AL-ZARARI ANGUINA-MICROLAENAE C	038	1977
HUSSAIN. RASKI. ANGUINA-MICROLAENAE CENT	002	1977
HYPCHUERIS-RADICATA JUSTICA-SIMPLEX LEU	025	1975
HYPTIS-RETIIPES IPOMOEA-REPTANS JUSSIAEA	010	1980
INDIGUFERA-HIRSUTA* O'BANNON. RADOPHOLU	059	1977
INSERRA. MELUIDUGYNE-NAASI CORONILLA-SCR	031	1979
IPOMOEA DIGITARIA-SANGUINALIS* ROURIGUE	065	1978
IPOMOEA-CARNEA IPOMOEA-ERIOCARPA LAUNAEA	005	1976
IPOMOEA-ERIOCARPA LAUNAEA-ASPLENIFOLIA P	005	1976
IPOMOEA-PURPUREA ASPARAGUS-OFFICINALE AB	021	1978
IPOMOEA-PURPUREA PORTULACA-OLERACEA SUNC	067	1972
IPOMOEA-REPTANS JUSSIAEA-SP. NYMPHAEA-LO	010	1980
IPOMOEA-SP. DIGITARIA-SP. SORGHUM-HALEPE	064	1975
JACQUEMONTIA-TAMNIFOLTA IPOMOEA DIGITARI	065	1978
JAMES. BISSETT. WAY. RADOPHOLUS-SIMILIS	052	1969
JATALA. FRANCO. VILCA. CORNEJO. OXALIS-T	039	1979
JUSSIAEA-SP. NYMPHAEA-LUTTA NYMPHAEA-MAC	010	1980
JUSTICA-SIMPLEX LEUCAS-ASPERSA LULIUM-RIG	025	1973
JUTE CALENDULA NASTURTIUM BALSAM MELUIDU	069	1976
JUTE ROSELLE HIBISCUS-SABDARIFFA YAM-BEA	001	1976
KASIMOVA. ATAKISHIYA. VEGETABLE-CROPS*	040	1976
KHAN. ALAM. MELUIDUGYNE-JAVANICA* KHAN.	041	1974
KHAN. MELUIDUGYNE-INCIGNITA ABUTILON-IND	003	1976
KHAN. PRATYLENCHUS-ZEAE SUGARCANE CORN S	042	1959
KHAN. SAXENA. MELUIDUGYNE-JAVANICA AMARA	004	1975
KHAN. SAXENA. MELUIDUGYNE-INCIGNITA ACAC	005	1976
KHURRAMOU. CUCURBITIS VEGETABLES FRUITS F	043	1977
KING. BUCHANAN. MURRAY. MELUIDUGYNE-AREN	065	1978
KIR'YANOVA. KIRJANOVA. KRALL. KRALL. HET	044	1976
KIRJANOVA. KRALL. KRALL. HETERODERA-SUNC	044	1976
KUEN. PRATYLENCHUS-BRACHYURUS SESBANIA-P	045	1967
KUHLRABI MELUIDUGYNE-ARENARIA TUBEROSE C	069	1976
KUSHY. SUSAMMA. RADOPHOLUS-SIMILIS BANAN	046	1977
KRALL. HETERODERA-SUNCHOPHILA CORN SUNCH	044	1976
KRALL. KRALL. HETERODEKA-SUNCHOPHILA CUR	044	1976
KRALL. SOLUV'EVA. ANGUINA-SP. CAREX-ACUT	047	1976
KRISHNAMURTHY. MELUIDUGYNE-JAVANICA TOBA	049	1976
KRISHNAMURTHY. MELUIDUGYNE-JAVANICA TOBA	050	1977
KYLLINGA-ERECTA MARISCUS-SP. GRAMINEAE B	010	1980
LAL. NAGARAJAN. KRISHNAMURTHY. MELUIDUGY	049	1976
LAL. NAGARAJAN. KRISHNAMURTHY. MELUIDUGY	050	1977
LAL. YADAV. NANDURANA. ROTYLENCHUS-RENIF	048	1978
LAMIUM-AMPLEXICAULE LESPEDEZA-CUNEATA VI	019	1965
LAMIUM-AMPLEXICAULE LINARIA-CANADENSIS P	036	1977
LAMIUM-AMPLEXICAULE LUPINUS-ALBUS* EPPS	029	1958
LAMIUM-AMPLEXICAULE VETCH* EPPS. CHAMBE	030	1966
LATHYRUS-SATIVUS PHYSALIS-MINIMA COLEUS-	046	1977
LAUNAEA-ASPLENIFOLIA PORTULACA-QUADRIFID	005	1976
LEGUMINOSAE COMPOSITAE CUCURBITACEAE* C	020	1979
LEGUMINOSAE GRAMINEAE TEPHRUSIA-VOGELII	021	1978

LEGUMINOSAE HETERODERA-GLYCINES*	RIGGS.	062	1962
LEGUMINOSAE*	SMART. HETERODERA-GLYCINES	074	1964
LEHMAN. MELUIDUGYNE*	ANTONIO. LEHMAN. M	008	1978
LEHMAN. MELUIDUGYNE-INCUGNITA SAURUS-CER		051	1980
LESPEDEZA LAMIUM-AMPLEXICAULE VETCH*	EP	030	1966
LESPEDEZA-CUNEATA VICIA-VILLOSA LUPINUS-		019	1965
LESPEDEZA-STIPULACEA SNAPBEAN LAMIUM-AMP		019	1965
LESPEDEZA-STRIATA LESPEDEZA-STIPULACEA S		019	1965
LESPEDEZA-STRIATA*	EPPS. GULDEN. HETERO	032	1967
LEUCAS-ASPERA LULIUM-RIGIDUM MIMOSA-PUDI		025	1973
LEUCAS-URTICAEFOLIA MELUIDUGYNE-INCUGNIT		016	1979
LIGUSTRUM-VULGARE CONVULVULUS-ARVENSIS R		077	1976
LINARIA-CANADENSIS PENSTEMUN-SP. PHYIOLA		036	1977
LINUM-GRANDIFOLIUM PUPPY VERIDIUM-DECURR		070	1979
LIPPIA-NODIFLORA PHYLLANTHUS-FRATERNUS P		003	1976
LULIUM ARRHENATHERUM-ELATIUS FESTUCA-ARU		068	1976
LULIUM-RIGIDUM MIMOSA-PUDICA UCIMUM-SANC		025	1973
LOUF. ANANAS-COMUSUS CAPSICUM-FRUTESCENS		071	1972
LORDELLO. GONCALVES. MELUIDUGYNE-EXIGUA		058	1977
LORDELLO. LORDELLO. PICCININ. MELUIDUGYN		057	1973
LORDELLO. MELUIDUGYNE*	MORAES. LORDELLO	056	1972
LORDELLO. PICCININ. MELUIDUGYNE-EXIGUA*		057	1973
LORDELLO. REIS. THUMAZIELLO. LORDELLO. G		058	1977
LORDELLO. WEED-PLANTS PASTURE-GRASSES*		085	1976
LUCAS. MELUIDUGYNE-SP. AMMOPHILA-BREVILI		084	1977
LUPINUS-ALBUS*	CHAMBERS. EPPS. HETERODE	019	1965
LUPINUS-ALBUS*	EPPS. CHAMBERS. HETERODE	029	1958
LYCIUM-AUSTRALE SOLANUM-LACINIATUM*	BIR	017	1979
MAHMOOD. TRICHODURUS-MIRZAI COMMELINA-NU		006	1975
MAIZE NARCISSUS-UMBELLATUS*	CADET. MERN	018	1978
MALEK. TYLENCHURYNCHUS-AGRI LEGUMINOSAE		021	1978
MALHAN. MELUIDUGYNE-JAVANICA ACHYRANTHES		015	1974
MARISCUS-SP. GRAMINEAE BRACHIANIA-DISTIC		010	1980
MARTIN. JAMES. BISSETT. WAY. RADOPHOLUS-		052	1969
MEDICAGO-HISPIDA MELILLOTUS-SULCATA VICIA		081	1979
MELALEUCA-ERICIFOLIA CUPRESSUS-SEMPERVIR		027	1971
MELILLOTUS-SULCATA VICIA-VILLOSA*	VOVLAS	081	1979
MELUIDODERITA HETERODERA-WEISSI POLYGONU		035	1975
MELUIDUGYNE*	ANTONIO. LEHMAN. MELUIDUGY	008	1978
MELUIDUGYNE*	MORAES. LORDELLO. MELUIDUG	056	1972
MELUIDUGYNE-ARENARIA CASSIA-OCCIDENTALIS		065	1978
MELUIDUGYNE-ARENARIA FIELD-CROPS FRUIT-C		067	1972
MELUIDUGYNE-ARENARIA TUBEROSE COCK'S-CUM		069	1976
MELUIDUGYNE-ARENARIA*	SEN. DASGUPTA. ME	070	1979
MELUIDUGYNE-EXIGUA SOLANUM-NIGRUM*	MORA	058	1977
MELUIDUGYNE-EXIGUA*	MORAES. LORDELLO. L	057	1973
MELUIDUGYNE-GRAMINICULA RICE ECHINOCHLOA		083	1979
MELUIDUGYNE-GRAMINICULA*	ROY. MELUIDUGY	066	1979
MELUIDUGYNE-GRAMINIS AMMOPHILA-ARENARIA		077	1976
MELUIDUGYNE-HAPLA MELUIDUGYNE-GRAMINIS A		077	1976
MELUIDUGYNE-HAPLA VIBURNUM-CARLESII MEL		076	1977
MELUIDUGYNE-INCUGNITA ABUTILON-INDICUM C		003	1976
MELUIDUGYNE-INCUGNITA ACACIA-ARABICA ACA		005	1976
MELUIDUGYNE-INCUGNITA CRUTALARIA-ANAGYRU		013	1978
MELUIDUGYNE-INCUGNITA CURCUMA-AMADA ACRO		070	1979
MELUIDUGYNE-INCUGNITA FICUS-BENJAMINA*		076	1977

MELUIDUGYNE-INCUGNITA MELUIDUGYNE-JAVANI	011	1974
MELUIDUGYNE-INCUGNITA MELUIDUGYNE-JAVANI	012	1975
MELUIDUGYNE-INCUGNITA MELUIDUGYNE-ARENAR	067	1972
MELUIDUGYNE-INCUGNITA MELUIDUGYNE-JAVANI	069	1976
MELUIDUGYNE-INCUGNITA SAURUS-CERNUUS FAT	051	1980
MELUIDUGYNE-INCUGNITA* BHATTI. DAHIYA.	016	1979
MELUIDUGYNE-INCUGNITA* OGBUJI. MELUIDUG	060	1978
MELUIDUGYNE-JAVANICA ACHYRANTHES-ASPERA	015	1974
MELUIDUGYNE-JAVANICA ALBIZZIA-DISTACHYA	017	1979
MELUIDUGYNE-JAVANICA AMARANTHUS-GRACILIS	004	1975
MELUIDUGYNE-JAVANICA CLEOME-VISCOSA LEUC	016	1979
MELUIDUGYNE-JAVANICA KOHLRABI MELUIDUGYN	069	1976
MELUIDUGYNE-JAVANICA MELUIDUGYNE-INCUGNI	067	1972
MELUIDUGYNE-JAVANICA MELUIDUGYNE-ARENARI	070	1979
MELUIDUGYNE-JAVANICA TOBACCO* LAL. NAGA	049	1976
MELUIDUGYNE-JAVANICA TOBACCO* LAL. NAGA	050	1977
MELUIDUGYNE-JAVANICA* BASU. TEA MELUIDU	011	1974
MELUIDUGYNE-JAVANICA* BASU. MELUIDUGYNE	012	1975
MELUIDUGYNE-JAVANICA* KHAN. ALAM. MELUI	041	1974
MELUIDUGYNE-NAASI CURONILLA-SCROPIUIDES	081	1979
MELUIDUGYNE-NAASI PUA-ANNUA* STURHAN. L	077	1976
MELUIDUGYNE-NAASI STELLARIA-MEDIA RUMEX-	053	1972
MELUIDUGYNE-SP. AMMOPHILA-BREVILIGULATA	084	1977
MELUIDUGYNE-SP.* AKRIETA. VALENCIA. VEL	009	1976
MELUIDUGYNE-SPP. BIGNONIA-PURPUREA CUCUM	027	1971
MELUIDUGYNE-SPP.* WIDJAJA-WISNUWARDANA.	082	1978
MERNY. HETERODERA-ORYZAE MILLET PANICUM-	018	1978
MICHELL. MELUIDUGYNE-NAASI STELLARIA-MED	053	1972
MILLER. XIPHINEMA-AMERICANUM POTENTILLA-	054	1980
MILLET PANICUM-MAXIMUM EGGPLANT PEPPER C	018	1978
MILLN. MELUIDUGYNE-JAVANICA ALBIZZIA-DIS	017	1979
MIMOSA-PUDICA UCIMUM-SANCTUM ORTHOSIPHON	025	1973
MUHANDAS. PATTANAİK. PRASAD. HIRSCHMANNI	055	1980
MUNOCHORIA-VAGINALIS FIMBRISTYLIS-MILIA	079	1979
MORAES. LORDELLO. LORDELLO. PICCININ. ME	057	1973
MORAES. LORDELLO. MELUIDUGYNE* MORAES.	056	1972
MORAES. LORDELLO. REIS. THOMAZIELLO. LOR	058	1977
MORUS-ALBA PASSIFLORA-EDULIS PORTULACA-G	071	1972
MOUSA. MELUIDUGYNE-SPP. BIGNONIA-PURPURE	027	1971
MUKIA-MADERASPATANA ROSA-INDICA SETARIA-	004	1975
MURRAY. MELUIDUGYNE-ARENARIA CASSIA-UCCI	065	1978
MYRISTICA-FRAGRANS CURCUMA-LONGA ALLIUM-	046	1977
NACUBBUS-ABERRANS. ULLUCUS-TUBEROSUS CHE	023	1977
NAGARAJAN. KRISHNAMURTHY. MELUIDUGYNE-JA	049	1976
NAGARAJAN. KRISHNAMURTHY. MELUIDUGYNE-JA	050	1977
NANDURANA. ROTYLENCHUS-RENIFORMIS ASPHOD	048	1978
NAQUI. MAHMOUD. TRICHODORUS-MIRZAI COMME	006	1975
NARCISSUS-UMBELLATUS* CADET. MERNY. HET	018	1978
NASTURTIUM BALSAM MELUIDUGYNE-INCUGNITA	069	1976
NICOTIANA-PLUMBAGINIFOLIA PORTULACA-QUAD	015	1974
NICOTIANA-TABACUM GLYCINE-MAX TRITICUM-A	052	1969
NYMPHAEA-LOTTA NYMPHAEA-MACULATA OLDENLA	010	1980
NYMPHAEA-MACULATA OLDENLANDIA-CORYMBUSA	010	1980
NYMPHAEA-MICRANTHA ORYZA-BARTHII ORYZA-B	034	1976
O'BANNON. RADOPHOLUS-SIMILIS CROTALARIA-	059	1977
UCIMUM-SANCTUM ORTHOSIPHON-GRANDIFLORUM	025	1973

UGBUJI. MELUIDUGYNE-INCIGNITA*	UGBUJI.	060	1978
ULDENLANDIA-CORYMBUSA	ULDENLANDIA-LATIFU	010	1980
ULDENLANDIA-LATIFULIA	ULDENLANDIA-SENEGA	010	1980
ULDENLANDIA-SENEGALENSIS	OXALIS-SP. TEPH	010	1980
UNIUN RADISH	TUMATU	080	1972
PEA	RYE	080	1972
BARLEY	SPINA	067	1972
ORNAMENTALS	AMARANTHUS-RETROFLEXUS	067	1972
CELUS	064	1973	
ORNAMENTALS	FIELD-CROPS	064	1973
IPOMOEA-SP. DIGI	025	1973	
ORTHUSIPHON-GRANDIFLORUM	OXALIS-ACETUSEL	025	1973
034	1976		
URYZA-BARTHII	URYZA-BREVILIGULATA	034	1976
PHRAGM	034	1976	
URYZA-BREVILIGULATA	PHRAGMITES-MAURITIAN	034	1976
010	1980		
URYZA-LONGISTAMINATA	CYPERACEAE	010	1980
CYPERUS-	010	1980	
URYZA-LONGISTAMINATA	PANICUM-REPENS	010	1980
RUTT	052	1969	
URYZA-SATIVA	NICOTIANA-TABACUM	052	1969
GLYCLINE-M	046	1977	
URYZA-SATIVA	SACCHARUM-OFFICINARUM*	046	1977
KUS	025	1973	
OXALIS-ACETUSELLA	OXALIS-SP. PASPALUM-CU	025	1973
051	1980		
OXALIS-CURNICULATA	OXALIS-STRICTA	051	1980
PHYLLA	054	1980	
OXALIS-CORNICULATA	PLANTAGO-LANCEOLATA	054	1980
P	025	1973	
OXALIS-SP. PASPALUM-CUNJUGATUM	PASTINACA	025	1973
010	1980		
OXALIS-SP. TEPHRUSIA-SP. THALIA-GENICULA	010	1980	
051	1980		
OXALIS-STRICTA	PHYLLANTHUS-AMARUS	051	1980
RADOPH	039	1979	
OXALIS-TUBERUSA	TRUPAEULUM-TUBERUSUM	039	1979
ULL	018	1978	
PANICUM-MAXIMUM	EGGPLANT	018	1978
PEPPER	COTTON	018	1978
S	072	1977	
PANICUM-MAXIMUM	SCUTELLONEMA-BRACHYUKUM	072	1977
010	1980		
PANICUM-REPENS	ROTTBUELLIA-EXALTATA	010	1980
AGER	065	1978	
PANICUM-TAXANUM	CHENOPODIUM-ALBUM	065	1978
CHENUP	080	1972	
PARSLEY	ATRIPLEX-PATUA	080	1972
CONVOLVULUS-ARVEN	025	1973	
PASPALUM-CUNJUGATUM	PASTINACA-SATIVA	025	1973
PIP	071	1972	
PASSIFLORA-EDULIS	PORTULACA-GRANDIFLORA*	071	1972
025	1973		
PASTINACA-SATIVA	PIPER-BETLE	025	1973
POGOSTEMON-	085	1976	
PASTURE-GRASSES*	ZEM. LORDELLU. WEED-PL	085	1976
055	1980		
PATTANAİK. PRASAD. HIRSCHMANIELLA-URYZA	080	1972	
080	1972		
PEA	RYE	080	1972
BARLEY	SPINACIA-OLERACEA	080	1972
PHASEUL	007	1974	
PENNISETUM-PURPUREUM	COLEUS-PARVIFLORUS	007	1974
074	1964		
PENSTEMON-ALBERTINUS	PENSTEMON-GLABRE	074	1964
PE	074	1964	
PENSTEMON-DIGITALIS	PENSTEMON-ALBERTINUS	074	1964
075	1964		
PENSTEMON-DIGITALIS	PENSTEMON-UNILATERAL	075	1964
074	1964		
PENSTEMON-GLABRE	PENSTEMON-GRANDIFLORUS	074	1964
074	1964		
PENSTEMON-GRANDIFLORUS	PENSTEMON-POLYPHY	074	1964
074	1964		
PENSTEMON-POLYPHYLLUS	PENSTEMON-UNILATER	074	1964
036	1977		
PENSTEMON-SP. PHYTULACCA-AMERICANA	PORTU	036	1977
074	1964		
PENSTEMON-UNILATERALIS	SCRUPHULARIACEAE	074	1964
075	1964		
PENSTEMON-UNILATERALIS	SUYBEANS*	075	1964
SMART.	016	1979	
PENTAPETES-PHUENICA	PONGAMIA-GLABRA	016	1979
MELU	018	1978	
PEPPER	COTTON	018	1978
SUGARCANE	SORGHUM	018	1978
CENTRUSE	061	1974	
PEREZ. BANANAS*	PEREZ. BANANAS*	061	1974
PEREZ.	007	1974	
PHASEULUS-CALCARATUS	CYAMOPSIS-TETRAGONU	007	1974
046	1977		
PHASEULUS-CALCARATUS	LATHYRUS-SATIVUS	046	1977
PH	080	1972	
PHASEOLUS-VULGARIS	PARSLEY	080	1972
ATRIPLEX-PATU	070	1979	
PHLUX-DRUMMONDII	LINUM-GRANDIFOLIUM	070	1979
POPP	034	1976	
PHRAGMITES-MAURITIANUS	PYCREUS-ALBUM	034	1976
MARGI	051	1980	
PHYLLANTHUS-AMARUS	RADOPHOLUS-SIMILIS*	051	1980
003	1976		
PHYLLANTHUS-FRATERNUS	PHYSALIS-PERUVIANA	003	1976
046	1977		
PHYSALIS-MINIMA	COLEUS-PARVIFLORUS	046	1977
AMAKA	007	1974	
PHYSALIS-MINIMA	DESMUDIUM-TORTUOSUM.*	007	1974
A	003	1976	
PHYSALIS-PERUVIANA	SETARIA-VERTICILLATA*	003	1976
036	1977		
PHYTULACCA-AMERICANA	PORTULACA-OLEKACEA	036	1977

PILCININ. MELUIDUGYNE-EXIGUA* MORAES. L	057	1973
PIGEON-PEA CAJANUS-CAJAN GUINEA-CORN SUR	001	1976
PIPER-BETLE POGOSTEMON-PACHOULY POLLINIA	025	1973
PITELLI. FURLAN.* FERRAZ. WEEDS PITELLI	033	1977
PLANTAGO-LANCEOLATA PLANTAGO-MAJOR AMBRU	054	1980
PLANTAGO-LANCEOLATA* COUKE. DITYLENCHUS	022	1975
PLANTAGO-MAJOR AMBRUSIA-ARTEMISIIFOLIA E	054	1980
POA-ANNUA ALUPECURUS-PRATENSIS AGROPYRON	068	1976
POA-ANNUA* STURHAN. LIGUSTRUM-VULGARE C	077	1976
POGOSTEMON-PACHOULY POLLINIA-CILIATA PUR	025	1973
POLLINIA-CILIATA PORTULACA-OLERACEA RUBU	025	1973
POLYGONUM-ARVICULARE* VLK. HOLUBCOVA. D	080	1972
POLYGONUM-PENNSYLVANICUM* GOLDEN. MELOID	035	1975
PONGAMIA-GLABRA MELUIDUGYNE-JAVANICA CLE	016	1979
PUPPY VERIDIUM-DECURRENS CHRYSANTHEMUM-C	070	1979
PORTULACA-GRANDIFLORA* SHARMA. LUOF. AN	071	1972
PORTULACA-OLERACEA RUBUS-OCIDENTALIS RU	025	1973
PORTULACA-OLERACEA SETARIA-VERTICILLATA	067	1972
PORTULACA-OLERACEA SUNCHUS-OLERACEUS SUR	067	1972
PORTULACA-OLERACEA STELLARIA-MEDIA TRIFO	036	1977
PORTULACA-OLERACEA* ELGINDI. MUUSA. MEL	027	1971
PORTULACA-QUADRIFIDA POTAMOGETON-SP. WIT	015	1974
PORTULACA-QUADRIFIDA RUMEX-HASTATUS SIDA	005	1976
POTAMOGETON-SP. WITHANIA-SUMNIFERA* BHA	015	1974
POTENTILLA-CANADENSIS LICHORIUM-INTYBUS	054	1980
PRASAD. HIRSCHMANNIELLA-ORYZAE RICE* MU	055	1980
PRATYLENCHUS-BRACHYURUS DIGITARIA-MILANJ	072	1977
PRATYLENCHUS-BRACHYURUS PRATYLENCHUS-ZEA	028	1959
PRATYLENCHUS-BRACHYURUS SESBANIA-PINNATA	045	1967
PRATYLENCHUS-COFFEAE BANANA AGERATUM-MEX	025	1973
PRATYLENCHUS-PENETRANS DIGITARIA-SANGUIN	051	1980
PRATYLENCHUS-PENETRANS LEGUMINOSAE LUMPU	020	1975
PRATYLENCHUS-ZEAE CORN SURGHUM DIGITARIA	028	1959
PRATYLENCHUS-ZEAE PRATYLENCHUS-BRACHYURU	072	1977
PRATYLENCHUS-ZEAE SUGARCANE CORN SURGHUM	042	1959
PUCCINELLIA-MAKITIMA* STURHAN. HETERODE	078	1976
PUERARIA-PHASEOLOIDES TOMATO RICE MAIZE	018	1978
PUMICA-GRANATUM VERNONIA-CINEREA* ALAM.	004	1975
PYCREUS-ALBUMARGINATUS SACCHARUM-OFFICIN	034	1976
PYCREUS-PATENS SCLERIA-SP. URENA-LUHATA*	034	1976
QAMAR. NAQUI. MAHMOOD. TRICHODORUS-MIRZA	006	1975
RADISH JUTE CALENDULA NASTURTIUM BALSAM	069	1976
RADISH TOMATO PEA RYE BARLEY SPINACIA-UL	080	1972
RADOPHOLUS-SIMILIS AKACHIS-HYPUGEA ZEA-M	052	1969
RADOPHOLUS-SIMILIS BANANA DESMUDIUM-GYRA	024	1971
RADOPHOLUS-SIMILIS BANANA CYNOPSIS-TETRA	046	1977
RADOPHOLUS-SIMILIS CRUTALAKIA-JUNCEA CYP	059	1977
RADOPHOLUS-SIMILIS PHASEOLUS-CALCARKATUS	007	1974
RADOPHOLUS-SIMILIS* LEHMAN. MELUIDUGYNE	051	1980
RANUNCULUS-PUSILLUS* YIK. BIRCHFIELD. M	083	1979
RANUNCULUS-SPECIOSUS APHELENCHOIDES-RITZ	076	1977
RASKI. ANGUINA-MICROLAENAE CENTAUREA-RIG	002	1977
RAZORSEDGE SCLERIA-PTEROTA* EDWARDS. WE	024	1971
REBOIS. SOYBEAN* EPPS. EDWARDS. GOOD. R	031	1973
REDDY. HETERODERA-SP. ELEUSINE-CORACANA*	073	1977
REIS. THUMAZIELLO. LURDELLU. GONCALVES.	058	1977

RICE ECHINOCHLOA-COLONUM CYPERUS-COMPRES	083	1979
RICE MAIZE NARCISSUS-UMBELLATUS* CADET.	018	1978
RICE MONUCHORIA-VAGINALIS FIMBRISTYLIS-M	079	1979
RICE* MUHANDAS. PAITANAİK. PRASAD. HIR	055	1980
RIGGS. HAMBLÉN. HETERODERA-GLYCINES* RI	063	1966
RIGGS. HAMBLÉN. LEGUMINOSAE HETERODERA-G	062	1962
RUBBINS. BARKER. BELUNOLAIMUS-LONGICAUDA	064	1973
ROBERTS. APHELENCHOIDES-FRAGARIAE KANUNC	076	1977
RODRIGUEZ-KABANA. KING. BUCHANAN. MURRAY	065	1978
RUSA-INDICA SETARIA-GLAUCA ACHYRANTHES-A	004	1975
ROSELLE HIBISCUS-SABDARIFFA YAM-BEAN SPH	001	1976
RUITBOELLIA-EXALTATA AGERATUM-CUNYZUIDES	010	1980
RUTYLENCHULUS-PARVUS CYNODON-PLECTIOSTACH	072	1977
RUTYLENCHUS-RENIFORMIS ASPHODELUS-TENIUF	048	1978
ROY. MELUIDOGYNE-GRAMINICOLA* ROY. MELU	066	1979
RUBUS-OCCIDENTALIS RUMEX-ACETOSELLA SHUT	025	1973
RUMEX-ACETOSELLA DAUCUS-CAROTA TARAXACUM	064	1973
RUMEX-ACETOSELLA SHUTERIA-VESTITA SULANU	025	1973
RUMEX-CRISPIUS SURGHUM BENTGRASS* MICHEL	053	1972
RUMEX-HASTATUS SIDA-CURDIFOLIA SPINACIA-	005	1976
RUMEX-HYDROLAPATHUM RUMEX-OBTUSIFOLIUS M	077	1976
RUMEX-OBTUSIFOLIUS MELUIDOGYNE-HAPLA MEL	077	1976
RYE BARLEY SPINACIA-ULERACEA PHASEOLUS-V	080	1972
SAAD. TANVEER. MELUIDOGYNE-JAVANICA MELU	067	1972
SACCHARUM-OFFICINARUM URYZA-SATIVA NICOT	052	1969
SACCHARUM-OFFICINARUM SCIRPUS-CUBENSIS S	034	1976
SACCHARUM-OFFICINARUM* KOSHY. SUSAMMA.	046	1977
SAURUS-CERNUUS FATOUA-VILLOSA PRATYLENCH	051	1980
SAXENA. MELUIDOGYNE-INCIGNITA ACACIA-AKA	005	1976
SAXENA. MELUIDOGYNE-JAVANICA AMARANTHUS-	004	1975
SCIRPUS-CUBENSIS SETARIA-PALLIDIFUSCA SU	034	1976
SCLERIA-PTERUTA* EDWARDS. WEHUNT. RADUP	024	1971
SCLERIA-SP. URENA-LOBATA* FURTUNER. HIR	034	1976
SCROPHULARIACEAE TRIFOLIUM-PROCUMBENS CA	074	1964
SCUTELLUNEMA-BRACHYURUM TOMATO* SHEPHER	072	1977
SCUTELLUNEMA-BRADYS SESAMUM-INDICUM COWP	001	1976
SEIDEL. HETERODERA-LONGICAUDATA GRAMINEA	068	1976
SEN. DASGUPTA. GOURD RADISH JUTE CALENDU	069	1976
SEN. DASGUPTA. MELUIDOGYNE-INCIGNITA CUR	070	1979
SESAMUM-INDICUM COWPEA VIGNA-UNGUICULATA	001	1976
SESBANIA-EXALTATA CORONILLA-VARIA GUMPHR	021	1978
SESBANIA-EXALTATA PANICUM-TAXANUM CHENOP	065	1978
SESBANIA-EXALTATA SOYBEAN LESPEDEZA-STRI	019	1965
SESBANIA-MACROCARPA LAMIUM-AMPLEXICAULE	029	1958
SESBANIA-MACROCARPA SOYBEAN LESPEDEZA LA	030	1966
SESBANIA-PINNATA AMARANTHUS-HYBRIDUS ELE	045	1967
SETARIA-GLAUCA ACHYRANTHES-ASPERA CALEND	004	1975
SETARIA-PALLIDIFUSCA SURGHUM-VULGARE SPU	034	1976
SETARIA-VERTICILLATA SETARIA-VIRIDIS* S	067	1972
SETARIA-VERTICILLATA* ALAM. KHAN. MELUI	003	1976
SETARIA-VERTICILLATA* ALAM. QAMAR. NAQU	006	1975
SETARIA-VIRIDIS* SAAD. TANVEER. MELUIDU	067	1972
SHARMA. LOUF. ANANAS-CUMUSUS CAPSICUM-FR	071	1972
SHEPHERD. TOBACCU CORN CHLORIS-GAYANA RU	072	1977
SHETTY. GOWDA. REDDY. HETERODERA-SP. ELE	073	1977
SHUTERIA-VESTITA SULANUM-NIGRUM SUNCHUS-	025	1973

SIDA-CURDIFOLIA SPINACIA-OLERACEA VICIA-	005	1976
SIDA-RHOMIBIFOLIA LYCIUM-AUSTRALE SOLANU	017	1979
SIDA-SPINDSA DATURA-STRAMONIUM JACQUEMUN	065	1978
SMART. HETERODERA-GLYCINES STELLARIA-MED	074	1964
SMART. HETERODERA-GLYCINES PENSTEMUN-DIG	075	1964
SNAPBEAN LAMIUM-AMPLEXICAULE LESPEDEZA-C	019	1965
SOLANUM-LACINIATUM* BIRD. MILLN. MELOID	017	1979
SOLANUM-NIGRUM SONCHUS-OLERACEUS SPERGUL	025	1973
SOLANUM-NIGRUM* MORAES. LORDELLO. REIS.	058	1977
SOLANUM-TUBEROSUM EUPHORBIA-HIRTA SONCHU	052	1969
SOLUV'EVA. ANGUINA-SP. CAREX-ACUTA* KRA	047	1976
SONCHUS-ARVENSIS* KIR'YANOVA. KIRJANOVA	044	1976
SONCHUS-OLERACEUS CAMELLIA-SINENSIS GOSS	052	1969
SONCHUS-OLERACEUS SURGHUM-HALEPENSE AMAR	067	1972
SONCHUS-OLERACEUS SPERGULA-ARVENSIS IAGE	025	1973
SURGHUM BENTGRASS* MICHELL. MELUIDUGYNE	053	1972
SURGHUM CENTROSEMA-PUBESCENS VIGNA-SINEN	018	1978
SURGHUM DIGITARIA-SANGUINALIS* ENDU. PR	028	1959
SURGHUM-HALEPENSE AMARANTHUS-VIRIDIS AMM	067	1972
SURGHUM-HALEPENSE DIGITARIA-SANGUINALIS	042	1959
SURGHUM-HALEPENSE RUMEX-ACETOSELLA DAUCU	064	1973
SURGHUM-VULGARE CORCHORUS-ULITURIUS* AD	001	1976
SURGHUM-VULGARE ERAGRUSTIS-CURVULA PRATY	072	1977
SURGHUM-VULGARE OXALIS-CORNICULATA PLANT	054	1980
SURGHUM-VULGARE SPOROBOLUS-ROBUSTUS TYPH	034	1976
SUSAMMA. RADOPHULUS-SIMILIS BANANA CYNOP	046	1977
SOUTHEY. ROBERTS. APHELENCHUIDES-FRAGARI	076	1977
SOYBEAN LESPEDEZA LAMIUM-AMPLEXICAULE VE	030	1966
SOYBEAN LESPEDEZA-STRIATA LESPEDEZA-STIP	019	1965
SOYBEAN PUERARIA-PHASEOLOIDES TOMATU RIC	018	1978
SOYBEAN* EPPS. EDWARDS. GOOD. REBOIS. S	031	1973
SOYBEANS* EDWARDS. EPPS. SOYBEANS* EDW	026	1975
SOYBEANS* SMART. HETERODERA-GLYCINES PE	075	1964
SPARTINA-PATENS TRITICUM-AESTIVUM UNICLA	084	1977
SPERGULA-ARVENSIS TAGETES-SP. TRIPSACUM-	025	1973
SPHENOSTYLIS-STENOCARPA PIGEON-PEA CAJAN	001	1976
SPINACIA-OLERACEA PHASEOLUS-VULGARIS PAK	080	1972
SPINACIA-OLERACEA VICIA-HIRSUTA ANTIKRI	005	1976
SPOROBOLUS-POIKETII* KHAN. PRATYLENCHUS	042	1959
SPOROBOLUS-ROBUSTUS TYPHA-SP. VETIVERIA-	034	1976
STELLARIA-MEDIA CARYOPHYLLACEAE VERBASCU	074	1964
STELLARIA-MEDIA DIGITARIA-GLUMERATA SURG	054	1980
STELLARIA-MEDIA RUMEX-CRISPUS SURGHUM BE	053	1972
STELLARIA-MEDIA TRIFOLIUM-AGRARIDM VERBA	036	1977
STURHAN. HETERODERA-HURDECALIS HETERODER	078	1976
STURHAN. LIGUSTRUM-VULGARE CONVULVULUS-A	077	1976
STYLOSANTHIS-GRACILIS AMARANTHUS-VIRIDIS	007	1974
SUGARCANE CURN SURGHUM-HALEPENSE DIGITAR	042	1959
SUGARCANE SURGHUM CENTROSEMA-PUBESCENS V	018	1978
SYNEURELLA-SP. JUTE ROSELLE HIBISCUS-SAB	001	1976
TAGETES-SP. TRIPSACUM-LAXUM VERNONIA-CIN	025	1973
TANVEEK. MELUIDUGYNE-JAVANICA MELUIDUGYN	067	1972
TARAXACUM-OFFICINALE STELLARIA-MEDIA DIG	054	1980
TARAXACUM-OFFICINALE* ROBBINS. BARKER.	064	1973
TEA MELUIDUGYNE-INCIGNITA MELUIDUGYNE-JA	011	1974
TEPHROSIA-CANDIDA TEPHROSIA-VUGELII* BA	013	1978

TEPHROSIA-SP. THALIA-GENICULATA*	BABAU	010	1980
TEPHROSIA-VOGELII CHENOPODIUM-QUINOA SES		021	1976
TEPHROSIA-VOGELII INDIGOFERA-HIRSUTA* U		059	1977
TEPHROSIA-VOGELII* BASU. BANERJEE. MELU		015	1976
THALIA-GENICULATA* BABATOLA. HIRSCHMANN		010	1980
THEMEDA-TRIANDRA* KUEN. PRATYLENCHUS-BR		045	1967
THUMAZIELLO. LURDELLU. GONCALVES. MELUID		058	1977
TUBACCU CURN CHLORIS-GAYANA ROTYLENCHULU		072	1977
TUBACCU* LAL. NAGARAJAN. KRISHNAMURTHY.		049	1976
TUBACCU* LAL. NAGARAJAN. KRISHNAMURTHY.		050	1977
TOMATO PEA RYE BARLEY SPINACIA-OLERACEA		060	1972
TOMATO RICE MAIZE NARCISSUS-UMBELLATUS*		018	1978
TOMATO* SHEPHERD. TUBACCU CURN CHLORIS-		072	1977
TRIBULUS-TERRESTRIS AGERATUM-CUNYZOIDES		048	1978
TRICHODORUS-MIRZAI CUMMELINA-NUDIFLORA E		006	1975
TRIFOLIUM-AGRARIUM VERBASCUM-THAPSUS* G		036	1977
TRIFOLIUM-PRUCUMBENS CASSIA-TORA LEGUMIN		074	1964
TRIPSACUM-LAXUM VERNONIA-CINEREA* EDWAR		025	1973
TRITICUM-AESTIVUM SULANUM-TUBEROSUM EUPH		052	1969
TRITICUM-AESTIVUM UNICLA-PANICULATA* YO		084	1977
TROPAEULUM-TUBEROSUM ULLUCUS-TUBEROSUS G		039	1979
TUBEROSE COCK'S-CUMB CUMMELINA-SP.* SEN		069	1976
TYLENCHURYNCHUS-AGRI LEGUMINUSAE GRAMINE		021	1978
TYPHA-SP. VETIVERIA-SP. VOSSIA-CUSPIDATA		034	1976
ULLUCUS-TUBEROSUS CHENOPODIUM-QUINOA CAL		023	1977
ULLUCUS-TUBEROSUS GLOBODERA-PALLIDA CHEN		039	1979
UNICLA-PANICULATA* YOUNG. LUCAS. MELUID		084	1977
URENA-LUBATA* FORTUNER. HIRSCHMANNIELLA		034	1976
VALENCIA. VELASQUEZ. MELOIDOGYNE-SP.* A		009	1976
VALLISNERIA-SPIRALIS HIRSCHMANNIELLA-ORY		079	1979
VEGETABLE-CRUPS* KASIMOVA. ATAKISHIEYA.		040	1976
VEGETABLES FRUITS FODDER WEEDS* KHUKKAM		043	1977
VEGETABLES ORNAMENTALS AMARANTHUS-REIKUF		067	1972
VELASQUEZ. MELOIDOGYNE-SP.* AKRIETA. VA		009	1976
VENKITESAN. CHARLES. RICE MONOCHORIA-VAG		079	1979
VERBASCUM-THAPSUS PENSTEMON-DIGITALIS PE		074	1964
VERBASCUM-THAPSUS* GRAHAM. HETERODEKA-G		036	1977
VERIDIUM-DECURRENS CHRYSANTHEMUM-CORONAR		070	1979
VERNONIA-CINEREA* ALAM. KHAN. SAXENA. M		004	1975
VERNONIA-CINEREA* EDWARDS. WEHUNT. PRAT		025	1973
VEICH* EPPS. CHAMBERS. HETERODEKA-GLYCI		030	1966
VETIVERIA-SP. VOSSIA-CUSPIDATA HIRSCHMAN		034	1976
VIBURNUM-BODNANTENSE DITYLENCHUS-DIPSACI		076	1977
VIBURNUM-CARLESII MELOIDOGYNE-INCIGNITA		076	1977
VICIA-HIRSUTA ANTIRRHINUM-MAJUS CICHORIUM		005	1976
VICIA-VILLUSA LUPINUS-ALBUS* CHAMBERS.		019	1965
VICIA-VILLUSA* VUVLAS. INSERRA. MELUID		081	1979
VIGNA-SINENSIS SOYBEAN PUERARIA-PHASEOLU		018	1978
VIGNA-UNGUICULATA EUPATORIUM-ODORATUM SY		001	1976
VIGNA-UNGUICULATA PHYSALIS-MINIMA DESMOD		007	1974
VILCA. CORNEJU. OXALIS-TUBEROSA TROPAEUL		039	1979
VLK. HULUBCOVA. DITYLENCHUS-DIPSACI UNIU		080	1972
VOSSIA-CUSPIDATA HIRSCHMANNIELLA-SPINICA		034	1976
VUVLAS. INSERRA. MELOIDOGYNE-NAASI CURUN		081	1979
WAY. RADOPHULUS-SIMILIS ARACHIS-HYPUGEA		052	1969
WEED-PLANTS PASTURE-GRASSES* ZEM. LURDE		085	1976

WEEDS PITELLI. FURLAN.* FERRAZ. WEEDS P	033	1977
WEEDS* KHURRAMOU. CUCURBITS VEGETABLES	043	1977
WEHUNT. PRATYLENCHUS-COFFEAE BANANA AGER	025	1973
WEHUNT. RADOPHOLUS-SIMILIS BANANA DESMUD	024	1971
WIDJAJA-WISNUWARDANA. MELOIDOGYNE-SPP.*	082	1978
WITHANIA-SOMNIFERA* BHATTI. GUPTA. DAHI	015	1974
XANTHIUM-CHINENSE CROTALARIA-SPECTABILIS	021	1978
XANTHOSOMA-SAGITTAEFOLIUM ORYZA-SATIVA S	046	1977
XIPHINEMA-AMERICANUM POTENTILLA-CANADENS	054	1980
YADAV. NANDURANA. RUTYLENCHUS-RENIFORMIS	048	1978
YAM-BEAN SPHENOSTYLIS-STENOCARPA PIGEON-	001	1976
YIK. BIRCHFIELD. MELUIDOGYNE-GRAMINICOLA	083	1979
YOUNG. LUCAS. MELUIDOGYNE-SP. AMMOPHILA-	084	1977
ZEA-MAYS SACCHARUM-OFFICINARUM ORYZA-SAT	052	1969
ZEM. LORDELLU. WEED-PLANTS PASTURE-GRASS	085	1976

The State Is the Campus for Agricultural Research and Development



Ohio's major soil types and climatic conditions are represented at the Research Center's 12 locations.

Research is conducted by 15 departments on more than 7000 acres at Center headquarters in Wooster, eight branches, Pomerene Forest Laboratory, North Appalachian Experimental Watershed, and The Ohio State University.

Center Headquarters, Wooster, Wayne County: 1953 acres

Eastern Ohio Resource Development Center, Caldwell, Noble County: 2053 acres

Jackson Branch, Jackson, Jackson County: 502 acres

Mahoning County Farm, Canfield: 275 acres

Muck Crops Branch, Willard, Huron County: 15 acres

North Appalachian Experimental Watershed, Coshocton, Coshocton County: 1047 acres (Cooperative with Agricultural Research Service, U. S. Dept. of Agriculture)

Northwestern Branch, Hoytville, Wood County: 247 acres

Pomerene Forest Laboratory, Coshocton County: 227 acres

Southern Branch, Ripley, Brown County: 275 acres

Vegetable Crops Branch, Fremont, Sandusky County: 105 acres

Western Branch, South Charleston, Clark County: 428 acres