



**NEMATODE • DISEASE • INSECT/IDENTIFICATION  
MONITORING • SAMPLING**

Lab #: 2848

**Nematode Sample Analysis**

To: Maureen Donahoo  
Fruit Growers Lab., Inc.  
P.O. Box 272  
Santa Paula, CA 93061-0272  
525-4172

Work Order #:

Sampled By: FGL

Samples Received By Laboratory

Date Sampled: 4/7/97

Date Processed:

Page 1 of 1

*Handwritten notes:*  
For glass jar - 300 cc  
1 - 100 cc nematode from  
top of jar - 100 cc  
1 - 100 cc nematode from  
bottom of jar - 100 cc  
Total = 300 cc  
1 - 100 cc  
1 - 100 cc  
1 - 100 cc

Sample Volume	Extraction Method	Root Knot	Meloidogyne	Cyrt	Heterodera	Citrus	Tylenchulus	Lesion	Pratylenchus	Dagger	Xiphinema	Ring	Chromomella	Stunt	Sample Volume	Extraction Method
300 CC	SF	1		1		1		2		2		1		1	300 CC	SF

These results reflect the kind and numbers of nematodes recovered from the sample(s) processed in this laboratory using the most appropriate nematode extraction method.

1. Larvae Recovered      2. All Stages Recovered

**Extraction Methods**  
 SM - Sieving Mist      SF - Sieving Sugar Flotation  
 BF - Baermann Funnel      DI - Diced Incubation  
 DE - Direct Exam      NPN = No Parasitic Nematodes Recovered  
 300 cc = 430 grams

**Approximate Extraction Efficiency**  
 Root Knot Larvae SM = 34%      Lesion SM = 60%

Signed: *Alan Butterfield*

Alan Butterfield • APCA #3543  
 12419 Lytle Avenue • McFarland, CA 93250  
 Laboratory (805) 792-2051 • Mobile (805) 838-4345

94-348-023

NEMATODE ASSAY REPORT

Client No: 1420

The grower was in Alfalfa for the past 6 years.

SEND TO:

GROWER: B&B RANCH

ENDOZA

DATE OF REPORT 12/20/94

Lab. No. 56083

Sample No. #3

Crop SUGARBEET

Root-knot (Meloidogyne) 87\*

Stunt (Tylenchorhynchus)

Lesion (Pratylenchus)

Spiral (Helicotylenchus)

Stubby-root (Trichodorus) 11

Dagger (Xiphinema)

Ring (Ciconemoides)

Cyst (Heterodera)

Sting (Belonolaimus)

Lance (Hoplolaimus)

Sheath (Hemierconemoides)

Recommendations (See Explanation Below)

TREAT

Relative Abundance of Nematodes Recovered per 100cc of Soil

Post-it Fax Note 7671

Date 12/20/94

To: Becker

From: [Redacted]

Co./Dept: [Redacted]

Phone #: [Redacted]

Fax #: 407-560-5609

# of pages: 1

Asterisks indicate excessive counts

TREAT area, as nematode numbers and species are likely to cause a significant impact on plant growth.

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

A & L WESTERN AGRICULTURAL LABORATORIES, INC.

By MIKE BUTTRESS, CPAG

# Nematodes, Ltd.

11344 South Academy  
 Selma, California 93662  
 (209) 891-9073

NEM #960269

SAMPLE NO.	DATE ANAL.	ROOT KNOT (Meloidogyne)		DAGGER (Xiphinema)		LESION (Pratylenchus)		STUBBYROOT (Trichodorus)		RING	
	03/28/96										
1. N-E CORNER									954		yellow line blue
2. N-W CORNER					294				57		line
3. CENTER FAIR					272				108		
4. S-E CORNER					240						
5. S-W CORNER			NPN								light 3-4 old
											2nd
											at mid.
											87%
											Blue
											check out good
											pollinifer but



LESION PV AND RING NEMATODES ARE BOTH CONSIDERED HARMFUL TO WALNUTS. THESE ARE HIGH POPULATIONS AND I WOULD EXPECT SIGNIFICANT DAMAGE TO BE OCCURRING FROM THEM IN EACH OF THESE SAMPLES.

NPN = NO PLANT PARASITIC NEMATODE LARVAE WERE FOUND IN THIS SAMPLE.

A HOLE FUMIGATION WILL NOT KEEP THESE OUT FOR VERY LONG.

AMOUNT SOIL ANAL.

1 KILOGRAM/SAMPLE

SIEVING & CENTRIFUGAL FLOTATION  
 @ 33% EXTRACTION EFFICIENCY  
 MULTIPLY ABOVE NUMBER X 3 = 100%

CROP

WALNUTS - 8 YEAR OLD



September 25, 1996  
Sample Received: 9-24-96  
Sample I.D.#137-96

Dear [REDACTED]

Your sample(s) were processed and the following parasitic nematodes were present. The nematode numbers represent the number of nematodes in 500 cc (about 1 pint) of soil.

<u>Sample Identification</u>	<u>Nematode</u>	<u>#/500 cc soil</u>
Zuckerman:		
Block A	Ring	548
	Stunt	18
Block B	Ring	144
	Lesion (not enough for species I.D.)	16
Water	No plant parasitic nematodes recovered.	

Extraction efficiencies are estimated to be 40%. This varies somewhat with soil type and nematode genus.

Further sampling from different areas of the same field, or at different times of the year may produce different results in both numbers and diversity of nematodes.

Nematode identification and numbers should be used to supplement accurate and detailed field histories when considering nematode management strategies.

If I may be of further help, on this or other nematode problems you encounter, please feel free to call.

Sincerely,

Sandra C. Burlando,  
Nematologist

SLIP-DISTRIBUTION

White: State File - Lab  
Blue: State File - Unit

Pink: County File - returned by State  
Yellow: Retained by Collector

(1-84)

COUNTIES OF CALIFORNIA

- 1. Alameda 2. Alpine 3. Amador 4. Butte 5. Calaveras 6. Colusa 7. Contra Costa 8. Del Norte 9. El Dorado 10. Fresno 11. Glenn 12. Humboldt 13. Imperial 14. Inyo 15. Kern 16. Kings 17. Lake 18. Lassen 19. Los Angeles 20. Madera 21. Marin 22. Mariposa 23. Mendocino 24. Merced 25. Modoc 26. Mono 27. Monterey 28. Napa 29. Nevada 30. Orange 31. Placer 32. Plumas 33. Riverside 34. Sacramento 35. San Benito 36. San Bernardino 37. San Diego 38. San Francisco 39. San Joaquin 40. San Luis Obispo 41. San Mateo 42. Santa Barbara 43. Santa Clara 44. Santa Cruz 45. Shasta 46. Sierra 47. Siskiyou 48. Solano 49. Sonoma 50. Stanislaus 51. Sutter 52. Tehama 53. Trinity 54. Tulare 55. Tuolumne 56. Ventura 57. Yolo 58. Yuba

ACTIVITY

EXCLUSION & DETECTION

- 01 Quarantine - State Exterior 02 Quarantine - State Interior 03 Quarantine - Federal Domestic 04 Quarantine - Federal Territorial 05 Quarantine - Federal Foreign 06 Quarantine - Agricultural Code 07 Quarantine - Other 08 County or Local Ordinance 12 Detection Survey - Entomology 42 Detection Survey - Plant Path. 52 Detection Survey - Nematology 62 Detection Survey - Weed and Vert.

CONTROL & ERADICATION

- 11 Project Survey - Entomology 41 Project Survey - Plant Path. 51 Project Survey - Nematology 61 Project Survey - Weed and Vert.

NURSERY & SEED SERVICES

- 70 Regulatory Nursery Inspection 71 Seed Potato Certification 72 Nursery Stock Certification 73 Nematode Control Program 74 Support Work 75 Special Survey 76 Regulatory Seed Inspection

CROP LOSS REPORTING

- 90 Air Pollution 91 Nursery 92 Entomology 93 Plant Pathology 94 Nematology 95 Weed and Vertebrate 96 Other (Explain in remarks)

LABORATORY SERVICES

- (For determinations not included in above activities) 10 General Entomology 40 General Plant Pathology 50 General Nematology 60 General Botany - Weed 63 General Botany - Seed

SITUATION

TRANSPORTATION

- 01 Automobile 02 Trailer 03 Camper 04 Bus 05 Truck 06 Aircraft 07 Ship 08 Railcar 09 Mail 10 United Parcel Service

NURSERY

- 20 Nursery Shipment - Incoming 21 Nursery Stock, Field Grown (B & B, B.R. bulbs, turf) 22 Nursery Stock - Container Grown 23 Nursery Stock - Greenhouse

COMMERCIAL FIELD

- 30 Orchard 31 Abandoned Orchard 32 Small Fruit (Grapes, Berries, etc.) 33 Row Crop, Vegetable 34 Field Crop 35 Feed Grain 36 Grain - Other 37 Crop Storage

NON CROP LAND

- 40 Roadside, Highway Edge 41 Railroad Right-of-way 42 Waste Ground, Fence Row, Vacant Lot, etc. 43 Dump 44 Flowing Water, Stream Bank, Ditch Bank 45 Still Water, Pond, or Lake

SEED

- 50 Official Seed Sample 51 Trade Seed Sample

MISCELLANEOUS

- 60 Greenhouse - Other than Nursery Stock 61 Florist Stock, Field Grown 62 Residence - Inside 63 Residence - Garden 64 Ornamental Planting, Park, Cemetery, Recreation Area 65 Forest 66 Rangeland 67 Pasture - Irrigated 68 Animal lot, yard 69 Other (Explain in Remarks)

STATE OF CALIFORNIA/DEPT. OF FOOD & AGRICULTURE PLANT INDUSTRY-PEST AND DAMAGE RECORD. Includes fields for COUNTY, ACTIVITY, SITUATION, SECTION, TOWNSHIP, RANGE, BASE & MERIDIAN, SHPT. SIZE, CODE, HOST/CROP NAME, PLANT DISTRIBUTION, PLANT PARTS AFFECTED, PLANT SYMPTOMS, ENTOMOLOGY, STAGE, WEED & VERTEBRATE, CROP LOSS, and REMARKS. Includes handwritten number 776577 and a date field.



N & A NEMATODE  
Identification Service  
251 Quarter Circle  
Davis, CA 95616

Feb. 28, 2001

Identification For B. Westerdahl Lab.

NEMATODE FAMILIES	% of Total Nematodes
Cephalobidae	58
Diplogasteridae	21
Dorylaimidae	2
Rhabditidae	5
Anguinidae	2
Aphelenchidae	3
Aphelenchoididae	1
Tylenchidae	1
Heteroderidae	7



# N & A NEMATODE IDENTIFICATION SERVICE

251 Quarter Circle  
Davis, CA 95616  
(530) 756-0851  
(530) 753-3889

Feb. 28, 2001

## LIST OF FAMILIES, GENERA, AND FEEDING HABITS

Cephalobidae (Bacterial Feeders)

Acrobeles

Acrobelbides

Eucephalobus

Diplogasteridae (Bacterial Feeders & Insect Associates)

Glauxinema

Mesodiplogaster

Rhabditidae (Bacterial Feeders)

Mesorhabditis

Pelodera

Dorylaimidae (Algal Feeders)

Eudorylaimus

Anguinidae

Nothotylenchus (Fungal Feeders)

Aphelenchidae (Fungal Feeders)

Aphelenchus

Aphelenchoididae (Most are Fungal Feeders)

Aphelenchoides

Tylenchidae (Fungal Feeders)

Psilenchus

Tylenchus

Heteroderidae (Plant Parasites)

Composite Nematode Chart

Golf courses which think they have a Nematode Lfd. problem with A-pacificae

Endo = Endoparasitic Ecto = Ectoparasitic Semi = Semi-endoparasitic Bene = Beneficial	January 09, 2000												
	Endo Root Knot	Ecto Stunt	Ecto Needle SPP	Ecto Spiral HP	Ecto Spiral	Ecto Ring CX	Ecto Sheath RR	Semi Roty	Bene BAC	Bene FUNG	Bene DOR	Bene MON	Bene OMN
	Sample Number												
	126					482			124	5	4		20
			206	162					228	9			14
	58		896	6824		1774			262	71		5	
	45								127	6			29
*	52		58			31			62		4		28
	11		62			1260			168	19			18
	58		80	1232		53			246	8			28
	46		438	1214		49			110	12			26
	1034		26	67					35			8	11
	1856					13			80	33			37
* C.	10		32					202	36	12	5		4
* NEM #991991K			42			36			79	5			
			42	47	2482		65		24	16			
			11						49	19	10		36
						916			60	7			6

\* = uco positive IO for Arguing Pacificae  
Compiled December 9, 1999