PN-ABI-926

THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
COLOMBO, SRI LANKA

"AGXPORTS"

AN INTERACTIVE

LOTUS 1-2-3 MACRO PROGRAM

FOR THE

COMPARATIVE ANALYSIS OF

NON-PLANTATION

AGRICULTURAL EXPORTS

SECONDARY LEVEL
PROGRAM PERFORMANCE INDICATORS

UNDER THE ASIA BUREAU

PERFORMANCE BASED BUDGETING SYSTEM

CALENDAR YEAR 199X ESTIMATE

(CONTRACT # 499-0000-0-00-1050-00)

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AUGUST 1991

PREFACE

The purpose of the Scope of Work (SOW) under this contract was to assist USAID/Sri Lanka develop a systematic approach for analyzing and monitoring the Mission's overall Program Performance as well as its project portfolio. This document outlines **one component of Deliverable # 3** of the SOW -- a report presenting a set of refined program performance indicators based on the program objectives in the Mission's approved Strategic Framework.

During discussions to formulate the new performance indicators, USAID managers expressed a desire to be able to disaggregate the indicators reported to the Asia Bureau for closer monitoring at the Sector level within the Mission. As a consequence, I developed the "AGXPORTS" Macro described herein to augment the USAID/Sri Lanka Agriculture Sector's capacity to track and analyze program level performance[1] with respect to **PROGRAM OBJECTIVE # 2:**

DIVERSIFIED & COMMERCIALIZED AGRICULTURAL SYSTEM

The program is interactive and "closed-loop" Menu-driven to obtain the data outlined herein, so no special analytical skill is required to use it. However, some basic familiarity with LOTUS 1-2-3 is required to update the regressions and graphics.

Similar interactive monitoring systems can be designed and developed for other Program Objectives and Performance Indicators. I am available to assist the Mission with further development of such systems, if so desired.

Kenneth F. Smith
Colombo, Sri Lanka
6 August 1991

Distribution:

USAID/Sri Lanka

1 - Richard Brown, Dir
1 - George Jones, DDir
2 - Randall Casey, PRM
1 - William Jeffers, PRJ
4 - Glen Anders, AGR
1 - Wayne Butler, CTR

AID/Washington

1 - Chris Hermann APRE/SPEE
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[1]The capacity to perform such an analyses may also be useful to planning units at various levels within the Sri Lankan Ministry of Agriculture, and also the Ministry of Planning.

SAMPLE COMPUTER "SCREENS"

FROM

\PPISECND>AGXPORTS.WKO

A43: [W8] REA

	A	B	C	D	E	F	G	H
41								
42				========				
43				AGXPORTS				
44				========				
45								
46				An Interactive				
47				ANALYSIS OF USAID/SRI LANKA'S				
48				NON-PLANTATION AGRICULTURAL EXPORTS				
49				Secondary Program Performance Indicators				
50				under the Asia Bureau				
51				PERFORMANCE BASED BUDGETING SYSTEM				
52								
53				FOR USAID/COLOMBO, SRI LANKA				
54				CONTRACT # 499-0000-0-00-1050-00				
55								
56				Dr. Kenneth F. Smith, Project Management Consultant				
57				4517 Twinbrook Road, FAIRFAX, Virginia, USA, 22032				
58				Phone: 703-978-1876				
59								
60				AUGUST 1991				

06-Aug-91 07:23 AM

```
A65: [W8]                                                                    MENU
COMPARISONS  UPDATE  REGRESSION  GRAPHING  PRINT  SAVE  QUIT
Perform a Comparative Analysis of Crop Export Trends
       A        B        C        D        E        F        G        H
55
66                              TO USE AGXPORTS
67                               ==============
58             Select one of the following Options from the Menu
59
70     TO ENTER NEW DATA
71        U  - Update Information from TABLE 41, Central Bank Annual Report
72
73     TO PERFORM VARIOUS COMPUTER FUNCTIONS
74        C  - COMPARATIVE ANALYSIS of Crop Export Trends
75        R  - REGRESSION ANALYSIS & PROJECT TRENDS
76        G  - GRAPH the Last Analysis made
77
78        P  - PRINT ALL the Data including the Last Analysis made
79        S  - SAVE the Update & Last Analysis
0         Q  - QUIT - without saving anything
1
2          NOTE: AFTER REGRESSION, GRAPHING or SAVING,
3                   THE "AUTOMATIC PILOT" IS DEACTIVATED.
4                   TO REACTIVATE THIS MENU  HIT:  [Alt] C
5-Aug-91  06:47 AM                      CMD
```

```
A128: [W8] '*                                                                    MEN
ESTABLISHED  TURN-AROUND  OK  STRUGGLING  POTENTIAL  LOST
Well Established Export Market, and Continuing to Expand
      A        B        C        D        E        F        G        H
128 *
129                          AN ANALYSIS OF SRI LANKAN
130                   AGRICULTURAL CROP EXPORT TRENDS, AND POTENTIAL
131
132    Based on export trends over both the Long-Term and the past 5 Years,
133    the program will analyze the crop data and sort it by the following
134    categories -- Rank Ordered from the Worst to the Best Case:-
135
136         GROWTH
137           E  - ESTABLISHED EXPORT MARKET and Continuing to Expand
138           T  - TURN-AROUND -- NEWLY EMERGING after a long Decline
139           O  - OK, BUT  has Potential to do Better
140
141         DECLINING
142           S  - STRUGGLING to Gain/Retain a Place in the Export Market
143           P  - Has POTENTIAL to do better, based on Past Performance
144           L  - LOST CAUSE -- Long Term Accelerating Decline
145
146                  SELECT ONE OF THE ABOVE FROM THE MENU
147
5-Aug-91  06:47 AM                    CMD
```

SAMPLE

ANALYTICAL RESULTS

IN TABULAR FORM

FROM

\PPISECND>AGXPORTS.WKO

A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS
Through: 1990
Numbers within each category are Comparative Indices of Growth/Decline

RANK ORDER BASED ON A CROP A	CURRENT "GROWTH" CROPS: SOLID Well Established B	RAPID Newly Emerging C	OK, BUT Potential for + D	ENDANGERED SPECIES: STRUGGLE to Survive E	Formerly Showed POTENTIAL F	LONG TERM INCREASED DECLINE G
AREACANUT		346.3				
BETEL LEAVES	311.7					
CARDAMOM						-7.1
CASHEW NUTS	185.0					
CINNAMON					-58.6	
CLOVES	261.4					
COCOA PRODUCTS						-58.4
COFFEE						-6.0
ESSENTIAL OILS					-87.8	
FRUITS		771.3				
MINOR AGR PRODUCT	1352.0					
NUTMEG & MACE					-2.9	
OTHER OIL SEED				-0.7		
PAPAIN				-0.6		
PEPPERS					-73.3	
SESAME SEED OIL		22.0				
TOBACCO		202.2				
VEGETABLES	2310.8					

```
C100: (F1) PR [W9] @IF(M100>=0#AND#M100>L100#AND#L100>0,@SUM(M100),"")      READY

       A         B         C         D         E         F         G         H
90    A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS
91                              Through:      1990
92   Numbers within each category are Comparative Indices of Growth/Decline
93
94  RANK ORDER        |  CURRENT "GROWTH" CROPS ||   ENDANGERED SPECIES
95  BASED ON            SOLID     RAPID  OK, BUT  STRUGGLE Formerly LONG TERM
96     B              Well Est-   Newly Potential   to      Showed  INCREASED
97     CROP            ablished Emerging  for +   Survive POTENTIAL DECLINE
98      A                 B         C         D         E         F         G
99     ====            =======  =======  =======|| ======  =======  =======
100 CASHEW NUTS          185.0
101 CLOVES               261.4
102 BETEL LEAVES         311.7
103 MINOR AGR PRODUCT   1352.0
104 VEGETABLES          2310.8
105 COCOA PRODUCTS                                                    -58.4
106 CARDAMOM                                                           -7.1
107 COFFEE                                                             -6.0
108 FRUITS                        771.3
109 AREACANUT                     346.3
06-Aug-91  07:13 AM                         CMD
```

D100: (F1) PR [W9] @IF(M100>0#AND#L100<=0,M100,"") READ

```
      A         B         C         D         E         F         G         H
90    A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS
91                              Through:     1990
92   Numbers within each category are Comparative Indices of Growth/Decline
93
94  RANK ORDER        |  CURRENT "GROWTH" CROPS ||   ENDANGERED SPECIES
95  BASED ON            SOLID     RAPID  OK, BUT  STRUGGLE Formerly LONG TERM
96     C              Well Est-   Newly Potential   to      Showed  INCREASED
97     CROP            ablished Emerging  for +   Survive POTENTIAL DECLINE
98      A                 B         C         D         E         F         G
99     ====            =======  =======  =======|| ======  =======  =======
100 SESAME SEED OIL                 22.0
101 TOBACCO                        202.2
102 AREACANUT                      346.3
103 FRUITS                         771.3
104 COCOA PRODUCTS                                                      -58.4
105 CARDAMOM                                                             -7.1
106 COFFEE                                                               -6.0
107 MINOR AGR PRODUCT  1352.0
108 VEGETABLES         2310.8
109 PAPAIN                                            -0.6
06-Aug-91  07:14 AM                          CMD
```

E100: (F1) PR [W9] @IF(M100>0#AND#L100>=M100,M100,"") READ

	A	B	C	D	E	F	G	H
90	A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS							
91				Through:	1990			
92	Numbers within each category are Comparative Indices of Growth/Decline							
93								
94	RANK ORDER		CURRENT "GROWTH" CROPS			ENDANGERED SPECIES		
95	BASED ON		SOLID	RAPID	OK, BUT	STRUGGLE	Formerly	LONG TERM
96	D		Well Est-	Newly	Potential	to	Showed	INCREASED
97	CROP		ablished	Emerging	for +	Survive	POTENTIAL	DECLINE
98	A		B	C	D	E	F	G
99	====		=======	=======	=======	======	=======	=======
100	COCOA PRODUCTS							-58.4
101	CARDAMOM							-7.1
102	COFFEE							-6.0
103	MINOR AGR PRODUCT		1352.0					
104	VEGETABLES		2310.8					
105	FRUITS			771.3				
106	AREACANUT			346.3				
107	PAPAIN					-0.6		
108	OTHER OIL SEED					-0.7		
109	NUTMEG & MACE						-2.9	

06-Aug-91 07:15 AM CMD

```
F100: (F1) PR [W9] @IF(L100<=0#AND#M100<=0#AND#L100<M100,@SUM((1/L100-M100)READ

      A         B         C         D         E         F         G         H
90    A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS
91                              Through:     1990
92   Numbers within each category are Comparative Indices of Growth/Decline
93
94  RANK ORDER        |  CURRENT "GROWTH" CROPS ||   ENDANGERED SPECIES
95  BASED ON            SOLID     RAPID  OK, BUT  STRUGGLE Formerly LONG TERM
96     E              Well Est-   Newly Potential   to      Showed  INCREASED
97     CROP            ablished Emerging  for +   Survive POTENTIAL DECLINE
98      A                 B         C         D         E         F         G
99     ====            =======  =======  =======|| ======  =======  =======
100 OTHER OIL SEED                                    -0.7
101 PAPAIN                                            -0.6
102 COCOA PRODUCTS                                                     -58.4
103 CARDAMOM                                                            -7.1
104 COFFEE                                                              -6.0
105 MINOR AGR PRODUCT  1352.0
106 VEGETABLES         2310.8
107 FRUITS                        771.3
108 AREACANUT                     346.3
109 NUTMEG & MACE                                              -2.9
06-Aug-91  07:16 AM                         CMD
```

```
G100: (F1) PR [W9] @IF(M100<=0#AND#L100>=0,@SUM(1/M100-L100),"")                READ

      A         B         C         D         E         F         G         H
90    A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS
91                              Through:     1990
92   Numbers within each category are Comparative Indices of Growth/Decline
93
94  RANK ORDER        |  CURRENT "GROWTH" CROPS ||   ENDANGERED SPECIES
95  BASED ON            SOLID     RAPID  OK, BUT  STRUGGLE Formerly LONG TERM
96     F              Well Est-   Newly Potential   to      Showed  INCREASED
97     CROP            ablished Emerging  for +   Survive POTENTIAL DECLINE
98      A                 B         C         D         E         F         G
99     ====            =======  =======  =======|| ======  =======  =======
100 ESSENTIAL OILS                                                -87.8
101 PEPPERS                                                       -73.3
102 CINNAMON                                                      -58.6
103 NUTMEG & MACE                                                  -2.9
104 COCOA PRODUCTS                                                          -58.4
105 CARDAMOM                                                                 -7.1
106 COFFEE                                                                   -6.0
107 MINOR AGR PRODUCT  1352.0
108 VEGETABLES         2310.8
109 FRUITS                        771.3
06-Aug-91  07:17 AM                          CMD
```

H100: (F1) PR [W9] @IF(M100<=0#AND#L100<=0#AND#M100<L100,@SUM((1/M100-L100)READY

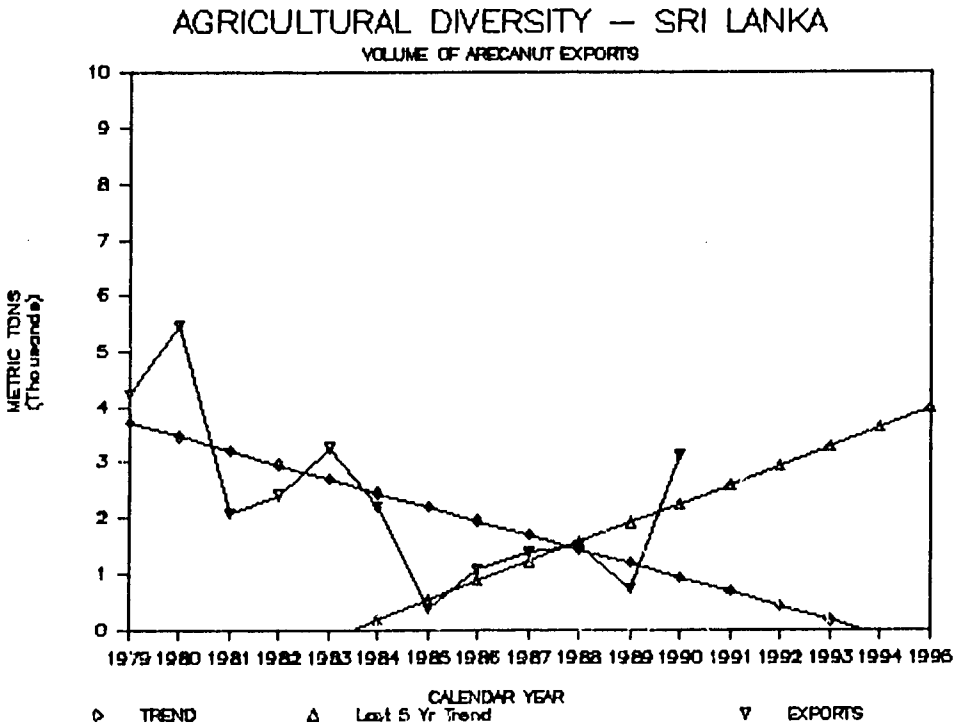
	A	B	C	D	E	F	G	H
90	A STRATEGIC ANALYSIS OF SRI LANKA'S AGRICULTURAL EXPORT CROP STATUS							
91				Through:	1990			
92	Numbers within each category are Comparative Indices of Growth/Decline							
93								
94	RANK ORDER		| CURRENT "GROWTH" CROPS ||			ENDANGERED SPECIES		
95	BASED ON		SOLID	RAPID	OK, BUT	STRUGGLE	Formerly	LONG TERM
96	G		Well Est-	Newly	Potential	to	Showed	INCREASED
97	CROP		ablished	Emerging	for +	Survive	POTENTIAL	DECLINE
98	A		B	C	D	E	F	G
99	====		=======	=======	=======||	======	=======	=======
100	COCOA PRODUCTS							-58.4
101	CARDAMOM							-7.1
102	COFFEE							-6.0
103	MINOR AGR PRODUCT		1352.0					
104	VEGETABLES		2310.8					
105	FRUITS			771.3				
106	AREACANUT			346.3				
107	PAPAIN					-0.6		
108	OTHER OIL SEED					-0.7		
109	NUTMEG & MACE						-2.9	

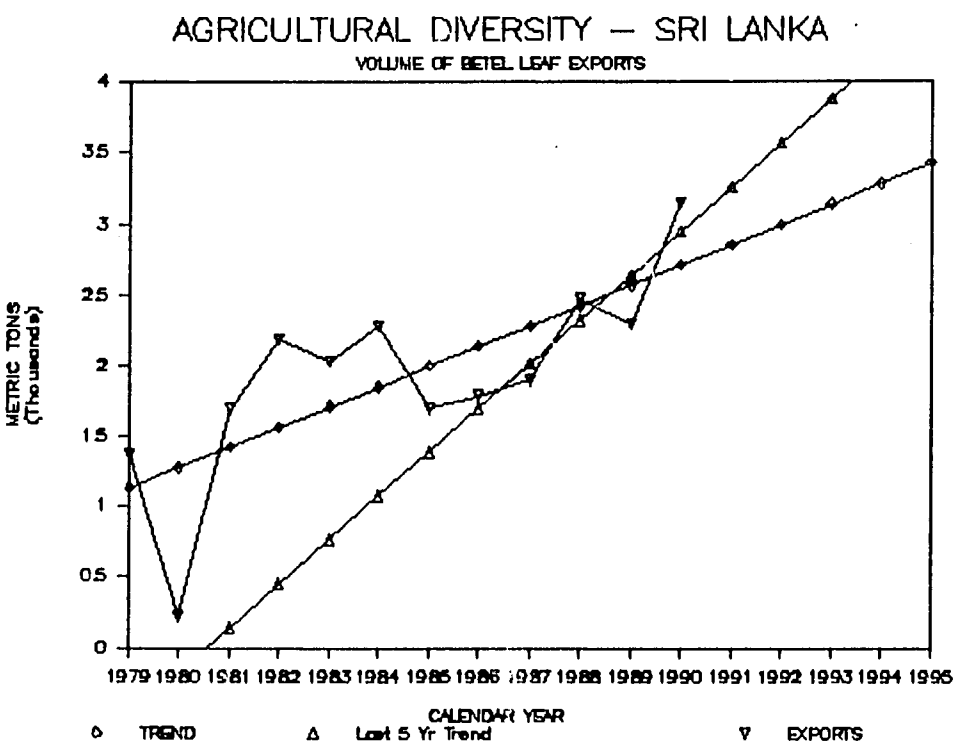
SAMPLE
ANALYTICAL RESULTS
IN GRAPHIC FORM

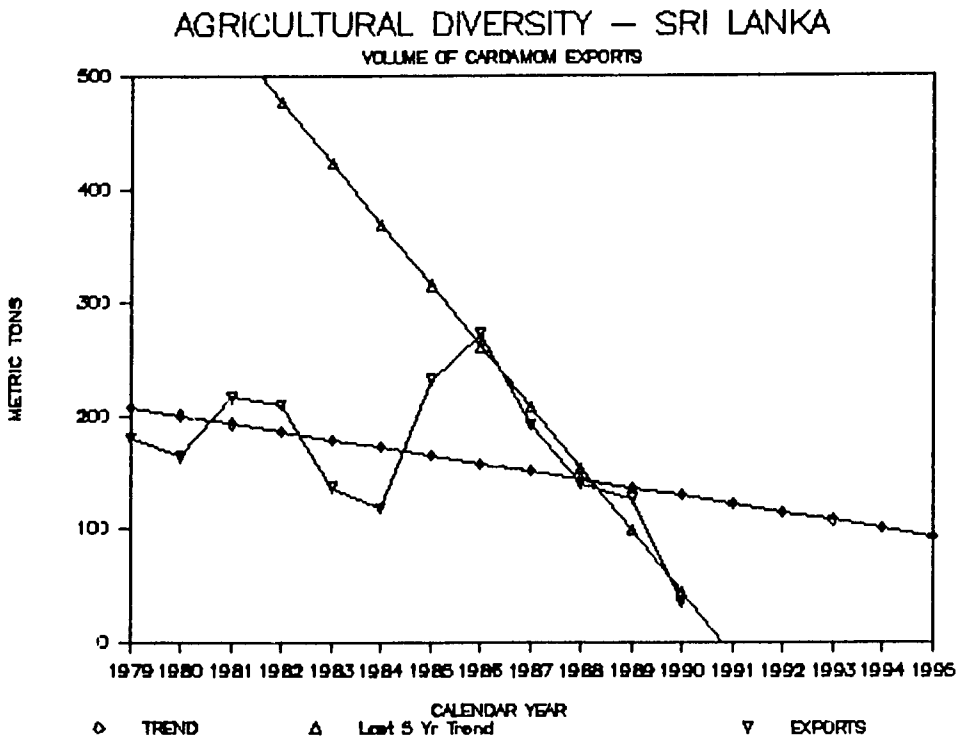
One Picture is Worth a Thousand Words

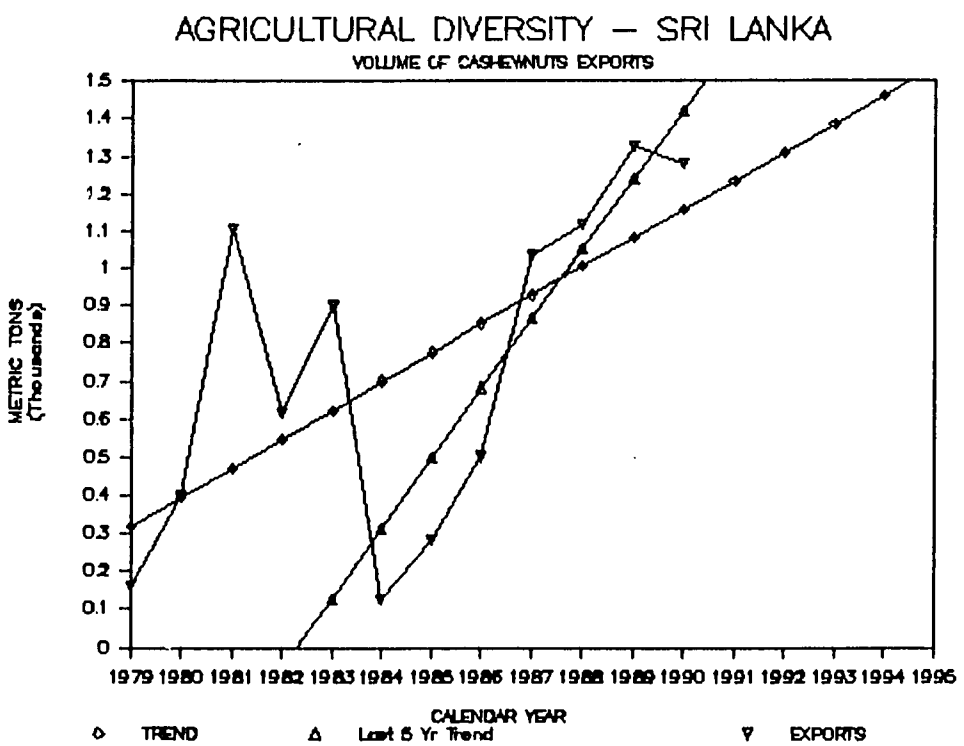
FROM

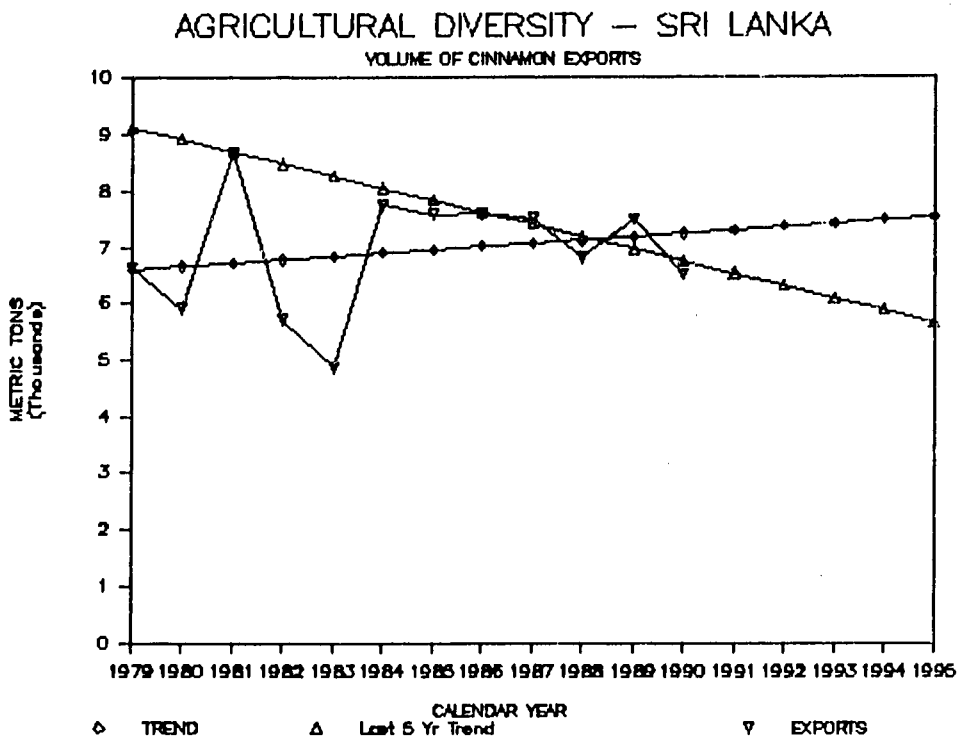
\PPISECND>AGXPORTS.WK0

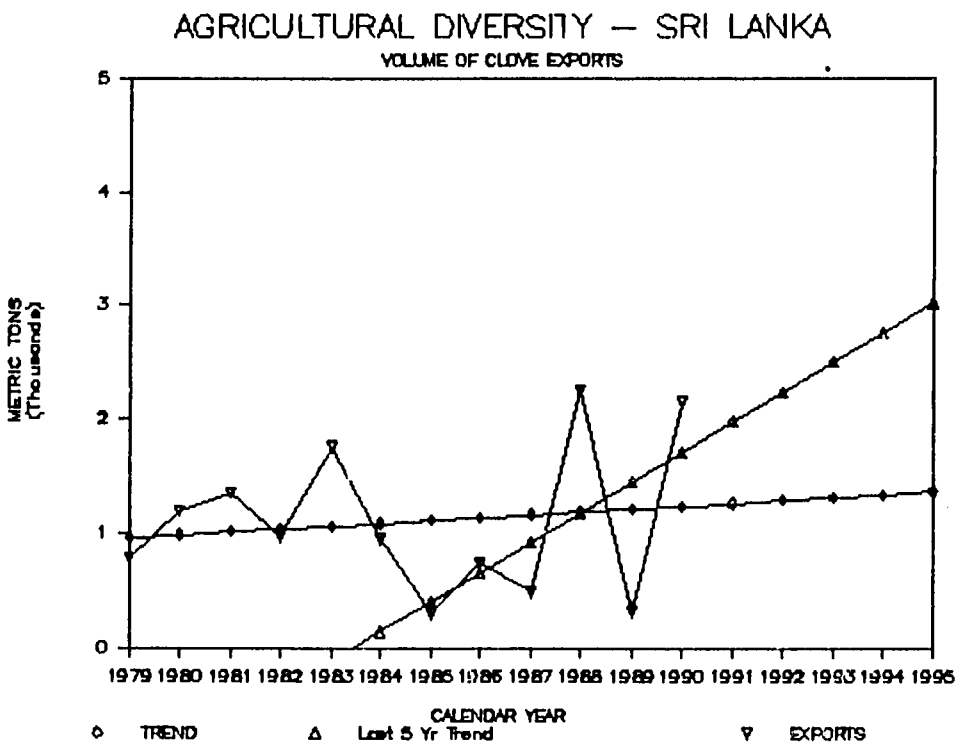

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF ARECANUT EXPORTS
METRIC TONS (Thousands)
10
9
8
7
6
5
4
3
2
1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

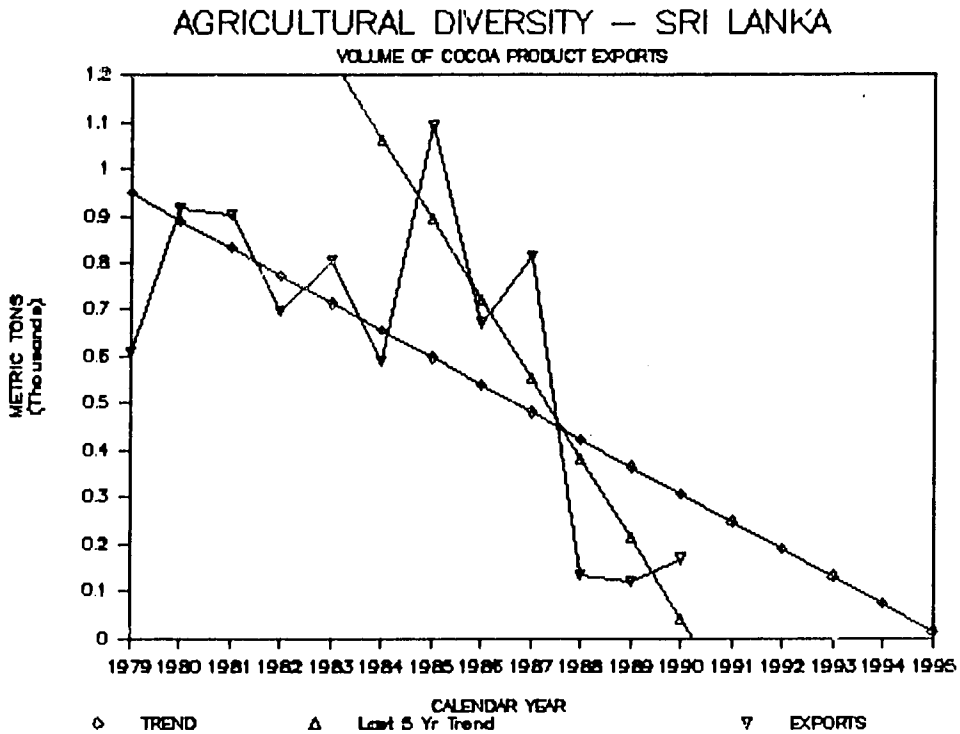

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF BETEL LEAF EXPORTS
METRIC TONS (Thousands)
4
3.5
3
2.5
2
1.5
1
0.5
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

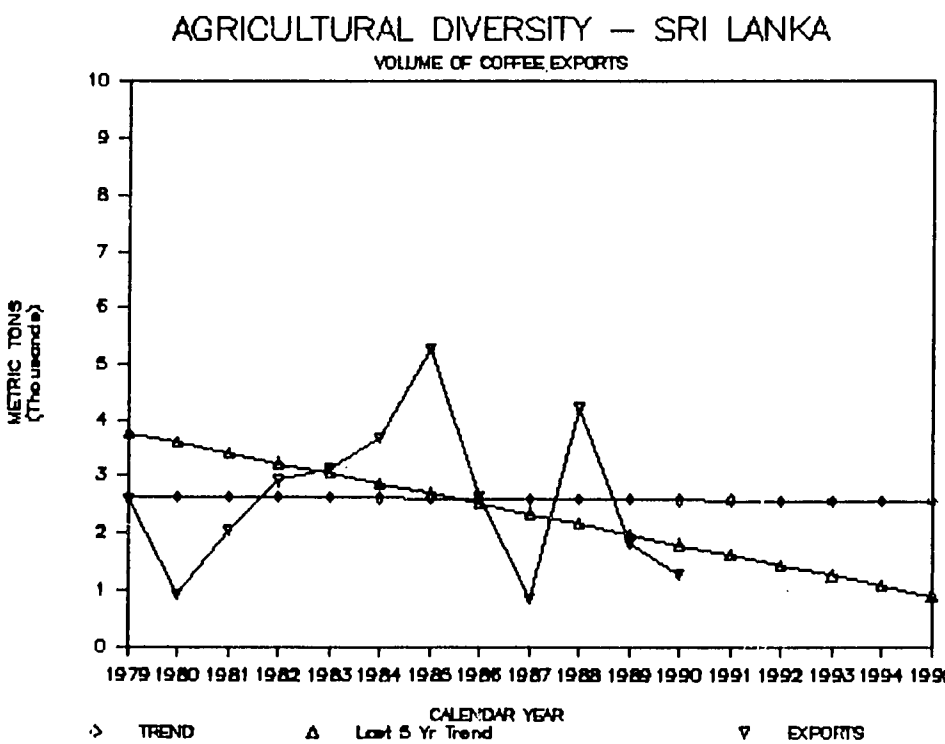

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF CARDAMOM EXPORTS
METRIC TONS
500
400
300
200
100
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

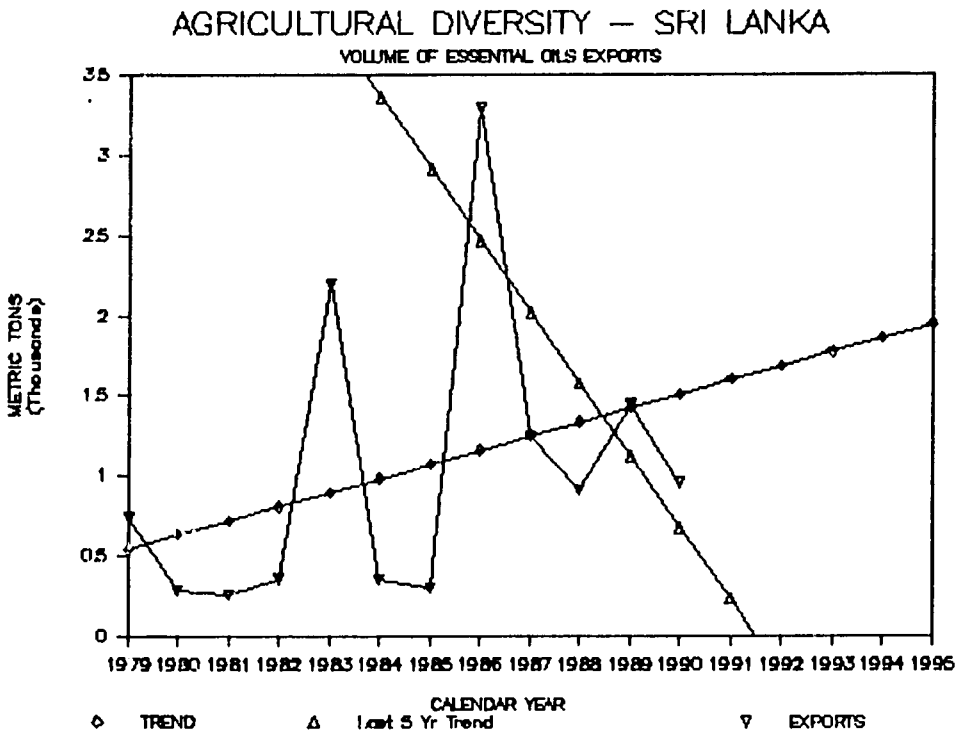

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF CASHEWNUTS EXPORTS
METRIC TONS (Thousands)
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

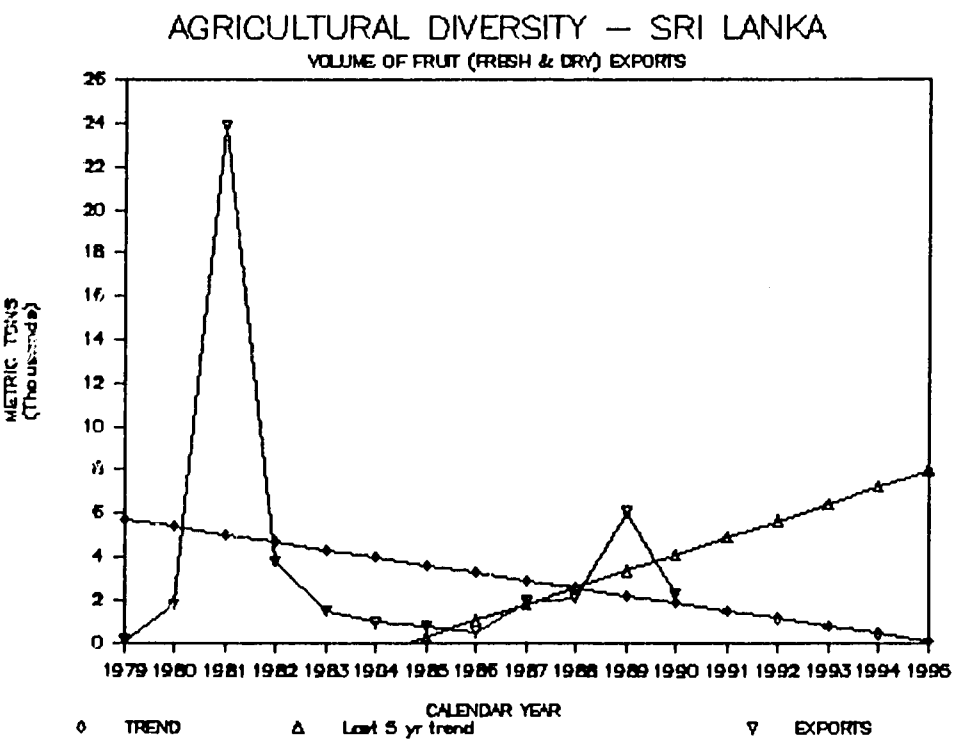

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF CINNAMON EXPORTS
METRIC TONS (Thousands)
0
1
2
3
4
5
6
7
8
9
10
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

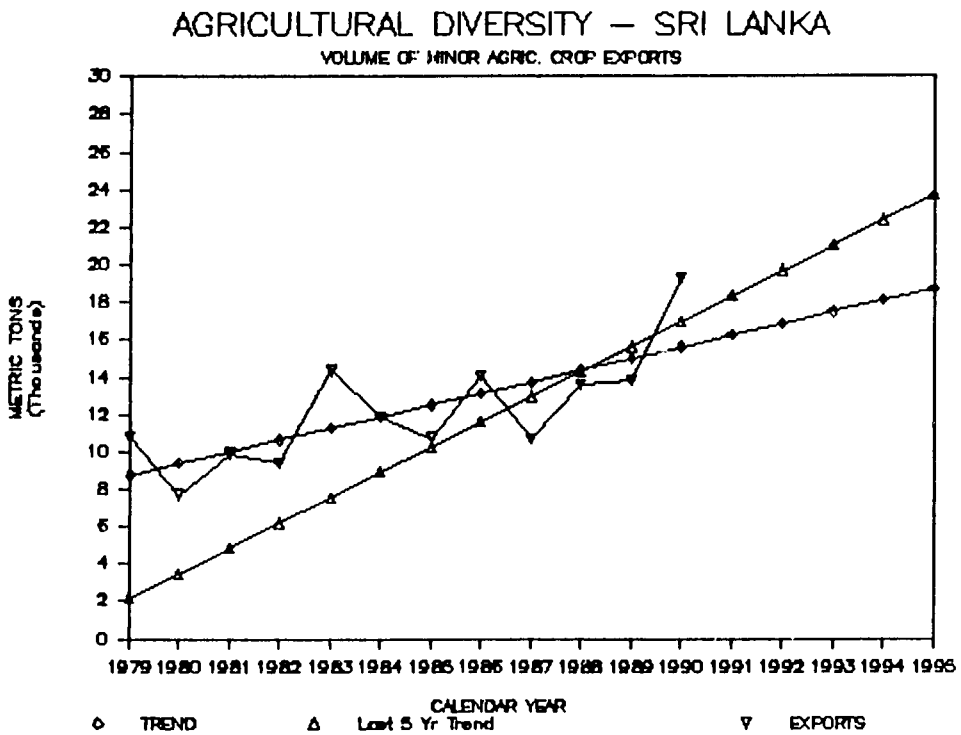

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF CLOVE EXPORTS
METRIC TONS (Thousands)
0
1
2
3
4
5
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

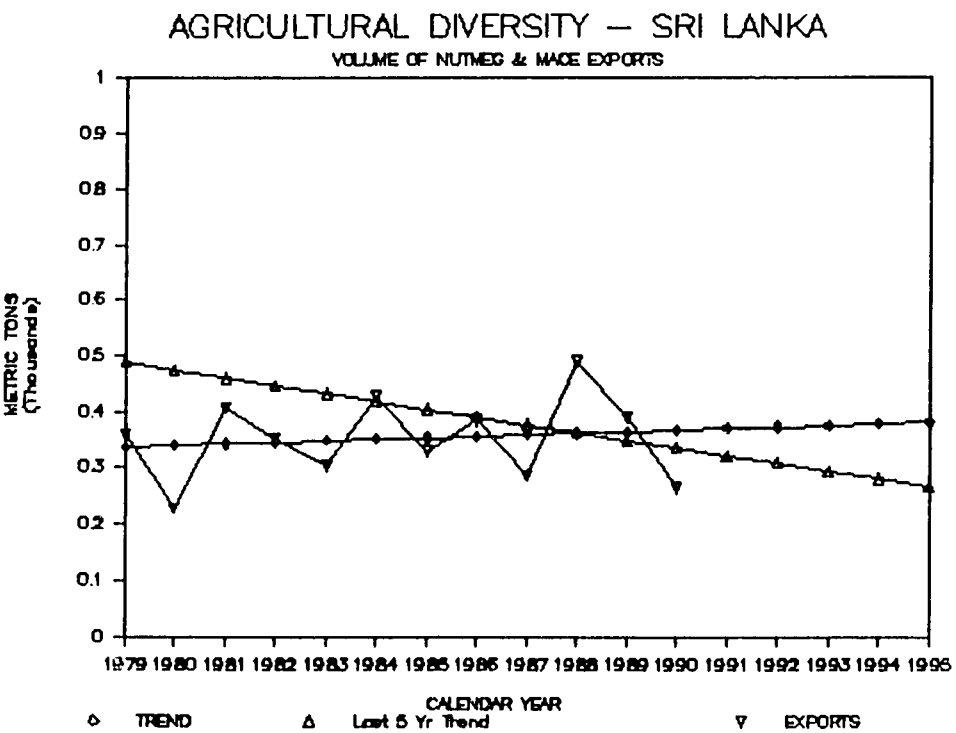

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF COCOA PRODUCT EXPORTS
METRIC TONS (Thousands)
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

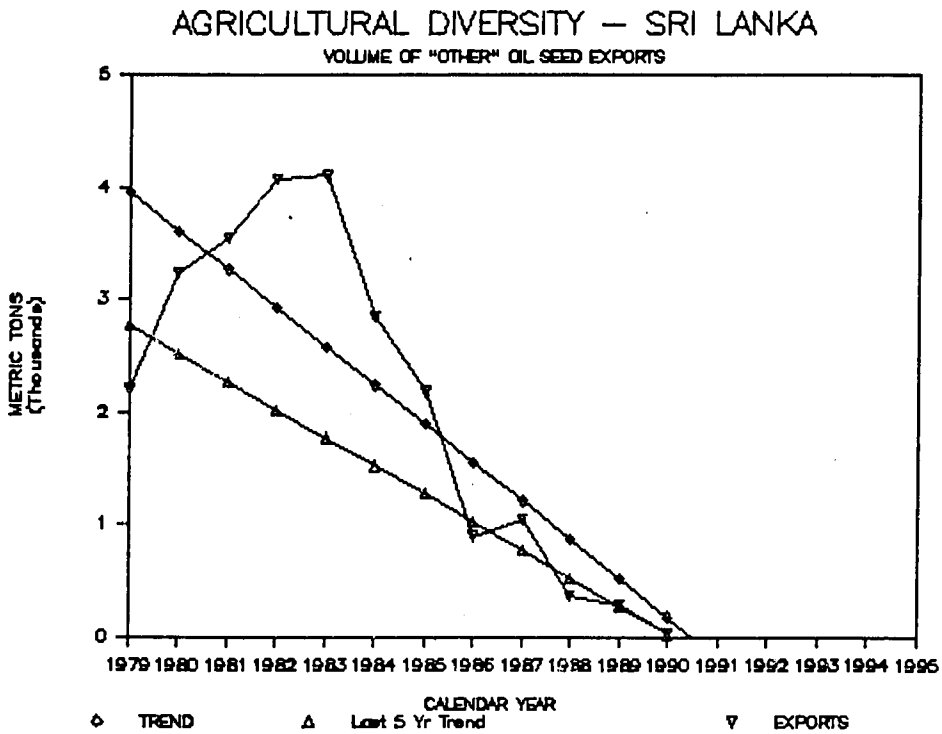

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF COFFEE EXPORTS
METRIC TONS (Thousands)
10
9
8
7
6
5
4
3
2
1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

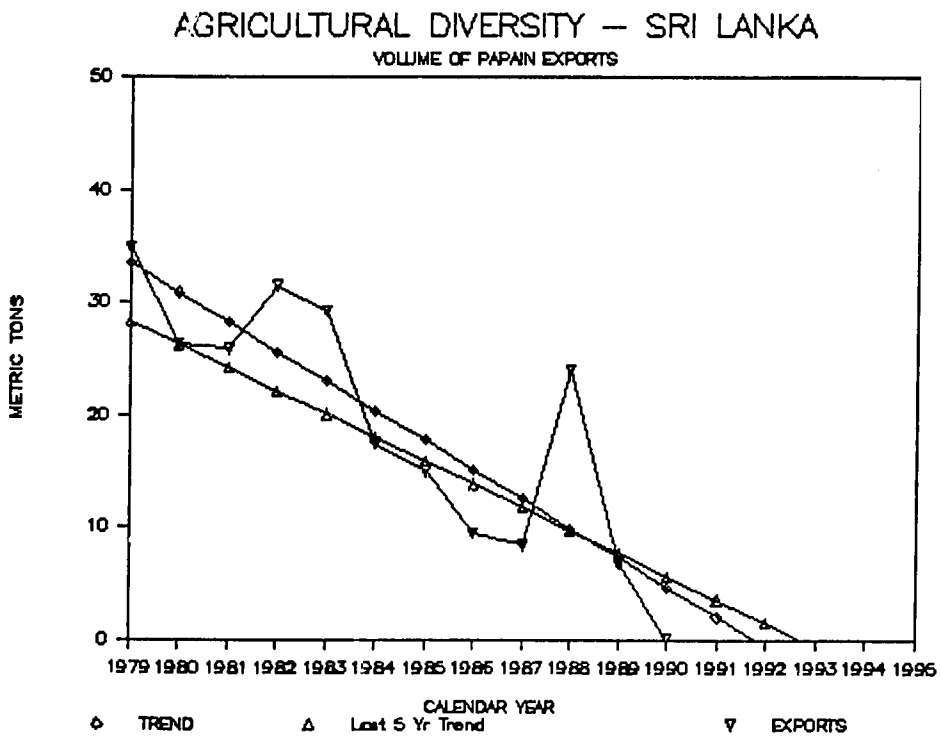

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF ESSENTIAL OILS EXPORTS
METRIC TONS (Thousands)
3.5
3
2.5
2
1.5
1
0.5
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

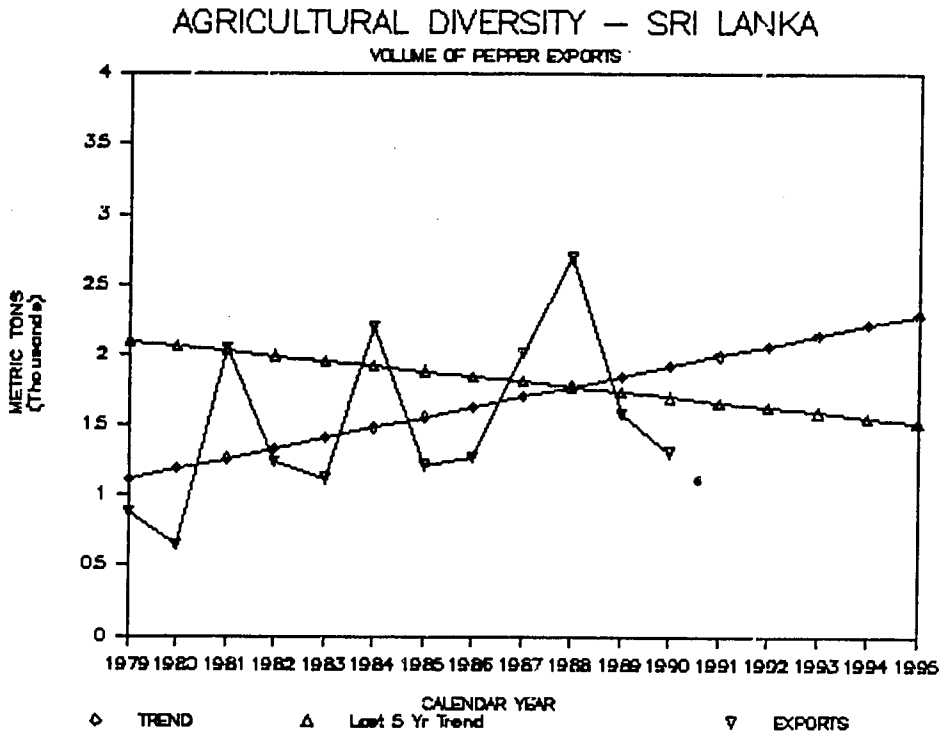

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF FRUIT (FRESH & DRY) EXPORTS
METRIC TONS (Thousands)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 yr trend
EXPORTS

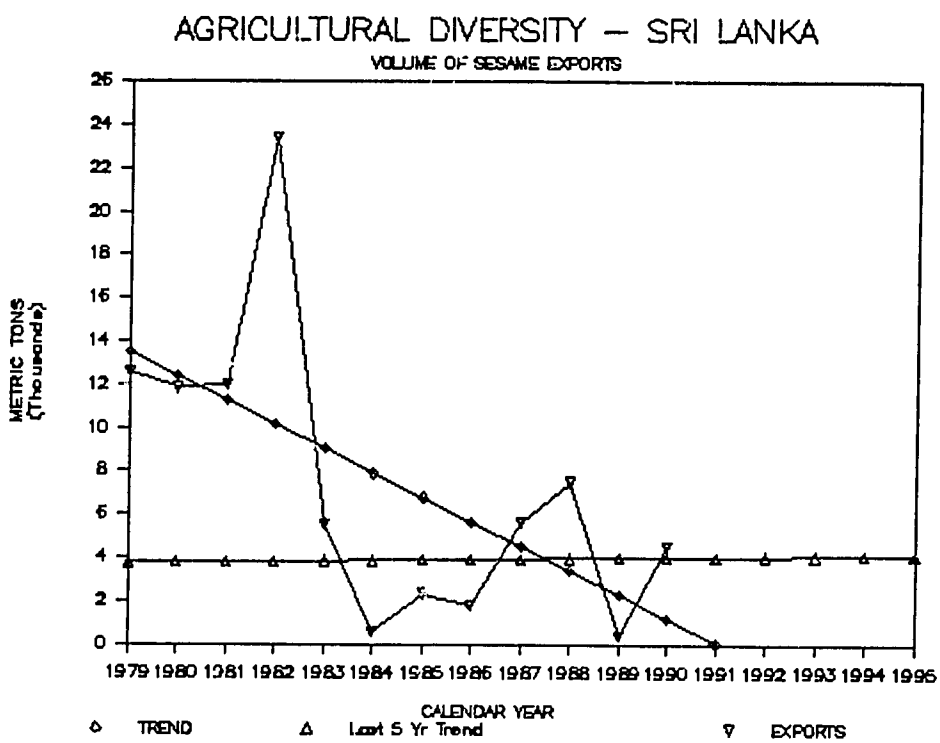

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF MINOR AGRIC. CROP EXPORTS
METRIC TONS (Thousands)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

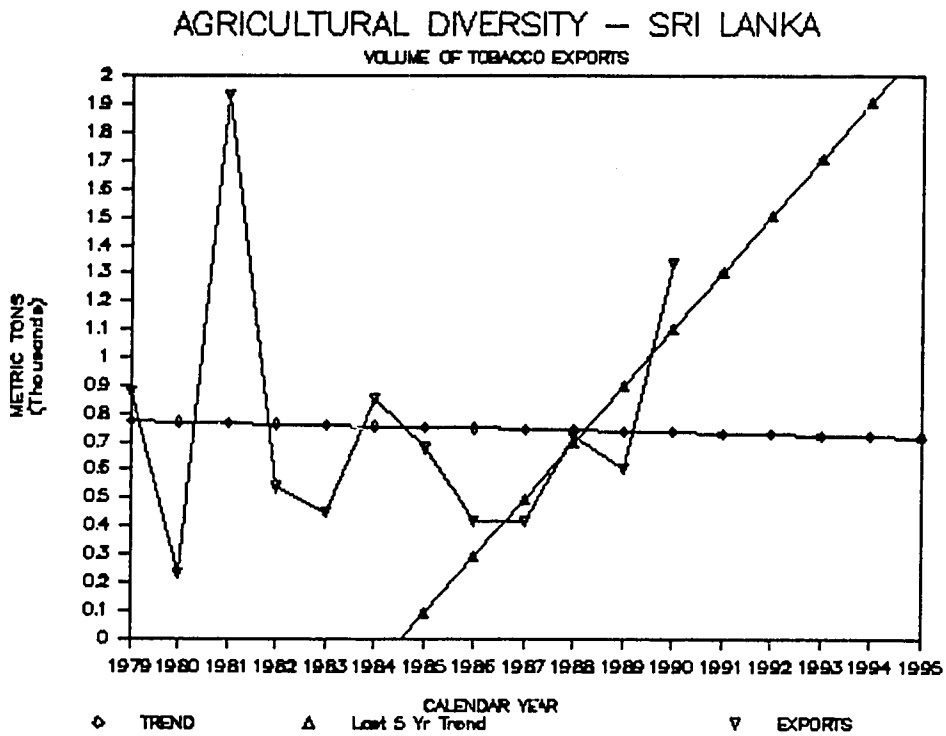

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF NUTMEG & MACE EXPORTS
METRIC TONS (Thousands)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS

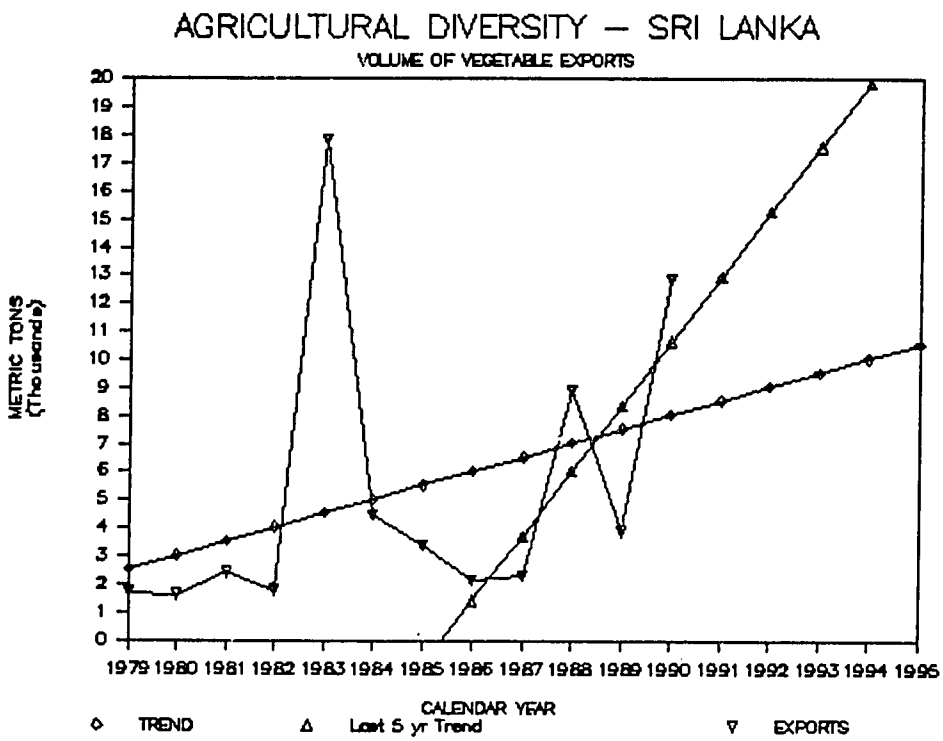

AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF "OTHER" OIL SEED EXPORTS
METRIC TONS (Thousands)
0
1
2
3
4
5
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS


AGRICULTURAL DIVERSITY — SRI LANKA
VOLUME OF PAPAIN EXPORTS
METRIC TONS
0
10
20
30
40
50
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS


AGRICULTURAL DIVERSITY – SRI LANKA
VOLUME OF PEPPER EXPORTS
METRIC TONS (Thousands)
4
3.5
3
2.5
2
1.5
1
0.5
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS


AGRICULTURAL DIVERSITY – SRI LANKA
VOLUME OF SESAME EXPORTS
METRIC TONS (Thousands)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS


AGRICULTURAL DIVERSITY – SRI LANKA
VOLUME OF TOBACCO EXPORTS
METRIC TONS (Thousands)
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 Yr Trend
EXPORTS


AGRICULTURAL DIVERSITY – SRI LANKA
VOLUME OF VEGETABLE EXPORTS
METRIC TONS (Thousands)
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
CALENDAR YEAR
TREND
Last 5 yr Trend
EXPORTS

APPENDIX

INPUT DATA

&

MACRO MENU

SECONDARY PROGRAM PERFORMANCE INDICATORS USAID/SRI LANKA
AGRICULTURAL DIVERSITY LATEST DATA AS OF: 1990

[VOLUME OF EXPORTS -- Thousands of Kilograms (i.e. METRIC TONS)]

A	B	C	D	E	F	G	H	I
YEAR	VEGET-ABLES	FRUITS FRESH/DRY	AREACA NUT	COFFEE	PEPPER	CINNA-MON	CLOVES	NUTMEG MACE
1979	1,718.7	105.3	4,228.8	2,603.0	875.7	6,632.9	785.6	360.7
1980	1,641.4	1,769.2	5,480.3	908.8	646.8	5,908.6	1,193.7	227.5
1981	2,429.2	23,861.8	2,097.8	2,036.6	2,051.6	8,682.0	1,348.3	407.1
1982	1,799.2	3,781.9	2,410.3	2,920.4	1,237.9	5,721.4	975.0	353.5
1983	17,826.9	1,441.8	3,269.3	3,124.4	1,119.7	4,867.2	1,749.8	303.9
1984	4,503.8	930.1	2,198.8	3,678.6	2,202.1	7,741.8	957.4	428.0
1985	3,405.9	799.6	383.2	5,268.4	1,214.6	7,585.7	294.8	330.6
1986	2,145.6	517.8	1,071.1	2,639.7	1,271.4	7,589.0	740.2	386.0
1987	2,311.8	1,923.7	1,376.4	850.9	2,014.7	7,504.7	491.7	286.0
1988	8,901.9	2,121.6	1,512.0	4,202.5	2,692.3	6,810.7	2,251.0	489.7
1989	3,915.0	6,056.0	714.2	1,805.0	1,575.8	7,492.7	311.7	390.4
1990	12,898.0	2,308.0	3,133.6	1,263.3	1,308.2	6,511.9	2,137.0	265.1
1991								
1992								
1993								
1994								
1995								

Source: Sri Lanka Central Bank, Annual Report, Table 41

J	K	L	M	N	O	P
[VOLUME OF EXPORTS -- Thousands of Kilograms (i.e. METRIC TONS)						
CARDAMOM	SESAME SEEDS	OTHER OIL SEED	BETEL LEAVES	COCOA PRODUCTS	TOBACCO	PAPAIN
=====	=====	=====	=====	=====	=====	=====
179.4	12,542.7	2,198.9	1,370.7	609.8	876.5	34.9
163.9	11,847.5	3,232.3	220.5	916.3	229.9	26.4
216.3	12,023.3	3,553.4	1,697.2	901.9	1,932.7	25.9
208.8	23,382.6	4,079.9	2,189.0	697.5	538.6	31.5
136.1	5,498.6	4,106.5	2,027.0	806.5	447.3	29.2
117.5	601.1	2,849.3	2,276.5	591.1	852.5	17.5
231.5	2,340.8	2,179.3	1,699.8	1,092.4	679.2	15.0
272.3	1,783.9	895.3	1,789.2	672.4	414.5	9.5
191.6	5,639.6	1,045.3	1,901.5	813.9	416.0	8.4
138.8	7,483.9	357.0	2,472.9	135.0	717.9	24.0
126.3	334.2	287.4	2,297.6	121.0	601.5	6.7
34.2	4,546.7	26.0	3,149.4	168.0	1,332.8	0.0

Q	R	S
[VOLUME OF EXPORTS -- Thousands of Kilograms]		
ESSENTIAL OILS	CASHEW	MINOR AG PRODUCTS
=====	=====	=====
734.6	162.5	10,812.1
281.9	399.4	7,704.2
253.3	1,105.0	9,931.9
354.4	616.8	9,374.9
2,199.4	899.4	14,382.5
346.6	128.0	11,848.0
291.3	284.5	10,739.4
3,295.4	503.4	14,096.0
1,246.7	1,034.1	10,687.6
902.5	1,116.2	13,632.4
1,443.6	1,527.8	13,827.2
953.5	1,281.3	19,286.1

```
W1: [W1]                                                                    NAME
Enter name of graph to make current:
ARECANUT        BETEL           CARDAMOM        CASHEWS         CINNAMON
    W   X        Y        Z        AA       AB       AC       AD       AE
1     TO PERFORM REGRESSION ANALYSIS: Enter /DRRX    TREND is GRAPHED as the
2     X-range, Y-range, Output, & Go in one                 3rd Variable in
3     of the appropriate Crop tables below                  the "C" RANGE
4    X RANGE Y RANGE  [HIT: [Page Down] for other tables]
5       YEAR   VEGET-             TREND = YEAR x X Coefficient + Constant
6               ABLES          i.e. AD8 = ((X8*AB15)+AC9) =  TREND
7      =====    ===== OUTPUT                                   =====
8       1979  1,718.7 *HERE*   Regression Output:            2,538.3
9       1980  1,641.4 Constant                    -988102.   3,038.9
10      1981  2,429.2 Std Err of Y Est            5133.426   3,539.4
11      1982  1,799.2 R Squared                   0.119699   4,040.0
12      1983 17,826.9 No. of Observations               12   4,540.6
13      1984  4,503.8 Degrees of Freedom                10   5,041.2
14      1985  3,405.9                                        5,541.7
15      1986  2,145.6 X Coefficient(s)  500.5762            6,042.3
16      1987  2,311.8 Std Err of Coef.  429.2787            6,542.9
17      1988  8,901.9 ============================          7,043.5
18      1989  3,915.0   NOTE:- TO RETURN TO MENU             7,544.0
19      1990 12,898.0          HIT: [Alt] C                  8,044.6
20      1991           ============================          8,545.2
06-Aug-91  07:19 AM
```

```
MENU

0        {GOTO}A41~{WAIT @NOW+@TIME(0,0,6)}{continue}
I

M        {goto}j30~/wtc/wgpd

START    {windowsoff}{home}{GOTO}F2~/WGPE{WINDOWSON}{?}~{goto}b8~
         /WTB/rib8.s24~{?}~/WTC{continue}

COMPARE  {goto}a128~{menubranch a125}
\x

CONTINUE {goto}a65~/wgpd{menubranch a62}
\C

PRINT    {WINDOWSOFF}{goto}a96~^A~/dsda100.m117~PA100~A~SA100~A~G
         /ppra1.s25~ag/PPRA89.I118~AG{esc}{esc}{esc}{continue}

ESTAB    {goto}a90~{WINDOWSOFF}{goto}a96~^B~/wgpe/dsda100.m117~PC100~A~SA100~A~G
         {GOTO}C100~/WTB{WINDOWSON}{?}/wtc{continue}

TURN     {goto}a90~{WINDOWSOFF}{goto}a96~^C~/wgpe/dsda100.m117~PD100~A~SA100~A~G
         {GOTO}C100~/WTB{GOTO}D100~{WINDOWSON}{?}/wtc{continue}

OK       {goto}a90~{WINDOWSOFF}{goto}a96~^D~/wgpe/dsda100.m117~PE100~A~SA100~A~G
         {GOTO}C100~/WTB{GOTO}E100~{WINDOWSON}{?}/wtc{continue}

STRUGL   {goto}a90~{WINDOWSOFF}{goto}a96~^E~/wgpe/dsda100.m117~PF100~A~SA100~A~G
         {GOTO}C100~/WTB{GOTO}F100~{WINDOWSON}{?}/wtc{continue}

POTENTL  {goto}a90~{WINDOWSOFF}{goto}a96~^F~/wgpe/dsda100.m117~PG100~A~SA100~A~G
         {GOTO}C100~/WTB{GOTO}G100~{WINDOWSON}{?}/wtc{continue}

LOST     {goto}a90~{WINDOWSOFF}{goto}a96~^G~/wgpe/dsda100.m117~PH100~A~SA100~A~G
         {GOTO}C100~/WTB{GOTO}H100~{WINDOWSON}{?}/wtc{continue}
```