

Appendix 1

SURVEY AND COVERING LETTER

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Dear Sir/Madam,

I am writing to you to seek your help and advice in an attempt to improve the flow of market information to Australian farmers. As I am sure you are aware, a great deal of your money is spent by statutory authorities in an attempt to provide information which is thought to help you in your business decisions. Yet, many producers, including myself, believe that much of this effort appears to miss the mark.

As part of this attempt to remedy this situation I am conducting the attached survey to gain a better understanding of farmer's management techniques, their attitudes to various information providers and an indication of the most important sources of information used by producers.

Please be assured of two things. Firstly the survey results will remain completely confidential. Secondly every effort will be made to communicate the findings of this survey and your suggestions to all organisations providing market information to farmers.

It would help me greatly if you could find a few minutes to complete this survey and return it in the reply paid envelope provided. Your assistance in completing this survey is critical to the success of this study as the number of survey forms that I have been able to send out has been severely limited by financial constraints.

In closing I would like to acknowledge the financial support for this study provided by the Australian Wool Research and Development Corporation

Yours sincerely

Keith Campbell

Please answer all questions by circling the answer which best describes your business or writing the appropriate answers within the brackets provided.

1) How many of the following stock are you currently running?

Sheep (head) () Cattle ()
 Pigs () Goats ()

2) What area (ha) of crop do you intend to plant within the current 12 months

Summer Crops (ha) Winter Crops (ha)

3) What percentage of your farm income is derived from:

Wool sale	()	%
Surplus sheep sale (CFA, wethers, weaners)	()	%
Prime lamb sales	()	%
Cattle sale	()	%
Winter crops	()	%
Summer crops	()	%
	100	%

4) Please estimate what percentage of your gross annual turnover comes from;

a) farm income only (%) b) non-farm income (%)

5) Please estimate your current equity (from the value of all your assets (including both farm and non-farm) subtract all your debts then divide this by the value of all your assets)

less than 25% 25-50% 50-75% 75-100% no debts

7) Do you own a computer? yes / no
 (If no go straight to question 12)

8) Which of the following programmes do you own?

Word processor	yes / no
Spread sheet	yes / no
Communications	yes / no
Database	yes / no
Farm accounting package	yes / no

9) If you own a farm accounting package please specify (name)

10) How often do you use your farm accounting package each year?

1-2 times 3-6 times 6-12 times more than 12 times

11) Please rank in order of usefulness, to your farming business, the following computer applications. (number 1 being the most useful)

Cash book	()
Cashflow Budgeting	()
Farm planning	()
Production recordkeeping	()
To access electronic info. services	()
Wordprocessing	()
Taxation accounting	()
Others	
(please specify,)()

12) Are you familiar with the following financial and business planning aids?

Gross Margins	yes / no
Cash flow budgets	yes / no
Linear programming	yes / no
Decision Theory	yes / no

13) Have you tried, but now no longer use any of the following financial and business planning aids?

Gross Margins	yes / no
Cash flow budgets	yes / no
Linear programming	yes / no
Decision Theory	yes / no

14) Do you currently use any of the following financial and business planning aids, either as a manual system or with the aid of a computer?

Gross Margins	yes / no
Cash flow budgets	yes / no
Linear programming	yes / no
Decision Theory	yes / no

15) If you currently compile cash flow budgets, how often do you review (either compare actual against budgets or recalculate) the budget?

More than 12 times a Year Monthly Quarterly Half Yearly Yearly

16) If you currently use cash flow budgets, who first encouraged you to use them?

NSW Department of Agriculture (Farm Check)	()
Private Consultants	()
Your Bank or Financial Institution	()
Your Accountant	()
Other Farmers	()
Educational institutions (TAFE, College, Uni etc)	()
Others (please specify,)	()

17) In planning next year's production, please indicate on a scale of 1 to 10 the importance of the following. Most important factors are to be indicated by the number 10 and the least important factors by the number 1. (You may consider several items to be equally important. If so they are to be given the same score)

a) Your cropping and grazing rotation:

1 2 3 4 5 6 7 8 9 10

b) Current levels of stock on hand:

1 2 3 4 5 6 7 8 9 10

c) Current commodity prices:

1 2 3 4 5 6 7 8 9 10

d) Your estimates of next year's prices:

1 2 3 4 5 6 7 8 9 10

e) Cash flow commitments:

1 2 3 4 5 6 7 8 9 10

f) Past production experience:

1 2 3 4 5 6 7 8 9 10

g) Environmental constraints (e.g. country only good for sheep):

1 2 3 4 5 6 7 8 9 10

h) Long range weather forecasts:

1 2 3 4 5 6 7 8 9 10

i) Other factors (please specify): ()

1 2 3 4 5 6 7 8 9 10

18) Please indicate the accuracy with which you believe that **YOU** can predict costs and prices 12 months ahead, within the following percentage errors (i.e. if you believe you can predict wool prices within plus or minus 10% of the price you will realize please circle 10%)

Input Costs (Sheep)	5%	10%	15%	25%
Production (Sheep)	5%	10%	15%	25%
Wool Prices	5%	10%	15%	25%
Lamb Prices	5%	10%	15%	25%
Surplus Sheep Prices	5%	10%	15%	25%
Input Costs (Grain)	5%	10%	15%	25%
Production (Grain)	5%	10%	15%	25%
Grain Prices	5%	10%	15%	25%
Input Costs (Cattle)	5%	10%	15%	25%
Production (Cattle)	5%	10%	15%	25%
Cattle Prices	5%	10%	15%	25%

19) Please indicate the accuracy with which you believe that the Australian Wool corporation (AWC) can predict wool prices 12 months ahead. (i.e. if you believe the AWC 's predictions are within plus or minus 10% of the price realize please circle 10%)

5% 10% 15% 25% 50% 100% Do not know

20) Please indicate the accuracy with which you believe that the Australian Meat and Livestock Corporation's (AMLC) can predict beef prices 12 months ahead. (i.e. if you believe the AMLC's predictions are within plus or minus 10% of the price realize please circle 10%)

5% 10% 15% 25% 50% 100 % Do not know

21) Please indicate the accuracy with which you believe that the Australian Wheat Board (AWB) can predict wheat prices 12 months ahead. (i.e. if you believe the AWB's predictions are within plus or minus 10% of the price realize please circle 10%)

5% 10% 15% 25% 50% 100 % Do not know

22) Please indicate the accuracy with which you believe that the Australian Bureau of Agricultural and Resource Economics (ABARE) can forecast commodity prices 12 months ahead. (i.e. if you believe the ABARE's forecasts are within plus or minus 10% of the price realize please circle 10%)

5% 10% 15% 25% 50% 100% Do not know

23) Did you attend or see on TV any of the 1993 outlook conference held in Canberra in early February, or any of the regional outlook conferences held by ABARE in 1993? yes / no

24) Please indicate (by numbering in order, most important =1) your three (3) most useful sources of market information .

NSW Department of Agriculture	()
ABARE	()
Statutory Authorities (AWC, AMLC, AWB, CALM etc)	()
Pastoral Firms, Agents and Merchants	()
Private consultants	()
Weekly Rural Papers (The Land, Weekly Times etc)	()
Your Local Paper	()
Radio Broadcasts	()
Television Programmes	()
Local Sales and direct sales	()
Other Farmers	()
Others- please specify	()

25) Please indicate (by numbering in order, most important =1) your three (3) most useful sources of financial/banking information.

NSW Department of Agriculture	()
Rural Counsellors	()
NSW Farmers Financial Referral Service	()
Pastoral Firms & Stock Agents	()
Your Accountant	()
Your Bank or Financial Institution	()
Private consultants	()
Weekly Rural Papers (The Land, Weekly Times etc)	()
Metropolitan Papers (Financial Review, The Australian etc)	()
Your Local Paper	()
Radio Broadcasts	()
Television Programmes	()
NSW Farmers 008 number	()
Other Farmers	()
Others - please specify	()

26) How many people are involved in the management of your farm?

1 2 3 4 more than 4

27) What is the highest level of education attained by any individual involved in the management of your farm?

Primary School Secondary School College Graduate Post Graduate

28) In your own words please describe the relationship between the wool market indicator and the prices you receive for your wool. For example, how would a 50 cent rise in the national wool market indicator would impact on the prices you would receive for your own clip.

29) Please make any comments that you believe may assist in the improvement of the provision of market or financial information to you as a farmer, below.

Thank you for your assistance in completing this survey. Please place the form in the reply paid envelope supplied (no stamp is required) and post it at your earliest convenience. In closing may I wish you bountiful season and good prices.

Appendix 2

SURVEY DATA

Codes

Code	Description	Question
1	yes	
0	no	
rno	return number	
sheep	sheep	Q1
cattle	cattle	
pigs	pigs	
goats	goats	
scrp	summer crop (ha)	Q2
wcrp	winter crop (ha)	
ent	farming enterprises	
prwool	percentage of farm income from wool production	Q4
prsheep	percentage of farm income from surplus sheep	
prlambs	percentage of farm income from lamb sales	
prcattle	percentage of farm income from cattle sales	
prwcrp	percentage of farm income from winter crops	
prscrp	percentage of farm income from summer crops	
proth	percentage of farm income from other enterprises	
farm	percentage of gross annual turnover from farming	Q5
equity	1=no debts, 2 = 75-100% equity, 3 = 50-75% equity 4 = 25 - 50% equity, 5 = < 25% equity	Q7
debt	yes/no	
comp	computer ownership yes/no	Q8
gm	familiar with gross margins yes/no	Q12
cf	familiar with cash flow budgets yes/no	
lin	familiar with linear programming yes/no	
dec	familiar with decision theory yes/no	
crgm	current gross margins user yes/no	Q14
crcf	current cash flow budget user yes/no	
crlin	current linear programming user yes/no	
crdec	current decision theory user yes/no	
rev	cash flow review 1 = more than 12 times a year, 2 = monthly, 3 = quarterly, 4 = half yearly, 5 = yearly, 6 = never	Q15
cfasda	cash flow as decision aid (rev = 1,2,3 & 4) = 1 (rev = 5 or 6)=0	
cfg	cash flow group, (rev = 1,2,3,4) =1 (rev = 5)=3 (rev = 6)=3	
ag	NSW Dep of Agriculture	Q16
con	private consultant	
bank	bank or financial instution	
acct	accountant	
f	farmers	
ed	education instution	
ot	others	
rot	cropping or grazing rotation	Q17

stock	stock on hand	
prices	next year prices	
fp	future prices	
curcf	current cash flow	
pprod	past production	
env	environment	
wth	weather forecasts	
otherf	other factors	
insh	input costs sheep	Q18
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
psh	production sheep	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
wool	wool prices	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
lmb	lamb prices	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
cfa	surplus sheep prices	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
ingr	input costs grain	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
pgr	production grain	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
gr	grain prices	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
inc	input cost cattle	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
pc	production cattle	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
c	cattle prices	
1 =5%, 2= 10%, 3 = 15 %, 4 = 25%, 5 = no reply (do not know)		
awcf	Australian Wool Corporation forecasts	Q19
1=5%, 2=10%, 3=15%, 4=25%, 5=50%, 6=100%, 7 =do not know		
amlcf	Australian Meat and Livestock Corporation forecasts	Q20
1=5%, 2=10%, 3=15%, 4=25%, 5=50%, 6=100%, 7 =do not know		
awbf	Australian Wheat Board forecasts	Q21
1=5%, 2=10%, 3=15%, 4=25%, 5=50%, 6=100%, 7 =do not know		
abaref	A.B.A.R.E. forecasts	Q22
1=5%, 2=10%, 3=15%, 4=25%, 5=50%, 6=100%, 7 =do not know		
outl	outlook conference attendance yes/no in top 3	Q23
agmi	NSW Dept Agriculture yes/no in top 3	Q24
abaremi	ABARE yes/no in top 3	
smami	statutory authorities yes/no in top 3	
pastmi	pastoral houses yes/no in top 3	
conmi	consultants yes/no in top 3	
wpapmi	weekly rural papers yes/no in top 3	
lpapmi	local papers yes/no in top 3	
radiomi	radio yes/no in top 3	
tvmi	television yes/no in top 3	
salesmi	local sales yes/no in top 3	
fmi	other farmers yes/no in top 3	
otmi	other yes/no in top 3	
agfi	NSW Dept Agriculture yes/no in top 3	Q25

clsfi	rural counsellors yes/no in top 3	
nswfi	NSW Farmers Financial Referral Service yes/no in top 3	
pastfi	pastoral houses yes/no in top 3	
acctfi	accountants yes/no in top 3	
bankfi	banks yes/no in top 3	
confi	consultantswpapfi yes/no in top 3	
wpapfi	weekly papers yes/no in top 3	
mpapfi	metropolitan papers yes/no in top 3	
lpapfi	loacal papers yes/no in top 3	
radiofi	radio yes/no in top 3	
tvfi	television yes/no in top 3	
nswffi	NSW Farmers yes/no in top 3	
ffi	farmers yes/no in top 3	
otfi	others yes/no in top 3	
man	number involved inmanagement	Q26
elev	education level	Q27
1=primary school, 2=secondary school, 3=colledge, 4=graduate, 5=post graduate		
dwght-1	decision weight factor 1	
dwght-2	decision weight factor 2	
dwght-3	decision weight factor 3	
dwght-4	decision weight factor 4	
pdict-1	prediction factor 1	
pdict-2	prediction factor 2	
pdict-3	prediction factor 3	
forecast	forecast factor	

Appendix 2

SURVEY DATA

	rno	sheep	cattle	pigs	goats	scrp	wcrp
1	1.00	3000.00	.00	.00	.00	.00	300.00
2	2.00	1600.00	113.00	.00	.00	.00	.00
3	3.00	1100.00	.00	.00	.00	.00	250.00
4	4.00	1500.00	120.00	60.00	.00	50.00	250.00
5	5.00	3000.00	110.00	.00	.00	.00	300.00
6	6.00	.00	.00	.00	.00	323.00	404.00
7	7.00	1150.00	.00	.00	.00	10.00	30.00
8	8.00	.00	100.00	.00	.00	.00	10000.00
9	9.00	1400.00	7.00	.00	.00	40.00	200.00
10	10.00	2990.00	.00	.00	.00	.00	80.00
11	11.00	5000.00	.00	.00	.00	.00	250.00
12	12.00	4300.00	120.00	.00	.00	.00	600.00
13	13.00	1160.00	8.00	.00	.00	.00	160.00
14	14.00	6000.00	.00	.00	.00	.00	750.00
15	15.00	250.00	300.00	200.00	.00	.00	.00
16	16.00	1000.00	.00	.00	.00	.00	400.00
17	17.00	4400.00	.00	.00	.00	.00	100.00
18	18.00	1500.00	.00	.00	.00	.00	400.00
19	19.00	4060.00	120.00	.00	.00	.00	760.00
20	20.00	4000.00	200.00	.00	.00	.00	4.00
21	21.00	3000.00	300.00	.00	.00	.00	200.00
22	22.00	2000.00	50.00	.00	.00	20.00	200.00
23	23.00	1200.00	21.00	.00	.00	.00	138.00
24	24.00	1100.00	150.00	160.00	.00	20.00	200.00
25	25.00	850.00	280.00	.00	.00	.00	350.00
26	26.00	136.00	4.00	.00	.00	.00	80.00
27	27.00	520.00	35.00	.00	.00	.00	100.00
28	28.00	1200.00	.00	.00	.00	.00	120.00
29	29.00	750.00	20.00	.00	.00	.00	300.00
30	30.00	3000.00	.00	.00	.00	.00	210.00
31	31.00	3700.00	.00	.00	.00	.00	640.00
32	32.00	1200.00	150.00	.00	.00	10.00	300.00

	ent	prwool	prssheep	prlambs	prcattle	prwcrp	prscrp	proth	farm
1	2.00	.40	.10	.00	.00	.50	.00	.00	.90
2	2.00	.95	.05	.00	.00	.00	.00	.00	.80
3	2.00	.25	.00	.25	.00	.50	.00	.00	.95
4	5.00	.25	.10	.15	.25	.25	.00	.00	.90
5	3.00	.20	.05	.00	.25	.50	.00	.00	.98
6	2.00	.00	.00	.00	.00	.30	.70	.00	1.00
7	3.00	.80	.10	.10	.00	.00	.00	.00	.40
8	2.00	.00	.00	.00	.01	.99	.00	.00	1.00
9	4.00	.40	.00	.00	.00	.60	.00	.00	1.00
10	2.00	.80	.10	.00	.00	.10	.00	.00	1.00
11	2.00	.44	.18	.00	.00	.38	.00	.00	.75
12	3.00	.25	.00	.00	.05	.70	.00	.00	1.00
13	3.00	.60	.05	.00	.15	.20	.00	.00	1.00
14	2.00	.30	.02	.10	.00	.58	.00	.00	1.00
15	3.00	.01	.00	.01	.60	.00	.00	.38	1.00
16	2.00	.12	.00	.18	.00	.70	.00	.00	.90
17	2.00	.80	.05	.10	.00	.05	.00	.00	.60
18	2.00	.60	.10	.00	.00	.30	.00	.00	.99
19	3.00	.30	.10	.00	.08	.52	.00	.00	1.00
20	3.00	.25	.10	.00	.25	.40	.00	.00	.90
21	3.00	.30	.10	.20	.20	.20	.00	.00	.95
22	4.00	.15	.05	.35	.10	.30	.05	.00	.95
23	3.00	.30	.00	.30	.10	.30	.00	.00	1.00
24	5.00	.20	.05	.05	.40	.20	.00	.10	1.00
25	3.00	.05	.00	.12	.43	.40	.00	.00	1.00
26	3.00	.10	.10	.00	.00	.80	.00	.00	.85
27	3.00	.25	.05	.05	.60	.05	.00	.00	.50
28	2.00	.50	.00	.00	.00	.50	.00	.00	.40
29	3.00	.15	.05	.20	.05	.55	.00	.00	1.00
30	2.00	.38	.11	.14	.00	.38	.00	.00	.75
31	2.00	.25	.10	.00	.00	.65	.00	.00	1.00
32	4.00	.15	.05	.00	.30	.50	.00	.00	.70

	equity	debt	comp	gm	cf	lin	dec
1	2.00	1.00	.00	1.00	1.00	.00	.00
2	4.00	1.00	.00	1.00	1.00	.00	.00
3	4.00	1.00	.00	1.00	1.00	.00	.00
4	1.00	1.00	.00	1.00	1.00	.00	.00
5	5.00	.00	.00	1.00	1.00	.00	.00
6	3.00	1.00	1.00	1.00	1.00	1.00	.00
7	5.00	.00	.00	.00	1.00	.00	.00
8	1.00	1.00	.00	1.00	1.00	.00	.00
9	4.00	1.00	.00	1.00	1.00	.00	.00
10	4.00	1.00	.00	1.00	1.00	.00	.00
11	4.00	1.00	1.00	1.00	1.00	.00	.00
12	3.00	1.00	1.00	1.00	1.00	.00	.00
13	4.00	1.00	1.00	1.00	1.00	.00	.00
14	4.00	1.00	1.00	.00	1.00	.00	.00
15	5.00	.00	.00	.00	.00	.00	.00
16	4.00	1.00	1.00	1.00	1.00	.00	1.00
17	4.00	1.00	1.00	1.00	1.00	1.00	1.00
18	1.00	1.00	.00	1.00	1.00	.00	.00
19	4.00	1.00	1.00	1.00	1.00	1.00	1.00
20	5.00	.00	.00	1.00	1.00	.00	.00
21	3.00	1.00	1.00	1.00	1.00	1.00	1.00
22	4.00	1.00	.00	1.00	1.00	.00	.00
23	5.00	.00	.00	.00	.00	.00	.00
24	4.00	1.00	.00	.00	1.00	.00	.00
25	4.00	1.00	.00	1.00	1.00	.00	.00
26	1.00	1.00	.00	1.00	1.00	.00	.00
27	4.00	1.00	.00	1.00	1.00	.00	.00
28	5.00	.00	.00	.00	.00	.00	.00
29	3.00	1.00	.00	1.00	1.00	.00	.00
30	4.00	1.00	1.00	1.00	1.00	.00	.00
31	5.00	.00	.00	1.00	1.00	.00	1.00
32	4.00	1.00	1.00	1.00	1.00	.00	.00

	crgm	crcf	crin	crdec	rev	cfasds	cfg
1	1.00	1.00	.00	.00	4.00	1.00	1.00
2	1.00	1.00	.00	.00	2.00	1.00	1.00
3	1.00	1.00	.00	.00	5.00	.00	2.00
4	1.00	1.00	.00	.00	5.00	.00	2.00
5	.00	1.00	.00	.00	4.00	1.00	1.00
6	1.00	1.00	.00	.00	1.00	1.00	1.00
7	.00	1.00	.00	.00	5.00	.00	2.00
8	1.00	1.00	.00	.00	2.00	1.00	1.00
9	1.00	1.00	.00	.00	4.00	1.00	1.00
10	1.00	1.00	.00	.00	2.00	1.00	1.00
11	.00	1.00	.00	.00	2.00	1.00	1.00
12	1.00	1.00	.00	.00	4.00	1.00	1.00
13	1.00	1.00	.00	.00	3.00	1.00	1.00
14	.00	1.00	.00	.00	3.00	1.00	1.00
15	.00	.00	.00	.00	6.00	.00	3.00
16	1.00	1.00	.00	.00	4.00	1.00	1.00
17	1.00	1.00	.00	.00	2.00	1.00	1.00
18	1.00	1.00	.00	.00	3.00	1.00	1.00
19	1.00	1.00	.00	.00	3.00	1.00	1.00
20	1.00	1.00	.00	.00	2.00	1.00	1.00
21	1.00	1.00	.00	.00	2.00	1.00	1.00
22	.00	.00	.00	.00	6.00	.00	3.00
23	.00	.00	.00	.00	6.00	.00	3.00
24	.00	.00	.00	.00	6.00	.00	3.00
25	1.00	1.00	.00	.00	2.00	1.00	1.00
26	1.00	1.00	.00	.00	5.00	.00	2.00
27	.00	1.00	.00	.00	4.00	1.00	1.00
28	.00	.00	.00	.00	6.00	.00	3.00
29	1.00	1.00	.00	.00	3.00	1.00	1.00
30	1.00	1.00	.00	.00	3.00	1.00	1.00
31	1.00	1.00	.00	1.00	4.00	1.00	1.00
32	1.00	1.00	.00	.00	4.00	1.00	1.00

	ag	con	bank	acct	f	ed	ot	rot	stock
1	.00	1.00	.00	.00	.00	.00	.00	.13	.16
2	.00	.00	1.00	.00	.00	.00	.00	.00	.21
3	1.00	.00	1.00	.00	.00	.00	.00	.18	.18
4	.00	.00	1.00	.00	.00	.00	.00	.09	.15
5	1.00	.00	.00	.00	.00	1.00	.00	.17	.17
6	.00	.00	.00	.00	1.00	.00	.00	.17	.02
7	.00	.00	1.00	.00	.00	.00	.00	.15	.15
8	.00	.00	1.00	1.00	.00	.00	1.00	.13	.09
9	.00	.00	1.00	.00	.00	.00	.00	.14	.14
10	.00	.00	.00	1.00	.00	.00	.00	.20	.20
11	.00	.00	.00	.00	.00	1.00	.00	.19	.17
12	.00	.00	1.00	.00	.00	.00	.00	.13	.11
13	.00	.00	1.00	1.00	.00	.00	.00	.08	.10
14	.00	.00	1.00	1.00	.00	.00	.00	.11	.14
15	.00	.00	.00	.00	.00	.00	.00	.10	.16
16	.00	.00	1.00	.00	.00	.00	.00	.20	.09
17	.00	.00	.00	.00	.00	1.00	.00	.12	.18
18	.00	.00	1.00	1.00	.00	.00	.00	.11	.11
19	.00	.00	.00	1.00	.00	.00	.00	.15	.13
20	.00	.00	.00	.00	.00	1.00	.00	.16	.16
21	.00	.00	.00	.00	.00	1.00	.00	.14	.14
22	.00	.00	.00	.00	.00	.00	.00	.22	.15
23	.00	.00	.00	.00	.00	.00	.00	.26	.26
24	.00	.00	.00	.00	.00	.00	.00	.13	.16
25	1.00	.00	.00	1.00	.00	.00	.00	.12	.15
26	.00	.00	.00	.00	.00	.00	.00	.08	.15
27	.00	.00	.00	1.00	.00	.00	.00	.11	.11
28	.00	.00	.00	.00	.00	.00	.00	.26	.26
29	.00	.00	1.00	.00	.00	.00	.00	.19	.10
30	.00	.00	.00	.00	.00	.00	1.00	.23	.23
31	.00	.00	.00	.00	.00	1.00	.00	.19	.14
32	.00	.00	1.00	.00	.00	.00	.00	.14	.14

	prices	fp	curcf	pprod	env	wth	otherf	insh
1	.11	.10	.10	.16	.15	.08	.00	1.00
2	.17	.21	.21	.02	.13	.06	.00	4.00
3	.13	.13	.15	.16	.05	.02	.00	4.00
4	.09	.11	.16	.11	.11	.02	.16	2.00
5	.11	.15	.07	.11	.20	.02	.00	3.00
6	.10	.15	.17	.08	.15	.02	.14	5.00
7	.12	.15	.03	.15	.15	.09	.00	2.00
8	.13	.13	.13	.13	.13	.11	.00	4.00
9	.13	.13	.14	.14	.14	.01	.00	5.00
10	.12	.12	.20	.07	.07	.02	.00	2.00
11	.13	.07	.17	.15	.11	.02	.00	4.00
12	.14	.14	.18	.13	.09	.09	.00	2.00
13	.20	.18	.18	.20	.04	.02	.00	3.00
14	.14	.09	.14	.14	.14	.04	.07	3.00
15	.13	.13	.16	.16	.15	.02	.00	5.00
16	.13	.13	.09	.17	.15	.04	.00	1.00
17	.09	.09	.06	.09	.15	.24	.00	1.00
18	.11	.11	.11	.11	.11	.22	.00	1.00
19	.15	.15	.16	.16	.07	.04	.00	1.00
20	.16	.13	.13	.10	.06	.10	.00	2.00
21	.12	.17	.15	.15	.12	.02	.00	2.00
22	.11	.11	.13	.17	.09	.02	.00	2.00
23	.13	.03	.13	.13	.03	.03	.00	5.00
24	.14	.18	.11	.13	.07	.09	.00	3.00
25	.15	.11	.12	.12	.14	.08	.00	1.00
26	.13	.10	.05	.03	.15	.18	.15	1.00
27	.15	.13	.15	.13	.13	.08	.00	2.00
28	.06	.06	.03	.26	.03	.03	.00	2.00
29	.17	.15	.13	.17	.08	.02	.00	1.00
30	.00	.09	.21	.21	.02	.00	.00	1.00
31	.10	.21	.02	.12	.19	.02	.00	1.00
32	.14	.11	.14	.14	.14	.03	.00	1.00

	psh	wool	lmb	cfa	ingr	pgr	gr	inc
1	4.00	4.00	4.00	4.00	2.00	4.00	4.00	4.00
2	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00
3	2.00	4.00	4.00	2.00	2.00	4.00	2.00	5.00
4	2.00	3.00	4.00	3.00	2.00	4.00	3.00	4.00
5	3.00	4.00	5.00	3.00	4.00	4.00	4.00	2.00
6	5.00	5.00	5.00	5.00	2.00	2.00	4.00	5.00
7	2.00	2.00	2.00	2.00	5.00	5.00	5.00	5.00
8	5.00	5.00	5.00	5.00	3.00	2.00	2.00	3.00
9	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
10	3.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00
11	2.00	4.00	5.00	4.00	1.00	4.00	3.00	5.00
12	2.00	2.00	2.00	2.00	4.00	1.00	4.00	2.00
13	2.00	2.00	5.00	1.00	2.00	1.00	1.00	2.00
14	3.00	1.00	2.00	1.00	3.00	3.00	2.00	5.00
15	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
16	2.00	4.00	3.00	4.00	2.00	4.00	4.00	5.00
17	2.00	4.00	4.00	3.00	2.00	4.00	4.00	5.00
18	1.00	4.00	4.00	4.00	1.00	1.00	3.00	4.00
19	2.00	3.00	3.00	3.00	2.00	3.00	3.00	1.00
20	2.00	4.00	4.00	3.00	2.00	2.00	4.00	1.00
21	2.00	4.00	4.00	4.00	3.00	3.00	4.00	2.00
22	2.00	4.00	4.00	4.00	2.00	4.00	3.00	2.00
23	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
24	3.00	3.00	4.00	4.00	3.00	4.00	4.00	1.00
25	3.00	4.00	3.00	3.00	2.00	4.00	4.00	2.00
26	1.00	2.00	1.00	1.00	4.00	4.00	4.00	4.00
27	2.00	5.00	3.00	4.00	2.00	3.00	2.00	1.00
28	5.00	2.00	5.00	1.00	4.00	4.00	1.00	5.00
29	3.00	4.00	3.00	4.00	2.00	4.00	4.00	4.00
30	1.00	5.00	4.00	4.00	1.00	1.00	4.00	5.00
31	1.00	4.00	4.00	4.00	2.00	4.00	4.00	5.00
32	2.00	4.00	4.00	4.00	4.00	4.00	4.00	1.00

	pc	c	awcf	amlcf	awbf	abaref	outl
1	4.00	4.00	5	5	3	3	1.00
2	5.00	5.00	7	7	7	7	.00
3	5.00	5.00	7	7	3	7	.00
4	2.00	2.00	4	4	3	4	.00
5	3.00	4.00	5	7	5	5	.00
6	5.00	5.00	7	7	5	5	1.00
7	5.00	5.00	5	7	7	5	.00
8	2.00	2.00	1	2	1	1	.00
9	5.00	5.00	7	7	7	7	.00
10	5.00	5.00	5	7	4	5	.00
11	5.00	5.00	4	7	4	5	1.00
12	2.00	2.00	3	3	4	3	.00
13	2.00	3.00	5	5	3	5	1.00
14	5.00	5.00	4	2	4	4	.00
15	5.00	5.00	7	7	7	7	.00
16	5.00	5.00	5	7	4	5	1.00
17	5.00	5.00	6	7	4	6	1.00
18	4.00	4.00	4	1	3	5	1.00
19	2.00	3.00	4	4	3	4	1.00
20	1.00	3.00	7	4	4	5	1.00
21	2.00	3.00	5	3	3	5	.00
22	2.00	4.00	4	4	2	4	.00
23	5.00	5.00	7	7	7	7	.00
24	2.00	3.00	4	3	4	3	.00
25	2.00	3.00	4	4	7	5	1.00
26	2.00	2.00	4	4	5	5	.00
27	1.00	2.00	5	7	3	3	.00
28	5.00	5.00	1	7	7	7	.00
29	2.00	4.00	5	4	5	5	.00
30	5.00	5.00	5	5	4	5	1.00
31	5.00	5.00	4	7	3	3	1.00
32	2.00	4.00	5	5	4	6	1.00

	agmi	abaremi	smami	pastmi	conmi	wpapmi	lpapmi
1	.00	.00	.00	.00	1.00	.00	.00
2	.00	.00	.00	1.00	.00	1.00	.00
3	.00	.00	.00	1.00	.00	1.00	.00
4	.00	.00	.00	.00	.00	1.00	.00
5	.00	.00	1.00	.00	.00	1.00	.00
6	.00	.00	.00	1.00	.00	1.00	.00
7	1.00	.00	.00	.00	.00	1.00	.00
8	.00	.00	.00	.00	.00	.00	.00
9	1.00	.00	.00	.00	.00	1.00	.00
10	.00	.00	.00	1.00	.00	1.00	.00
11	.00	.00	.00	1.00	.00	.00	.00
12	.00	.00	.00	1.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.00	.00
14	.00	.00	.00	.00	.00	1.00	.00
15	.00	.00	.00	.00	.00	.00	.00
16	1.00	.00	1.00	.00	.00	1.00	.00
17	.00	.00	.00	.00	.00	1.00	.00
18	1.00	.00	.00	.00	.00	1.00	.00
19	1.00	.00	.00	1.00	.00	1.00	.00
20	.00	.00	.00	1.00	.00	1.00	.00
21	.00	.00	.00	1.00	.00	1.00	.00
22	.00	.00	1.00	1.00	.00	1.00	.00
23	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	1.00	.00
25	.00	.00	.00	1.00	.00	1.00	.00
26	.00	.00	1.00	1.00	.00	1.00	.00
27	.00	.00	.00	1.00	.00	1.00	.00
28	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	1.00	.00
30	.00	.00	.00	.00	.00	1.00	.00
31	.00	.00	1.00	.00	.00	1.00	.00
32	.00	.00	.00	1.00	.00	.00	.00

	radiomi	tvmi	salesmi	fmi	otmi	agfi
1	.00	1.00	1.00	.00	.00	.00
2	.00	.00	1.00	.00	.00	.00
3	.00	.00	.00	1.00	.00	.00
4	1.00	.00	.00	.00	1.00	.00
5	1.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	1.00	.00
7	1.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00
9	1.00	.00	.00	.00	.00	.00
10	1.00	.00	.00	.00	.00	.00
11	1.00	.00	1.00	.00	.00	.00
12	.00	.00	1.00	1.00	.00	.00
13	.00	.00	1.00	1.00	.00	.00
14	.00	.00	1.00	1.00	.00	.00
15	1.00	.00	1.00	1.00	.00	.00
16	.00	.00	.00	.00	.00	.00
17	1.00	.00	.00	.00	1.00	.00
18	1.00	.00	.00	.00	.00	1.00
19	.00	.00	.00	.00	.00	.00
20	1.00	.00	.00	.00	.00	.00
21	1.00	.00	.00	.00	1.00	.00
22	.00	.00	.00	.00	.00	.00
23	1.00	1.00	1.00	.00	.00	.00
24	1.00	.00	1.00	.00	.00	.00
25	.00	.00	1.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00
27	1.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00
29	1.00	.00	1.00	.00	.00	.00
30	1.00	1.00	.00	.00	.00	.00
31	.00	.00	.00	.00	1.00	.00
32	.00	1.00	1.00	.00	.00	.00

	clsfi	nswfi	pastfi	acctfi	bankfi	confi
1	.00	.00	.00	1.00	.00	1.00
2	.00	.00	.00	1.00	1.00	.00
3	.00	.00	.00	1.00	1.00	.00
4	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	1.00	.00	.00
6	1.00	.00	.00	1.00	1.00	.00
7	.00	.00	.00	.00	1.00	.00
8	.00	.00	.00	.00	.00	.00
9	1.00	.00	.00	1.00	1.00	.00
10	.00	.00	.00	1.00	1.00	.00
11	.00	.00	.00	1.00	1.00	.00
12	1.00	.00	.00	1.00	.00	.00
13	1.00	.00	.00	.00	1.00	.00
14	.00	.00	.00	1.00	1.00	.00
15	.00	.00	.00	1.00	1.00	.00
16	.00	.00	.00	1.00	1.00	.00
17	.00	.00	.00	.00	1.00	.00
18	.00	.00	.00	1.00	.00	1.00
19	.00	.00	1.00	1.00	1.00	.00
20	.00	.00	.00	1.00	1.00	.00
21	.00	.00	1.00	1.00	1.00	.00
22	.00	.00	.00	1.00	1.00	.00
23	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00
25	1.00	.00	.00	1.00	.00	1.00
26	.00	.00	.00	1.00	1.00	1.00
27	.00	.00	1.00	1.00	.00	.00
28	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	1.00	1.00	.00
30	1.00	.00	.00	1.00	1.00	.00
31	.00	.00	.00	1.00	.00	.00
32	.00	.00	1.00	1.00	1.00	.00

	wpapfi	mpapfi	lpapfi	radiofi	tvfi	nswffi	ffi
1	.00	1.00	.00	.00	.00	.00	.00
2	1.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	1.00
4	1.00	.00	.00	1.00	.00	.00	.00
5	1.00	.00	.00	1.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00
7	1.00	.00	1.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00
10	.00	1.00	.00	.00	.00	.00	.00
11	.00	.00	.00	1.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	1.00
13	1.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	1.00
15	.00	.00	.00	.00	.00	.00	1.00
16	.00	.00	.00	.00	.00	.00	1.00
17	1.00	.00	.00	1.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00
22	.00	1.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00
24	1.00	.00	.00	1.00	1.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1.00	.00
28	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	1.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00
31	1.00	.00	.00	.00	.00	.00	.00
32	.00	.00	.00	.00	.00	.00	.00

	otfi	man	elev	dwght_1	dwght_2	dwght_3	dwght_4
1	.00	1.00	2.00	.15731	-.53142	.54524	.75888
2	.00	1.00	2.00	1.28260	.62658	-.58079	-.55095
3	.00	1.00	3.00	-.76206	.43873	.46147	.10302
4	1.00	4.00	2.00	.48473	-.29787	-2.43473	1.36587
5	.00	2.00	4.00	.24459	-.18464	.04966	-.18517
6	.00	3.00	4.00	1.19160	.69220	-2.30497	.03825
7	.00	1.00	2.00	.48718	-.60890	.90296	-.10958
8	.00	3.00	2.00	.80299	.08437	.37377	-.09612
9	.00	1.00	3.00	.14640	.47995	.21116	.47684
10	.00	2.00	2.00	-.67012	.41322	-.62914	-.82809
11	.00	1.00	2.00	-.56270	.11176	.13506	.49248
12	.00	3.00	4.00	.54616	.53696	.20932	-.22795
13	.00	2.00	2.00	.58734	1.44959	1.41765	.57853
14	.00	2.00	2.00	.53526	-.33103	-.47842	1.15731
15	.00	1.00	2.00	.23949	.52884	.25866	1.11647
16	.00	2.00	4.00	.33169	.23711	.77857	.13172
17	.00	1.00	3.00	.70782	-2.00900	.09791	-.50993
18	.00	2.00	2.00	.97019	-1.02165	.28881	-.50472
19	.00	2.00	4.00	.01735	.79430	.57268	.16627
20	.00	1.00	3.00	.13374	-.25968	.47613	-1.00430
21	.00	1.00	3.00	.16569	.94036	.17026	.32098
22	.00	1.00	2.00	-.77548	.31289	.36637	.19282
23	.00	3.00	2.00	-1.97273	-.91896	.31221	-.34322
24	.00	2.00	3.00	.35452	.11235	.63955	-.62430
25	.00	2.00	4.00	.50431	-.34861	.50298	.13681
26	.00	2.00	2.00	1.69681	-2.35759	-1.80711	-.32451
27	.00	2.00	2.00	.76026	.26440	.41441	.16075
28	.00	1.00	1.00	-2.45374	-.97875	1.19756	1.08528
29	.00	1.00	3.00	.07983	.70188	.97717	-.23509
30	.00	1.00	3.00	-2.48903	.81014	-.86554	1.15916
31	1.00	2.00	4.00	.47084	.21101	.24643	-.70576
32	.00	1.00	3.00	.22278	.24088	.35597	.45148

	pdict_1	pdict_2	pdict_3	forecast
1	.29326	.35045	-.53350	-.20586
2	1.33846	.77223	.91594	1.86211
3	.07952	1.36996	.04908	1.13695
4	-.54811	-.18919	.24456	-.30917
5	.40350	-.48645	.32121	.81954
6	1.19685	.41854	-.56976	1.12080
7	.12170	1.76037	1.58268	1.18212
8	.34075	-1.29410	.23915	-1.97583
9	1.94684	.27816	.58257	1.86211
10	.67910	1.01966	-.08873	.63825
11	.49543	.95861	-1.07671	.48763
12	-1.19599	-.22495	1.62232	-.60993
13	-1.32682	-.19522	.65410	.17287
14	-.73101	2.08642	1.87537	-.41198
15	1.94684	.27816	.58257	1.86211
16	.15829	1.33216	-.96181	.63825
17	.15039	1.29678	-.91529	.97825
18	-.61298	.64850	-1.70319	-.54595
19	-.94059	-.49941	-.09347	-.30917
20	-.62206	-1.09558	-.48372	.51336
21	-.17483	-.75761	-.33506	-.11123
22	-.17934	-.47620	-.78675	-.49046
23	1.94684	.27816	.58257	1.86211
24	-.03194	-1.01294	.41947	-.45930
25	-.39173	-.49425	-.09126	.60535
26	-1.21537	.62413	1.91862	.24277
27	-.71489	-1.28649	-.45158	.07823
28	-.02969	1.45983	1.60464	.95834
29	-.06338	.09009	-.53747	.39340
30	-.13162	1.18048	-2.21292	.35416
31	.16622	1.24902	-1.41049	-.07239
32	-.02356	-.76804	-.39105	.54352

	mo	sheep	cattle	pigs	goats	scrp	wcrp
33	33.00	.00	.00	.00	.00	.00	.00
34	34.00	.00	85.00	105.00	.00	.00	12.00
35	35.00	80.00	30.00	.00	12.00	.00	.00
36	36.00	4200.00	.00	.00	.00	.00	250.00
37	37.00	1200.00	150.00	.00	.00	.00	120.00
38	38.00	1800.00	15.00	.00	.00	.00	300.00
39	39.00	6000.00	.00	.00	.00	.00	500.00
40	40.00	1800.00	100.00	75.00	.00	24.00	110.00
41	41.00	.00	49.00	.00	20.00	10.00	10.00
42	42.00	.00	300.00	.00	.00	200.00	200.00
43	43.00	5300.00	120.00	.00	.00	.00	500.00
44	44.00	1000.00	30.00	.00	.00	15.00	40.00
45	45.00	3900.00	240.00	.00	.00	.00	200.00
46	46.00	1200.00	.00	.00	.00	.00	130.00
47	47.00	1200.00	.00	.00	.00	.00	135.00
48	48.00	900.00	.00	.00	.00	.00	112.60
49	49.00	2500.00	.00	.00	.00	.00	300.00
50	50.00	1050.00	.00	.00	.00	.00	380.00
51	51.00	6300.00	.00	.00	.00	.00	320.00
52	52.00	36.00	46.00	.00	.00	.00	.00
53	53.00	3000.00	30.00	.00	.00	100.00	.00
54	54.00	1160.00	45.00	.00	.00	.00	40.00
55	55.00	1400.00	250.00	.00	.00	50.00	150.00
56	56.00	500.00	10.00	.00	.00	70.00	90.00
57	57.00	3000.00	50.00	.00	.00	.00	240.00
58	58.00	2200.00	50.00	.00	.00	.00	150.00
59	59.00	4250.00	.00	.00	.00	.00	700.00
60	60.00	3427.00	227.00	.00	.00	.00	160.00
61	61.00	4500.00	50.00	.00	200.00	.00	25.00
62	62.00	.00	575.00	.00	.00	.00	810.00
63	63.00	.00	600.00	.00	.00	.00	.00
64	64.00	1000.00	290.00	.00	.00	.00	70.00

	ent	prwool	prssheep	prlambs	prcattle	prwcrp	prscrp	proth	farm
33	2.00	.10	.00	.00	.15	.75	.00	.00	1.00
34	4.00	.00	.00	.00	.50	.00	.00	.50	.66
35	3.00	.50	.00	.00	.50	.00	.00	.00	.10
36	2.00	.35	.15	.00	.00	.50	.00	.00	1.00
37	3.00	.40	.10	.00	.30	.20	.00	.00	.60
38	3.00	.30	.10	.05	.05	.50	.00	.00	1.00
39	2.00	.35	.10	.15	.00	.40	.00	.00	.95
40	5.00	.50	.04	.06	.15	.08	.00	.17	.83
41	4.00	.00	.00	.00	.80	.00	.00	.20	.10
42	3.00	.00	.00	.00	.20	.30	.50	.00	.60
43	3.00	.50	.10	.00	.10	.30	.00	.00	1.00
44	4.00	.90	.00	.00	.05	.05	.00	.00	.40
45	3.00	.35	.20	.10	.33	.02	.00	.00	.89
46	2.00	.60	.00	.30	.00	.10	.00	.00	1.00
47	2.00	.33	.06	.00	.00	.61	.00	.00	.91
48	2.00	.30	.70	.00	.00	.00	.00	.00	.80
49	2.00	.30	.20	.00	.00	.50	.00	.00	1.00
50	2.00	.10	.00	.30	.00	.60	.00	.00	.85
51	2.00	.40	.02	.00	.00	.58	.00	.00	1.00
52	2.00	.02	.02	.00	.96	.00	.00	.00	.40
53	3.00	.00	.40	.10	.50	.00	.00	.00	.95
54	3.00	.50	.50	.00	.00	.00	.00	.00	.40
55	4.00	.15	.05	.00	.75	.05	.00	.00	1.00
56	4.00	.04	.01	.12	.02	.19	.62	.00	.95
57	3.00	.40	.12	.00	.08	.40	.00	.00	.95
58	3.00	.70	.10	.00	.10	.10	.00	.00	.50
59	2.00	.52	.18	.00	.00	.30	.00	.00	1.00
60	3.00	.50	.12	.00	.13	.25	.00	.00	.95
61	4.00	.70	.10	.20	.00	.00	.00	.00	.60
62	2.00	.00	.00	.00	.50	.50	.00	.00	1.00
63	1.00	.00	.00	.00	1.00	.00	.00	.00	1.00
64	3.00	.20	.05	.10	.65	.00	.00	.00	.85

	equity	debt	comp	gm	cf	lin	dec
33	5.00	.00	.00	.00	1.00	.00	.00
34	5.00	.00	.00	.00	.00	.00	.00
35	.00	1.00	.00	.00	.00	.00	.00
36	5.00	.00	1.00	1.00	1.00	.00	.00
37	4.00	1.00	.00	1.00	1.00	.00	.00
38	4.00	1.00	.00	.00	1.00	.00	.00
39	4.00	1.00	.00	1.00	1.00	.00	.00
40	4.00	1.00	.00	1.00	1.00	.00	.00
41	3.00	1.00	.00	1.00	1.00	1.00	1.00
42	4.00	1.00	1.00	1.00	1.00	.00	.00
43	4.00	1.00	1.00	.00	1.00	.00	.00
44	2.00	1.00	.00	.00	1.00	.00	.00
45	5.00	.00	.00	1.00	1.00	.00	.00
46	3.00	1.00	.00	1.00	1.00	.00	.00
47	5.00	.00	.00	1.00	1.00	.00	.00
48	4.00	1.00	.00	1.00	1.00	.00	.00
49	4.00	1.00	1.00	1.00	1.00	.00	.00
50	5.00	.00	.00	.00	1.00	.00	.00
51	3.00	1.00	1.00	1.00	1.00	.00	.00
52	5.00	.00	.00	1.00	1.00	.00	.00
53	4.00	1.00	1.00	1.00	1.00	.00	.00
54	3.00	1.00	1.00	1.00	1.00	1.00	1.00
55	4.00	1.00	.00	1.00	1.00	.00	.00
56	4.00	1.00	1.00	1.00	1.00	.00	.00
57	3.00	1.00	1.00	1.00	1.00	.00	.00
58	4.00	1.00	.00	1.00	1.00	1.00	.00
59	4.00	1.00	.00	1.00	1.00	1.00	1.00
60	5.00	.00	1.00	1.00	1.00	.00	.00
61	1.00	1.00	.00	1.00	1.00	.00	.00
62	5.00	.00	1.00	.00	.00	.00	.00
63	5.00	.00	.00	1.00	1.00	1.00	.00
64	4.00	1.00	1.00	1.00	1.00	.00	.00

	crgm	crcl	crin	crdec	rev	cfasds	cfg
33	.00	1.00	.00	.00	2.00	1.00	1.00
34	.00	.00	.00	.00	6.00	.00	3.00
35	.00	.00	.00	.00	6.00	.00	3.00
36	1.00	1.00	.00	.00	2.00	1.00	1.00
37	1.00	1.00	.00	.00	4.00	1.00	1.00
38	.00	1.00	.00	.00	2.00	1.00	1.00
39	.00	1.00	.00	.00	5.00	.00	2.00
40	.00	1.00	.00	.00	5.00	.00	2.00
41	1.00	1.00	.00	.00	3.00	1.00	1.00
42	1.00	1.00	.00	.00	3.00	1.00	1.00
43	.00	1.00	.00	.00	5.00	.00	2.00
44	.00	.00	.00	.00	6.00	.00	3.00
45	.00	1.00	.00	.00	3.00	1.00	1.00
46	1.00	1.00	.00	.00	2.00	1.00	1.00
47	1.00	1.00	.00	.00	2.00	1.00	1.00
48	.00	1.00	.00	.00	4.00	1.00	1.00
49	1.00	1.00	.00	.00	2.00	1.00	1.00
50	.00	.00	.00	.00	6.00	.00	3.00
51	1.00	1.00	.00	.00	2.00	1.00	1.00
52	.00	1.00	.00	.00	2.00	1.00	1.00
53	.00	1.00	.00	.00	2.00	1.00	1.00
54	1.00	1.00	.00	.00	2.00	1.00	1.00
55	.00	1.00	.00	.00	5.00	.00	2.00
56	1.00	1.00	.00	.00	3.00	1.00	1.00
57	.00	.00	.00	.00	6.00	.00	3.00
58	1.00	1.00	.00	.00	5.00	.00	2.00
59	1.00	1.00	1.00	1.00	2.00	1.00	1.00
60	1.00	1.00	.00	.00	3.00	1.00	1.00
61	1.00	1.00	.00	.00	5.00	.00	2.00
62	.00	.00	.00	.00	6.00	.00	3.00
63	.00	1.00	.00	.00	1.00	1.00	1.00
64	1.00	.00	.00	.00	6.00	.00	3.00

	ag	con	bank	acct	f	ed	ot	rot	stock
33	.00	.00	.00	.00	.00	.00	1.00	.33	.00
34	.00	.00	.00	.00	.00	.00	.00	.21	.21
35	.00	.00	.00	.00	.00	.00	.00	.50	.50
36	.00	.00	.00	1.00	.00	.00	.00	.18	.13
37	.00	.00	1.00	.00	.00	.00	.00	.15	.18
38	.00	.00	.00	1.00	.00	.00	.00	.25	.25
39	.00	.00	1.00	1.00	.00	.00	.00	.14	.14
40	.00	.00	1.00	.00	.00	.00	.00	.14	.14
41	.00	.00	.00	1.00	.00	.00	.00	.18	.20
42	.00	.00	1.00	.00	.00	.00	.00	.16	.04
43	.00	.00	1.00	.00	.00	.00	.00	.14	.14
44	.00	.00	.00	.00	.00	.00	.00	.21	.23
45	1.00	.00	.00	.00	.00	.00	.00	.17	.17
46	.00	.00	1.00	.00	.00	.00	.00	.21	.18
47	1.00	.00	.00	.00	.00	.00	.00	.20	.02
48	.00	.00	.00	.00	.00	.00	1.00	.13	.13
49	.00	.00	.00	1.00	.00	.00	.00	.18	.18
50	.00	.00	.00	.00	.00	.00	.00	.14	.14
51	.00	.00	.00	.00	.00	.00	1.00	.16	.13
52	.00	.00	.00	.00	.00	.00	1.00	.00	.42
53	.00	.00	1.00	.00	.00	.00	.00	.06	.11
54	.00	.00	1.00	.00	.00	.00	.00	.15	.09
55	.00	.00	1.00	.00	.00	.00	.00	.10	.14
56	.00	1.00	.00	.00	.00	.00	.00	.15	.15
57	.00	.00	.00	.00	.00	.00	.00	.15	.13
58	.00	.00	.00	.00	1.00	.00	.00	.14	.14
59	.00	.00	.00	1.00	.00	.00	.00	.17	.13
60	.00	.00	.00	.00	.00	.00	1.00	.14	.14
61	1.00	.00	.00	.00	.00	.00	.00	.20	.10
62	.00	.00	.00	.00	.00	.00	.00	.15	.15
63	.00	.00	.00	.00	.00	.00	1.00	.19	.19
64	.00	.00	.00	.00	.00	.00	.00	.14	.14

	prices	fp	curcf	pprod	env	wth	otherf	insh
33	.00	.33	.33	.00	.00	.00	.00	2.00
34	.21	.00	.02	.11	.02	.21	.00	5.00
35	.00	.00	.00	.00	.00	.00	.00	5.00
36	.09	.09	.14	.18	.18	.02	.00	3.00
37	.10	.08	.15	.13	.03	.03	.18	1.00
38	.13	.13	.25	.00	.00	.00	.00	2.00
39	.10	.17	.17	.14	.10	.05	.00	2.00
40	.14	.06	.14	.14	.07	.14	.00	3.00
41	.16	.07	.13	.18	.07	.02	.00	5.00
42	.14	.12	.18	.16	.00	.20	.00	5.00
43	.14	.07	.14	.00	.08	.14	.14	1.00
44	.03	.15	.13	.18	.00	.08	.00	1.00
45	.17	.17	.09	.17	.03	.02	.00	1.00
46	.13	.13	.18	.10	.03	.03	.03	4.00
47	.10	.18	.16	.14	.16	.02	.00	2.00
48	.12	.12	.13	.13	.13	.09	.00	5.00
49	.18	.18	.09	.16	.04	.02	.00	3.00
50	.14	.14	.14	.14	.14	.02	.00	5.00
51	.16	.16	.16	.16	.02	.08	.00	5.00
52	.00	.00	.29	.29	.00	.00	.00	4.00
53	.11	.16	.13	.14	.16	.13	.02	1.00
54	.12	.12	.06	.09	.15	.21	.00	1.00
55	.04	.18	.20	.10	.14	.02	.10	2.00
56	.13	.10	.15	.13	.10	.07	.00	3.00
57	.13	.13	.13	.17	.11	.04	.00	2.00
58	.14	.14	.14	.14	.14	.02	.00	2.00
59	.17	.17	.13	.15	.07	.02	.00	1.00
60	.16	.16	.12	.16	.08	.02	.00	1.00
61	.12	.14	.12	.12	.16	.02	.00	1.00
62	.15	.12	.15	.15	.08	.05	.00	5.00
63	.19	.02	.19	.02	.19	.02	.00	5.00
64	.08	.08	.11	.11	.11	.12	.11	3.00

	psh	wool	lmb	cfa	ingr	pgr	gr	inc
33	2.00	2.00	5.00	5.00	5.00	2.00	5.00	2.00
34	5.00	5.00	5.00	5.00	2.00	4.00	4.00	2.00
35	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
36	3.00	4.00	5.00	3.00	3.00	5.00	2.00	5.00
37	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00
38	1.00	1.00	2.00	2.00	4.00	4.00	4.00	3.00
39	2.00	4.00	4.00	4.00	2.00	3.00	3.00	5.00
40	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
41	5.00	5.00	5.00	5.00	5.00	5.00	5.00	2.00
42	5.00	5.00	5.00	5.00	2.00	3.00	4.00	2.00
43	2.00	4.00	4.00	4.00	4.00	4.00	4.00	1.00
44	2.00	4.00	3.00	2.00	3.00	2.00	1.00	1.00
45	2.00	4.00	4.00	4.00	1.00	4.00	2.00	1.00
46	2.00	4.00	3.00	3.00	2.00	3.00	3.00	5.00
47	1.00	4.00	4.00	4.00	2.00	2.00	4.00	5.00
48	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
49	3.00	4.00	3.00	3.00	5.00	3.00	3.00	3.00
50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
51	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
52	4.00	4.00	4.00	4.00	5.00	5.00	5.00	2.00
53	1.00	3.00	4.00	3.00	1.00	1.00	4.00	1.00
54	1.00	4.00	4.00	4.00	1.00	4.00	3.00	1.00
55	2.00	3.00	1.00	1.00	3.00	2.00	3.00	3.00
56	3.00	4.00	4.00	3.00	3.00	2.00	3.00	3.00
57	1.00	3.00	5.00	3.00	2.00	2.00	2.00	1.00
58	2.00	3.00	5.00	2.00	2.00	2.00	3.00	2.00
59	2.00	4.00	4.00	4.00	2.00	3.00	4.00	5.00
60	2.00	2.00	5.00	4.00	1.00	3.00	2.00	1.00
61	1.00	4.00	5.00	4.00	1.00	5.00	5.00	1.00
62	5.00	5.00	5.00	5.00	2.00	2.00	3.00	1.00
63	5.00	5.00	5.00	5.00	5.00	5.00	5.00	1.00
64	3.00	5.00	5.00	5.00	5.00	5.00	5.00	3.00

	pc	c	awcf	amlcf	awbf	abaref	outl
33	5.00	2.00	1	1	2	5	1.00
34	2.00	4.00	7	2	4	4	.00
35	5.00	5.00	7	7	7	7	.00
36	5.00	5.00	4	7	7	7	.00
37	3.00	1.00	1	2	2	1	.00
38	1.00	3.00	7	4	3	1	.00
39	5.00	5.00	4	2	3	4	1.00
40	3.00	1.00	2	4	4	3	.00
41	2.00	3.00	7	4	7	4	1.00
42	2.00	4.00	7	7	4	4	1.00
43	1.00	4.00	4	3	4	5	.00
44	2.00	3.00	5	4	3	4	.00
45	1.00	3.00	5	4	3	4	.00
46	5.00	5.00	7	4	1	6	.00
47	5.00	5.00	5	7	3	6	.00
48	5.00	5.00	1	1	1	1	.00
49	5.00	5.00	7	7	7	7	1.00
50	5.00	5.00	7	7	7	7	.00
51	5.00	5.00	7	7	7	7	.00
52	2.00	4.00	6	6	5	6	.00
53	1.00	3.00	3	2	4	6	.00
54	2.00	4.00	5	5	3	4	.00
55	2.00	3.00	4	5	2	2	.00
56	3.00	3.00	4	4	3	4	.00
57	3.00	3.00	4	4	3	1	.00
58	2.00	3.00	3	4	4	6	.00
59	5.00	5.00	1	7	4	5	1.00
60	1.00	2.00	4	2	2	5	.00
61	1.00	4.00	6	1	7	6	.00
62	1.00	3.00	7	4	2	4	.00
63	1.00	4.00	1	5	1	5	.00
64	3.00	5.00	5	1	5	5	1.00

	agmi	abaremi	smami	pastrni	conmi	wpapmi	lpapmi
33	.00	.00	.00	1.00	.00	1.00	.00
34	.00	.00	.00	.00	.00	1.00	.00
35	.00	.00	.00	.00	.00	.00	.00
36	.00	.00	.00	.00	.00	.00	.00
37	.00	.00	.00	.00	.00	1.00	.00
38	.00	.00	.00	1.00	.00	1.00	.00
39	1.00	.00	.00	.00	.00	1.00	.00
40	.00	.00	.00	.00	.00	1.00	.00
41	.00	.00	.00	1.00	.00	1.00	.00
42	.00	.00	.00	1.00	.00	1.00	.00
43	.00	.00	.00	.00	.00	.00	.00
44	.00	.00	.00	.00	.00	1.00	.00
45	.00	.00	.00	.00	.00	1.00	.00
46	.00	.00	.00	1.00	.00	.00	.00
47	.00	.00	1.00	.00	.00	1.00	.00
48	.00	.00	1.00	.00	.00	1.00	.00
49	.00	.00	.00	.00	.00	1.00	.00
50	.00	.00	.00	.00	.00	1.00	.00
51	1.00	.00	.00	.00	.00	1.00	.00
52	.00	.00	.00	1.00	.00	1.00	.00
53	.00	.00	.00	1.00	.00	1.00	.00
54	.00	.00	.00	1.00	.00	1.00	1.00
55	1.00	.00	.00	1.00	.00	1.00	.00
56	1.00	.00	.00	1.00	1.00	.00	.00
57	1.00	.00	.00	1.00	.00	1.00	.00
58	.00	.00	.00	.00	.00	.00	.00
59	1.00	.00	.00	.00	.00	1.00	.00
60	1.00	.00	.00	.00	.00	1.00	.00
61	1.00	.00	.00	1.00	.00	1.00	.00
62	.00	.00	.00	.00	.00	1.00	.00
63	.00	.00	1.00	1.00	.00	.00	.00
64	.00	.00	.00	1.00	.00	1.00	.00

	radiomi	tvmi	salesmi	fmi	otmi	agfi
33	.00	1.00	.00	.00	.00	.00
34	1.00	1.00	.00	.00	.00	.00
35	.00	.00	.00	.00	.00	.00
36	.00	.00	.00	.00	.00	.00
37	1.00	.00	.00	1.00	.00	.00
38	1.00	.00	.00	.00	.00	.00
39	.00	.00	.00	1.00	.00	.00
40	.00	1.00	.00	1.00	.00	.00
41	.00	.00	1.00	.00	.00	.00
42	.00	.00	.00	1.00	.00	.00
43	.00	.00	.00	.00	.00	.00
44	1.00	1.00	.00	.00	.00	.00
45	.00	.00	1.00	1.00	.00	.00
46	1.00	.00	1.00	.00	.00	.00
47	.00	1.00	.00	.00	.00	.00
48	.00	1.00	.00	.00	.00	.00
49	1.00	.00	1.00	.00	.00	.00
50	1.00	1.00	.00	.00	.00	.00
51	1.00	.00	.00	.00	.00	.00
52	1.00	.00	.00	.00	.00	.00
53	.00	.00	1.00	.00	.00	.00
54	.00	.00	.00	.00	.00	.00
55	.00	.00	.00	.00	.00	.00
56	.00	.00	.00	.00	.00	.00
57	.00	.00	.00	.00	.00	.00
58	1.00	1.00	1.00	.00	.00	.00
59	1.00	.00	.00	.00	.00	.00
60	1.00	.00	.00	.00	.00	.00
61	.00	.00	.00	.00	.00	.00
62	1.00	.00	.00	1.00	.00	.00
63	.00	.00	1.00	.00	.00	.00
64	1.00	.00	.00	.00	.00	.00

	clsfi	nswfi	pastfi	acctfi	bankfi	confi
33	.00	.00	1.00	1.00	1.00	.00
34	.00	.00	.00	.00	.00	.00
35	.00	.00	.00	.00	.00	.00
36	.00	.00	.00	.00	.00	.00
37	.00	.00	.00	1.00	1.00	.00
38	.00	.00	.00	1.00	1.00	.00
39	.00	1.00	.00	1.00	1.00	.00
40	.00	.00	.00	1.00	1.00	.00
41	.00	.00	.00	1.00	.00	.00
42	.00	.00	.00	1.00	1.00	.00
43	.00	.00	.00	.00	.00	.00
44	.00	.00	.00	1.00	1.00	.00
45	.00	.00	.00	1.00	1.00	.00
46	.00	.00	.00	.00	1.00	.00
47	.00	.00	.00	.00	1.00	.00
48	.00	.00	.00	1.00	1.00	.00
49	.00	.00	.00	1.00	1.00	1.00
50	.00	.00	.00	.00	.00	.00
51	1.00	.00	.00	1.00	.00	.00
52	.00	.00	.00	.00	.00	.00
53	1.00	.00	.00	1.00	1.00	.00
54	.00	.00	.00	.00	1.00	.00
55	.00	.00	.00	1.00	1.00	.00
56	.00	.00	.00	1.00	.00	1.00
57	.00	.00	.00	1.00	1.00	.00
58	.00	.00	1.00	.00	.00	.00
59	1.00	.00	.00	1.00	1.00	.00
60	.00	.00	.00	1.00	.00	1.00
61	.00	.00	.00	1.00	.00	.00
62	.00	.00	.00	1.00	.00	.00
63	.00	.00	.00	1.00	1.00	.00
64	.00	.00	.00	1.00	1.00	.00

	wpapfi	mpapfi	lpapfi	radiofi	tvfi	nswffi	ffi
33	.00	.00	.00	.00	.00	.00	.00
34	.00	.00	.00	1.00	1.00	.00	1.00
35	.00	.00	.00	.00	.00	.00	.00
36	.00	.00	.00	.00	.00	.00	.00
37	1.00	.00	.00	.00	.00	.00	.00
38	.00	.00	.00	.00	.00	.00	.00
39	.00	.00	.00	.00	.00	.00	.00
40	1.00	.00	.00	.00	.00	.00	.00
41	.00	1.00	.00	1.00	.00	.00	.00
42	1.00	.00	.00	.00	.00	.00	.00
43	.00	.00	.00	.00	.00	.00	.00
44	1.00	.00	.00	.00	.00	.00	.00
45	.00	.00	.00	.00	.00	.00	1.00
46	.00	.00	.00	1.00	.00	.00	1.00
47	1.00	.00	.00	.00	.00	.00	1.00
48	.00	.00	.00	.00	1.00	.00	.00
49	.00	.00	.00	.00	.00	.00	.00
50	.00	.00	.00	.00	.00	.00	.00
51	.00	.00	.00	.00	.00	1.00	.00
52	1.00	.00	.00	1.00	1.00	.00	.00
53	.00	.00	.00	.00	.00	.00	.00
54	1.00	.00	.00	1.00	.00	.00	.00
55	.00	.00	.00	.00	.00	.00	1.00
56	1.00	.00	.00	.00	.00	.00	.00
57	1.00	.00	.00	.00	.00	.00	.00
58	1.00	.00	.00	.00	.00	.00	1.00
59	.00	.00	.00	.00	.00	.00	.00
60	.00	1.00	.00	.00	.00	.00	.00
61	1.00	1.00	.00	.00	.00	.00	.00
62	1.00	.00	.00	.00	.00	.00	1.00
63	.00	.00	.00	.00	.00	.00	.00
64	1.00	.00	.00	.00	.00	.00	.00

	otfi	man	elev	cwght_1	dwght_2	dwght_3	dwght_4
33	.00	1.00	1.00	-.63848	4.21082	-3.15478	-3.80005
34	.00	1.00	2.00	-.32871	-2.95568	1.86274	-1.46774
35	.00	1.00	2.00	-5.05180	-3.00985	-1.52249	-3.01099
36	.00	4.00	4.00	-.17184	.30210	-.01216	1.14882
37	.00	2.00	4.00	-.44172	-.74824	-2.15753	.95580
38	.00	1.00	2.00	-1.55776	.64049	-1.43193	-2.16871
39	.00	2.00	2.00	.12540	.85778	-.16091	.03110
40	.00	2.00	3.00	.04322	-.81586	.64921	.08858
41	.00	2.00	4.00	-.84514	-.26096	.90698	.60924
42	.00	2.00	4.00	.47804	.20740	.74515	-.80960
43	.00	3.00	2.00	.89383	-1.66789	-2.21393	-.99909
44	.00	2.00	2.00	-1.70331	.20672	-.21095	-.05915
45	.00	2.00	4.00	-.33209	.42619	1.38225	-.43192
46	.00	1.00	2.00	-.79882	.43036	-.46154	-.77592
47	.00	1.00	2.00	.66317	1.58509	-.22508	-.31111
48	.00	3.00	2.00	.42079	-.10628	.20773	.15224
49	.00	2.00	2.00	-.30059	.40695	1.28715	-.65075
50	.00	2.00	2.00	.27796	.52595	.32082	.31235
51	.00	1.00	2.00	-.05496	.63223	.82027	-.53866
52	.00	2.00	2.00	-3.03998	-.02495	-.56169	4.89950
53	.00	2.00	4.00	1.23591	-.03213	.06812	.59285
54	.00	1.00	4.00	1.23481	-1.24133	.41677	-1.10331
55	.00	3.00	2.00	.40717	.79299	-2.50186	.85182
56	.00	1.00	2.00	.04881	-.05867	.28610	.08829
57	.00	3.00	2.00	.07203	.42095	.58516	.43865
58	.00	2.00	3.00	.28439	.51158	.32052	.30476
59	.00	2.00	3.00	.02900	.79824	.83064	-.39971
60	.00	2.00	3.00	.13507	.64261	.95112	.01652
61	.00	2.00	4.00	.27124	.52913	.03068	-.35441
62	.00	2.00	3.00	-.06043	.23231	.57537	.13012
63	1.00	1.00	4.00	.10264	-.76564	-.55914	-.55048
64	.00	2.00	4.00	.41449	-1.22423	-1.46535	.45850

	pdict_1	pdict_2	pdict_3	forecast
33	.07269	-.38697	.50900	-1.17912
34	.99418	-1.25599	-.28499	.03990
35	1.94684	.27816	.58257	1.86211
36	.54329	1.05598	-.02970	1.41023
37	-2.29886	.43024	1.84560	-1.79454
38	-1.01385	.15083	1.66899	-.42539
39	.13927	1.19159	-1.00634	-.59327
40	-2.17934	.35474	1.93265	-.61851
41	1.41266	-1.59602	.95793	.86786
42	.87823	-1.24925	-.35017	.75014
43	-.08515	-1.00739	-.39130	-.08057
44	-1.21117	-.40629	.23346	-.15855
45	-.71598	-1.04791	-1.09266	-.15855
46	.10053	1.35963	-.09713	.15886
47	.03960	1.21348	-1.33210	.64633
48	1.94684	.27816	.58257	-2.11788
49	.28100	.78679	.86765	1.86211
50	1.94684	.27816	.58257	1.86211
51	1.94684	.27816	.58257	1.86211
52	.90390	-.88882	1.07036	1.01749
53	-1.18813	-.83830	-1.03769	-.18388
54	-.53849	-.58029	-1.57393	-.01650
55	-1.25870	.45452	1.40783	-.72715
56	-.21874	-.21705	.36038	-.30917
57	-.89010	-.48377	-.58643	-.87727
58	-.78841	-.48454	-.10406	.10022
59	.16304	1.18816	-1.24959	.03574
60	-1.09293	-1.18238	-.60658	-.58519
61	-.10533	-1.08204	-1.80060	.66982
62	.42197	-1.88582	-.18208	-.03858
63	1.40064	-1.86552	.71481	-.79222
64	1.28746	-.45385	-.33141	-.03275

	mo	sheep	cattle	pigs	goats	scrp	wcrp
65	65.00	650.00	12.00	.00	.00	5.00	110.00
66	66.00	1000.00	.00	.00	.00	.00	50.00
67	67.00	7000.00	.00	.00	.00	.00	.00
68	68.00	500.00	.00	.00	.00	.00	.00
69	69.00	.00	14.00	3.00	.00	.00	40.00
70	70.00	2200.00	.00	.00	.00	.00	80.00
71	71.00	500.00	84.00	.00	.00	.00	.00
72	72.00	15.00	100.00	.00	.00	.00	280.00
73	73.00	5000.00	35.00	.00	.00	.00	200.00
74	74.00	3000.00	.00	200.00	.00	100.00	400.00
75	75.00	7200.00	25.00	.00	.00	.00	300.00
76	76.00	3500.00	.00	.00	.00	20.00	200.00
77	77.00	3000.00	.00	.00	.00	20.00	350.00
78	78.00	1600.00	.00	550.00	.00	.00	240.00
79	79.00	1400.00	250.00	.00	120.00	.00	250.00
80	80.00	3000.00	60.00	.00	.00	.00	300.00
81	81.00	2900.00	.00	.00	.00	.00	340.00
82	82.00	1600.00	20.00	.00	.00	.00	180.00
83	83.00	1800.00	22.00	.00	.00	.00	.00
84	84.00	3000.00	100.00	.00	.00	100.00	1200.00
85	85.00	.00	70.00	.00	.00	10.00	50.00
86	86.00	6000.00	.00	2000.00	.00	.00	500.00
87	87.00	6500.00	150.00	100.00	.00	40.00	800.00
88	88.00	400.00	160.00	.00	.00	150.00	250.00
89	89.00	1000.00	120.00	.00	.00	.00	120.00

	ent	prwool	prssheep	prlambs	prcattle	prwcrp	prscrp	proth	farm
65	8.00	.40	.10	.00	.00	.50	.00	.00	.80
66	2.00	.40	.00	.50	.00	.10	.00	.00	1.00
67	1.00	.80	.20	.00	.00	.00	.00	.00	1.00
68	1.00	.90	.00	.00	.00	.00	.00	.10	.10
69	3.00	.00	.00	.00	1.00	.00	.00	.00	.10
70	2.00	.65	.05	.10	.00	.20	.00	.00	1.00
71	2.00	.24	.00	.06	.71	.00	.00	.00	.50
72	3.00	.00	.00	.00	.48	.52	.00	.00	.98
73	3.00	.60	.05	.00	.05	.30	.00	.00	1.00
74	4.00	.25	.00	.00	.00	.50	.00	.25	1.00
75	3.00	.65	.22	.00	.00	.13	.00	.00	.90
76	3.00	.45	.09	.00	.00	.45	.01	.00	.90
77	3.00	.40	.10	.10	.00	.40	.00	.00	1.00
78	3.00	.15	.02	.00	.00	.34	.00	.49	1.00
79	4.00	.15	.10	.25	.20	.30	.00	.00	1.00
80	3.00	.30	.15	.05	.15	.30	.05	.00	.95
81	2.00	.35	.05	.00	.00	.60	.00	.00	.98
82	3.00	.30	.10	.00	.00	.60	.00	.00	.90
83	2.00	1.00	.00	.00	.00	.00	.00	.00	.30
84	4.00	.10	.08	.13	.10	.60	.00	.00	1.00
85	3.00	.00	.00	.00	1.00	.00	.00	.00	.40
86	3.00	.30	.01	.00	.00	.20	.00	.49	1.00
87	5.00	.29	.05	.10	.15	.40	.01	.00	.98
88	4.00	.15	.10	.00	.50	.13	.12	.00	1.00
89	3.00	.50	.05	.00	.30	.15	.00	.00	1.00

	equity	debt	comp	gm	cf	lin	dec
65	5.00	.00	.00	1.00	1.00	1.00	1.00
66	4.00	1.00	.00	.00	.00	.00	.00
67	5.00	.00	.00	.00	.00	.00	.00
68	4.00	1.00	1.00	1.00	1.00	.00	.00
69	1.00	1.00	.00	.00	1.00	.00	.00
70	5.00	.00	.00	1.00	1.00	.00	.00
71	5.00	.00	1.00	.00	.00	.00	.00
72	3.00	1.00	.00	1.00	1.00	.00	.00
73	4.00	1.00	.00	1.00	1.00	.00	.00
74	3.00	1.00	.00	1.00	1.00	1.00	1.00
75	4.00	1.00	.00	1.00	1.00	.00	.00
76	5.00	.00	.00	1.00	1.00	.00	.00
77	4.00	1.00	.00	1.00	1.00	.00	.00
78	3.00	1.00	1.00	1.00	1.00	1.00	1.00
79	.00	1.00	.00	1.00	1.00	.00	.00
80	3.00	1.00	.00	1.00	1.00	.00	.00
81	5.00	.00	.00	1.00	1.00	.00	.00
82	4.00	1.00	1.00	1.00	1.00	.00	.00
83	5.00	.00	1.00	1.00	1.00	.00	.00
84	4.00	1.00	1.00	1.00	1.00	.00	.00
85	5.00	.00	1.00	1.00	1.00	.00	.00
86	3.00	1.00	1.00	1.00	1.00	.00	1.00
87	.00	1.00	.00	1.00	1.00	.00	.00
88	4.00	1.00	.00	1.00	1.00	.00	1.00
89	3.00	1.00	.00	1.00	1.00	.00	.00

	crgm	crcf	crln	crdec	rev	cfasds	cfg
65	.00	1.00	.00	.00	3.00	1.00	1.00
66	.00	.00	.00	.00	6.00	.00	3.00
67	.00	.00	.00	.00	6.00	.00	3.00
68	.00	1.00	.00	.00	3.00	1.00	1.00
69	.00	1.00	.00	.00	5.00	.00	2.00
70	1.00	1.00	.00	.00	2.00	1.00	1.00
71	.00	.00	.00	.00	6.00	.00	3.00
72	1.00	1.00	.00	.00	5.00	.00	2.00
73	1.00	1.00	.00	.00	4.00	1.00	1.00
74	.00	1.00	.00	.00	4.00	1.00	1.00
75	1.00	1.00	.00	.00	2.00	1.00	1.00
76	.00	1.00	.00	.00	4.00	1.00	1.00
77	1.00	1.00	.00	.00	4.00	1.00	1.00
78	1.00	1.00	1.00	1.00	1.00	1.00	1.00
79	.00	1.00	.00	.00	5.00	.00	2.00
80	1.00	1.00	.00	.00	4.00	1.00	1.00
81	1.00	1.00	.00	.00	3.00	1.00	1.00
82	.00	1.00	.00	.00	5.00	.00	2.00
83	1.00	1.00	.00	.00	3.00	1.00	1.00
84	1.00	1.00	.00	.00	4.00	1.00	1.00
85	1.00	1.00	.00	.00	3.00	1.00	1.00
86	.00	1.00	.00	.00	4.00	1.00	1.00
87	.00	1.00	.00	.00	4.00	1.00	1.00
88	.00	1.00	.00	1.00	3.00	1.00	1.00
89	1.00	1.00	.00	.00	2.00	1.00	1.00

	ag	con	bank	acct	f	ed	ot	rot	stock
65	.00	.00	1.00	.00	.00	.00	1.00	.13	.13
66	.00	.00	.00	.00	.00	.00	.00	.12	.15
67	.00	.00	.00	.00	.00	.00	.00	.19	.19
68	.00	.00	.00	.00	.00	.00	1.00	.09	.09
69	.00	.00	1.00	.00	.00	.00	.00	.13	.16
70	.00	.00	.00	.00	.00	1.00	.00	.15	.16
71	.00	.00	.00	.00	.00	.00	.00	.02	.20
72	.00	.00	1.00	.00	.00	.00	.00	.19	.19
73	.00	.00	.00	1.00	.00	.00	.00	.14	.14
74	.00	.00	1.00	.00	.00	.00	.00	.	.
75	.00	1.00	.00	.00	.00	.00	.00	.12	.13
76	.00	.00	.00	.00	.00	.00	.00	.17	.17
77	.00	.00	.00	.00	1.00	.00	.00	.16	.13
78	1.00	.00	.00	.00	.00	.00	.00	.16	.13
79	.00	.00	1.00	1.00	.00	.00	.00	.12	.12
80	.00	1.00	.00	.00	.00	.00	.00	.18	.18
81	.00	.00	.00	.00	.00	1.00	.00	.13	.13
82	.00	1.00	.00	.00	.00	.00	.00	.16	.13
83	.00	.00	.00	.00	.00	1.00	.00	.00	.20
84	.00	.00	1.00	1.00	1.00	.00	.00	.15	.15
85	.00	.00	.00	.00	.00	.00	1.00	.18	.18
86	.00	.00	1.00	.00	.00	.00	.00	.19	.11
87	.00	.00	1.00	1.00	.00	.00	.00	.17	.17
88	.00	.00	1.00	1.00	.00	.00	.00	.14	.14
89	.00	.00	1.00	.00	.00	.00	.00	.12	.14

	prices	fp	curcf	pprod	env	wth	otherf	insh
65	.13	.13	.13	.13	.13	.13	.00	1.00
66	.14	.17	.17	.10	.07	.08	.00	1.00
67	.11	.09	.13	.15	.08	.02	.04	3.00
68	.09	.09	.14	.09	.18	.09	.14	1.00
69	.13	.10	.16	.13	.16	.05	.00	5.00
70	.10	.15	.16	.15	.11	.03	.00	1.00
71	.14	.12	.04	.12	.12	.10	.16	2.00
72	.15	.13	.09	.17	.00	.08	.00	1.00
73	.14	.14	.14	.14	.14	.01	.00	1.00
74	1.00
75	.15	.17	.19	.10	.08	.02	.04	1.00
76	.10	.10	.10	.17	.17	.02	.00	2.00
77	.13	.11	.14	.14	.13	.07	.00	2.00
78	.13	.13	.14	.16	.09	.08	.00	2.00
79	.12	.12	.12	.12	.12	.12	.01	3.00
80	.14	.09	.16	.13	.11	.02	.00	3.00
81	.11	.09	.13	.11	.11	.06	.13	1.00
82	.13	.13	.15	.10	.11	.08	.00	2.00
83	.15	.15	.05	.05	.05	.35	.00	2.00
84	.15	.15	.11	.15	.11	.02	.00	1.00
85	.15	.07	.13	.11	.11	.07	.00	5.00
86	.17	.21	.06	.21	.02	.02	.00	1.00
87	.14	.16	.17	.17	.00	.02	.00	2.00
88	.14	.13	.14	.14	.11	.07	.00	2.00
89	.06	.12	.18	.16	.14	.04	.02	2.00

	psh	wool	lmb	cfa	ingr	pgr	gr	inc
65	2.00	2.00	4.00	1.00	2.00	2.00	4.00	2.00
66	1.00	4.00	2.00	2.00	1.00	4.00	4.00	5.00
67	2.00	3.00	5.00	4.00	5.00	5.00	5.00	5.00
68	2.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00
69	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00
70	1.00	3.00	4.00	3.00	1.00	3.00	2.00	2.00
71	2.00	3.00	4.00	4.00	1.00	4.00	3.00	1.00
72	1.00	4.00	4.00	3.00	1.00	1.00	3.00	1.00
73	1.00	4.00	4.00	4.00	1.00	4.00	4.00	1.00
74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.00
75	1.00	4.00	5.00	4.00	3.00	4.00	4.00	1.00
76	4.00	4.00	4.00	4.00	3.00	4.00	4.00	5.00
77	3.00	3.00	4.00	4.00	2.00	4.00	3.00	5.00
78	2.00	2.00	2.00	2.00	2.00	2.00	2.00	5.00
79	4.00	5.00	3.00	3.00	4.00	4.00	3.00	4.00
80	2.00	4.00	4.00	4.00	3.00	4.00	4.00	2.00
81	1.00	3.00	4.00	4.00	1.00	4.00	4.00	5.00
82	2.00	3.00	4.00	4.00	2.00	2.00	3.00	2.00
83	5.00	4.00	5.00	2.00	5.00	5.00	5.00	2.00
84	2.00	4.00	4.00	4.00	3.00	3.00	4.00	1.00
85	5.00	5.00	5.00	5.00	5.00	5.00	5.00	1.00
86	1.00	4.00	4.00	4.00	1.00	1.00	3.00	5.00
87	2.00	4.00	3.00	2.00	2.00	4.00	4.00	2.00
88	1.00	2.00	5.00	2.00	5.00	2.00	2.00	2.00
89	3.00	4.00	4.00	4.00	3.00	3.00	4.00	2.00

	pc	c	awcf	amlcf	awbf	abaref	outl
65	2.00	1.00	1	1	1	1	.00
66	5.00	5.00	1	1	1	1	.00
67	5.00	5.00	1	1	1	1	1.00
68	5.00	5.00	3	1	1	3	.00
69	4.00	3.00	7	1	1	1	.00
70	2.00	4.00	4	5	3	4	.00
71	2.00	1.00	1	4	5	1	1.00
72	1.00	4.00	1	6	2	6	.00
73	1.00	4.00	5	5	5	6	.00
74	1.00	1.00	6	4	5	6	.00
75	1.00	4.00	1	1	4	5	1.00
76	5.00	5.00	4	7	4	5	1.00
77	5.00	5.00	4	1	2	4	.00
78	5.00	5.00	1	1	5	4	1.00
79	4.00	3.00	5	4	3	5	.00
80	2.00	2.00	4	1	3	6	.00
81	5.00	5.00	3	1	3	5	1.00
82	2.00	2.00	4	3	2	6	.00
83	2.00	2.00	5	3	3	4	1.00
84	1.00	2.00	5	2	2	4	.00
85	2.00	3.00	1	1	1	1	.00
86	5.00	5.00	5	7	3	5	.00
87	2.00	4.00	5	5	5	5	.00
88	3.00	1.00	4	1	5	2	1.00
89	2.00	4.00	5	4	3	4	.00

	agmi	abaremi	smami	pastrni	conmi	wpapmi	lpapmi
65	.00	.00	.00	.00	.00	.00	.00
66	.00	.00	.00	.00	.00	1.00	.00
67	.00	.00	.00	1.00	.00	1.00	.00
68	.00	.00	.00	1.00	.00	1.00	.00
69	.00	.00	.00	1.00	.00	1.00	.00
70	.00	.00	.00	1.00	.00	.00	.00
71	.00	.00	.00	1.00	.00	1.00	.00
72	1.00	.00	.00	.00	.00	1.00	.00
73	1.00	.00	.00	.00	.00	1.00	.00
74	1.00	.00	.00	.00	.00	1.00	.00
75	.00	.00	1.00	1.00	.00	.00	.00
76	.00	.00	.00	1.00	.00	1.00	.00
77	.00	.00	.00	.00	.00	1.00	.00
78	1.00	.00	.00	.00	.00	.00	.00
79	1.00	.00	.00	.00	.00	1.00	.00
80	.00	.00	.00	.00	.00	1.00	.00
81	1.00	.00	1.00	.00	.00	.00	.00
82	.00	.00	.00	1.00	.00	1.00	.00
83	.00	.00	.00	1.00	.00	1.00	.00
84	1.00	.00	.00	.00	.00	.00	.00
85	1.00	.00	.00	.00	.00	1.00	.00
86	.00	.00	.00	.00	.00	.00	.00
87	.00	.00	.00	1.00	1.00	.00	.00
88	.00	.00	.00	1.00	.00	1.00	.00
89	1.00	.00	.00	1.00	.00	1.00	.00

	radiomi	tvmi	salesmi	fmi	otmi	agfi
65	.00	.00	.00	.00	.00	.00
66	.00	.00	1.00	1.00	.00	.00
67	1.00	.00	.00	.00	.00	.00
68	.00	1.00	.00	.00	.00	.00
69	.00	.00	.00	1.00	.00	.00
70	1.00	.00	1.00	.00	.00	.00
71	.00	.00	.00	1.00	.00	.00
72	.00	.00	.00	1.00	.00	.00
73	1.00	.00	.00	.00	.00	.00
74	.00	.00	.00	1.00	.00	.00
75	.00	.00	.00	1.00	.00	.00
76	1.00	.00	.00	.00	.00	.00
77	1.00	.00	.00	1.00	.00	.00
78	.00	.00	.00	1.00	1.00	1.00
79	.00	.00	.00	1.00	.00	1.00
80	.00	1.00	1.00	.00	.00	.00
81	.00	.00	.00	1.00	.00	.00
82	.00	.00	.00	.00	1.00	.00
83	.00	.00	1.00	.00	.00	.00
84	.00	.00	1.00	1.00	.00	.00
85	.00	.00	1.00	.00	.00	.00
86	.00	.00	.00	1.00	.00	.00
87	.00	1.00	.00	.00	.00	.00
88	1.00	.00	.00	.00	.00	.00
89	.00	.00	.00	.00	.00	.00

	clsfi	nswfi	pastfi	acctfi	bankfi	confi
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66	.00	.00	.00	.00	.00	.00
67	.00	.00	.00	1.00	1.00	.00
68	.00	.00	.00	1.00	1.00	.00
69	.00	.00	.00	1.00	1.00	.00
70	.00	.00	.00	1.00	.00	.00
71	.00	.00	.00	1.00	.00	.00
72	.00	.00	.00	1.00	1.00	.00
73	1.00	.00	.00	1.00	1.00	.00
74	.00	.00	.00	.00	1.00	.00
75	.00	.00	.00	1.00	1.00	.00
76	.00	.00	.00	.00	1.00	.00
77	.00	.00	.00	.00	1.00	.00
78	.00	1.00	.00	.00	.00	.00
79	.00	.00	.00	.00	.00	.00
80	1.00	.00	.00	.00	1.00	1.00
81	1.00	.00	.00	1.00	1.00	.00
82	1.00	.00	.00	.00	1.00	.00
83	.00	.00	.00	1.00	1.00	.00
84	.00	.00	.00	1.00	1.00	.00
85	.00	.00	.00	1.00	.00	1.00
86	.00	.00	.00	1.00	1.00	.00
87	.00	.00	1.00	1.00	.00	1.00
88	.00	.00	.00	1.00	1.00	.00
89	1.00	.00	.00	1.00	1.00	.00

	wpapfi	mpapfi	lpapfi	radiofi	tvfi	nswffi	ffi
65	1.00	.00	.00	.00	1.00	.00	.00
66	.00	.00	.00	1.00	1.00	.00	1.00
67	.00	1.00	.00	.00	.00	.00	.00
68	.00	1.00	.00	.00	.00	.00	.00
69	.00	.00	.00	.00	.00	.00	1.00
70	.00	.00	.00	.00	1.00	.00	.00
71	.00	.00	.00	.00	.00	.00	1.00
72	.00	.00	.00	.00	.00	.00	1.00
73	.00	.00	.00	.00	.00	.00	.00
74	1.00	.00	.00	.00	1.00	.00	.00
75	.00	1.00	.00	.00	.00	.00	.00
76	.00	.00	.00	1.00	1.00	.00	.00
77	1.00	.00	.00	.00	.00	.00	1.00
78	.00	.00	.00	.00	.00	.00	1.00
79	1.00	.00	.00	.00	.00	.00	1.00
80	.00	.00	.00	.00	.00	.00	.00
81	.00	.00	.00	.00	.00	.00	.00
82	1.00	.00	.00	.00	.00	.00	.00
83	1.00	.00	.00	.00	.00	.00	.00
84	.00	.00	.00	.00	.00	.00	.00
85	.00	.00	.00	.00	.00	.00	.00
86	.00	.00	.00	.00	.00	.00	1.00
87	.00	.00	.00	.00	.00	.00	.00
88	1.00	.00	.00	.00	.00	.00	.00
89	.00	.00	.00	.00	.00	.00	.00

	otfi	man	elev	cwght_1	dwght_2	dwght_3	dwght_4
65	.00	2.00	2.00	.64443	-.29337	.30387	-.12022
66	.00	2.00	2.00	.32097	.49161	.03103	-.62758
67	.00	3.00	4.00	-.76638	-.15535	-.20398	.39927
68	.00	1.00	4.00	1.32492	-.81616	-2.26609	1.08697
69	.00	2.00	2.00	.23097	-.02885	-.02517	.63077
70	1.00	1.00	3.00	-.19442	.61710	-.14847	.38235
71	1.00	2.00	4.00	1.23969	-1.83274	-.98427	1.26279
72	.00	4.00	2.00	-.74006	-.19720	1.21224	-.56150
73	.00	2.00	4.00	.27279	.53749	.32106	.31844
74	.00	3.00	3.00				
75	.00	2.00	4.00	.47128	.93520	-.50541	-.28789
76	.00	2.00	3.00	-.24841	-.10603	.28942	.91198
77	.00	4.00	3.00	.16315	.05652	.25201	.17178
78	.00	2.00	3.00	.08173	.21532	.44091	.08771
79	.00	3.00	2.00	.67379	-.35396	.13956	-.06286
80	.00	2.00	3.00	-.43330	.07484	.13148	.10435
81	.00	2.00	4.00	.55827	-.76155	-1.47770	.75908
82	.00	1.00	3.00	.31222	.09152	-.03142	-.62545
83	.00	1.00	4.00	1.70775	-2.43958	.87619	-1.53363
84	1.00	3.00	3.00	.08828	.40469	.79932	.02971
85	.00	1.00	3.00	-.24658	-.67672	.28423	-.28436
86	.00	1.00	2.00	-.06443	.99057	1.84550	-.56899
87	.00	4.00	4.00	-.83679	.97175	.59682	-.12212
88	.00	2.00	4.00	.26930	.10774	.42076	.08022
89	.00	1.00	2.00	-.07415	.57957	-.77059	1.27840

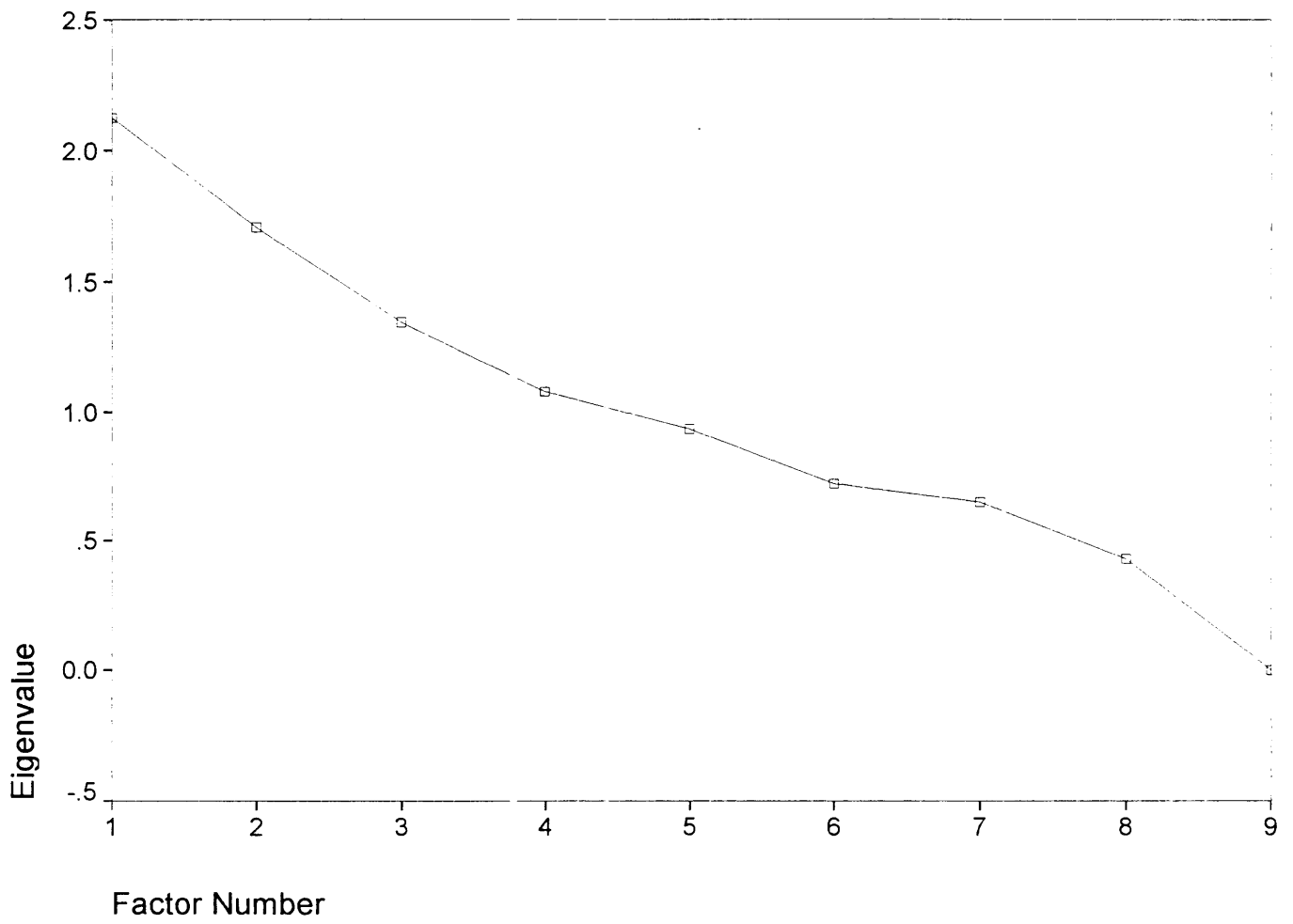
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66	-.42341	1.80379	-.75747	-2.11788
67	.98730	.91705	.30891	-2.11788
68	.90535	.89976	-.37770	-1.43789
69	1.63594	-.63074	1.00227	-1.21411
70	-1.00306	-.05111	-1.03709	-.16712
71	-.76035	-1.22498	-.19984	-.96658
72	-1.07651	-.68405	-1.50059	-.27952
73	-.47102	-.87210	-1.60868	.72481
74	-2.47565	.77157	1.35437	.73339
75	-.16825	-1.06797	-1.17041	-.81655
76	.70084	.97462	-.19309	.48763
77	.22695	1.22858	-.43863	-.91661
78	-.88640	2.00566	.49935	-.82462
79	.34895	.20135	1.01556	.03082
80	-.05323	-1.02652	.15980	-.35659
81	-.06585	1.38292	-1.46446	-.69658
82	-.75153	-.77764	-.19877	-.25378
83	.47035	-1.20465	1.63647	-.30059
84	-.49138	-1.40435	-.34504	-.62393
85	1.36259	-1.83931	.93600	-2.11788
86	-.40171	1.34427	-1.90195	.45697
87	-.42819	-.14719	-.06040	.53545
88	-1.03583	-.50775	1.41426	-.75147
89	.03756	-.61208	-.32992	-.15855

Appendix 3

Appendix 3.1

Decision Weight: (Dwght) Factor Analysis

Factor Scree Plot



Decision Weight Data

Factor Matrix:

	Factor 1	Factor 2	Factor 3	Factor 4
ROT	-.68637	.07061	-.02961	-.53358
STOCK	-.75437	-.45947	.00020	.11587
PRICES	.47574	-.06245	.58024	-.17463
FP	.37418	.71796	.02515	-.33288
CURCF	-.09955	.67380	-.39331	.14717
PPROD	-.24277	.24470	.56023	.66571
ENV	.59562	-.07568	-.11397	.25881
WTH	.46565	-.60059	.12963	-.24135
OTHERF	.28183	-.30462	-.71406	.22464

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
ROT	.76168	*	1	2.12640	23.6	23.6
STOCK	.79361	*	2	1.70858	19.0	42.6
PRICES	.59740	*	3	1.34641	15.0	57.6
FP	.76692	*	4	1.07996	12.0	69.6
CURCF	.64026	*				
PPROD	.87585	*				
ENV	.44046	*				
WTH	.65260	*				
OTHERF	.73257	*				

Skipping rotation 1 for extraction 1 in analysis 1

Analysis number 1 Listwise deletion of cases with missing values

Extraction 1 for analysis 1, Principal Components Analysis (PC)

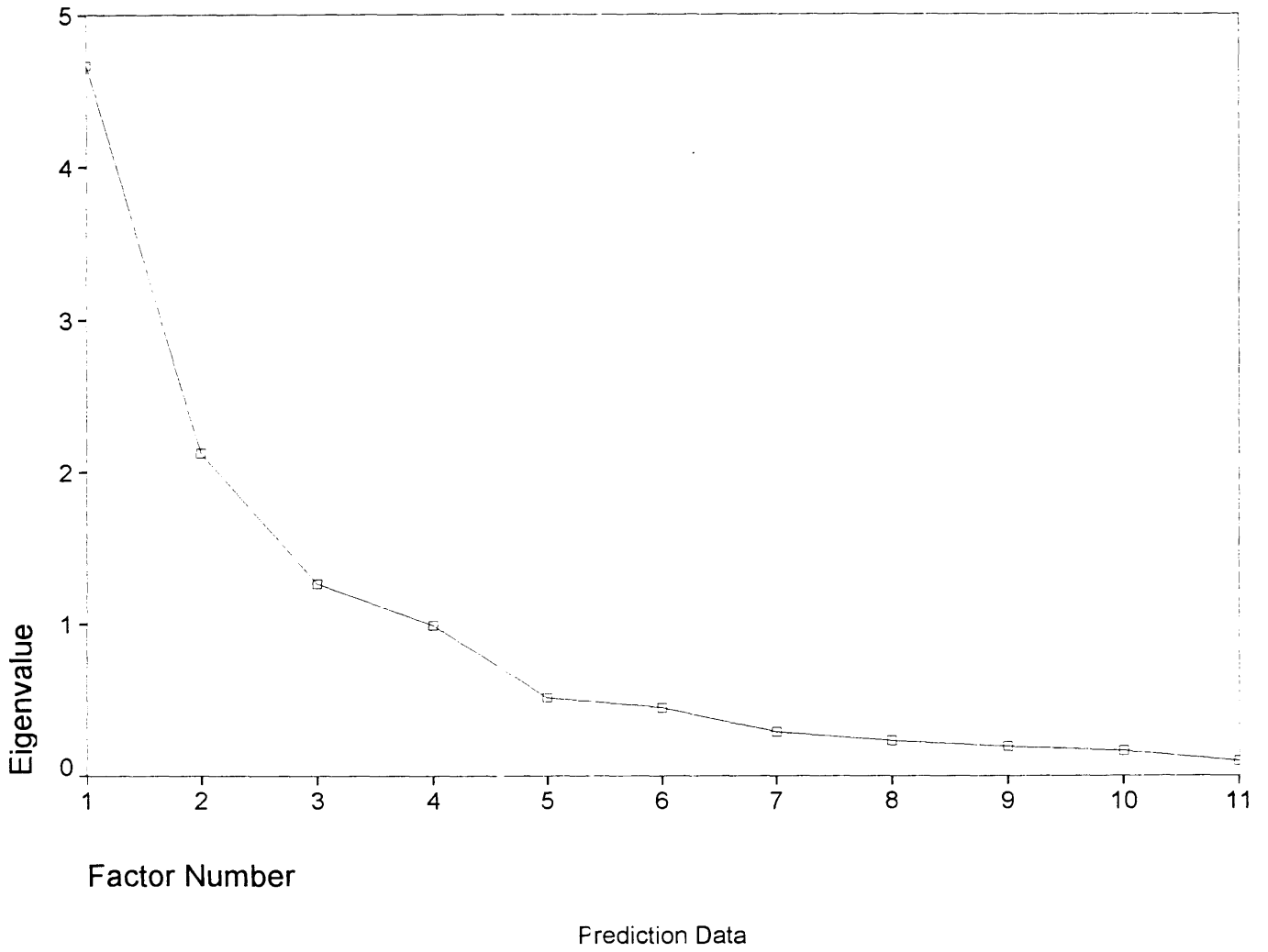
Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
ROT	1.00000	*	1	2.12640	23.6	23.6
STOCK	1.00000	*	2	1.70858	19.0	42.6
PRICES	1.00000	*	3	1.34641	15.0	57.6
FP	1.00000	*	4	1.07996	12.0	69.6
CURCF	1.00000	*	5	.93575	10.4	80.0
PPROD	1.00000	*	6	.72228	8.0	88.0
ENV	1.00000	*	7	.65158	7.2	95.2
WTH	1.00000	*	8	.42905	4.8	100.0
OTHERF	1.00000	*	9	.00000	.0	100.0

Appendix 3.2

Predictive Variable Factor Analysis

Factor Scree Plot



Factor Matrix:

	Factor 1	Factor 2	Factor 3
INSH	.71430	-.15154	.38490
PSH	.74576	-.20364	.40631
WOOL	.73484	-.26423	-.39145
LMB	.63219	-.35966	-.31686
CFA	.74724	-.30532	-.42497
INGR	.62198	-.07023	.61354
PGR	.71027	-.01882	.10851
GR	.70345	-.13025	-.05111
INC	.38934	.86187	.04634
PC	.46198	.81788	.00051
C	.59507	.57989	-.35864

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
INSH	.68133	*	1	4.66971	42.5	42.5
PSH	.76272	*	2	2.12710	19.3	61.8
WOOL	.76304	*	3	1.26905	11.5	73.3
LMB	.62943	*				
CFA	.83219	*				
INGR	.76822	*				
PGR	.51662	*				
GR	.51442	*				
INC	.89655	*				
PC	.88235	*				
C	.81900	*				

Analysis number 1 Listwise deletion of cases with missing values

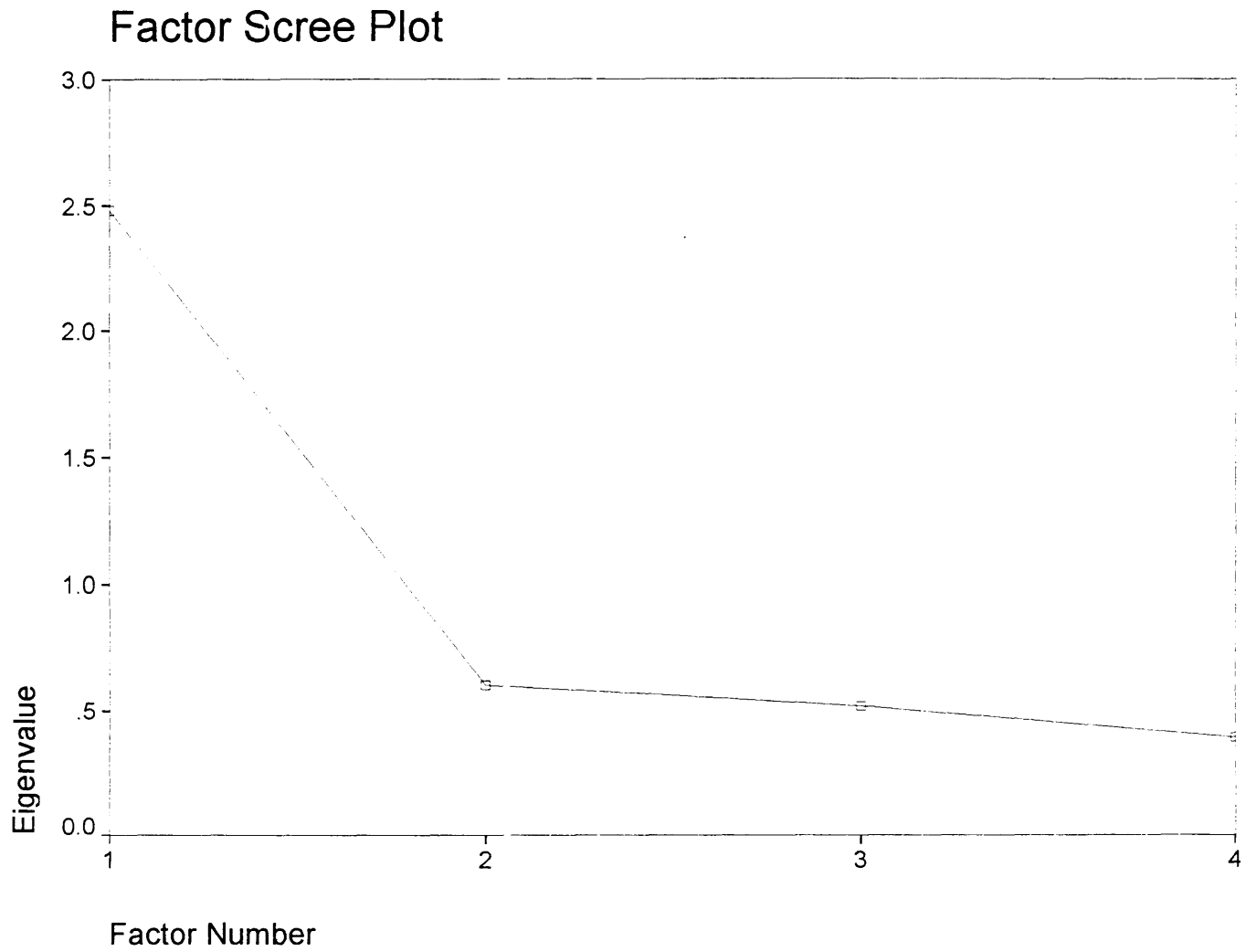
Extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
INSH	1.00000	*	1	4.66971	42.5	42.5
PSH	1.00000	*	2	2.12710	19.3	61.8
WOOL	1.00000	*	3	1.26905	11.5	73.3
LMB	1.00000	*	4	.99182	9.0	82.3
CFA	1.00000	*	5	.51339	4.7	87.0
INGR	1.00000	*	6	.44737	4.1	91.1
PGR	1.00000	*	7	.28869	2.6	93.7
GR	1.00000	*	8	.23342	2.1	95.8
INC	1.00000	*	9	.19373	1.8	97.6
PC	1.00000	*	10	.16558	1.5	99.1
C	1.00000	*	11	.10014	.9	100.0

Appendix 3.3

Forecast Variable Factor Analysis



Forecast Data

Factor Matrix:

	Factor 1
AWCF	.72698
AMLCF	.78035
AWBF	.81329
ABAREF	.82647

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
AWCF	.52851	*	1	2.48195	62.0	62.0
AMLCF	.60895	*				
AWBF	.66144	*				
ABAREF	.68306	*				

extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
AWCF	1.00000	*	1	2.48195	62.0	62.0
AMLCF	1.00000	*	2	.60523	15.1	77.2
AWBF	1.00000	*	3	.51925	13.0	90.2
ABAREF	1.00000	*	4	.39357	9.8	100.0

Appendix 4

Appendix 4.1

Current Gross Margins Non-use/Use (CRGM) Discriminant Function Analysis

----- DISCRIMINANT ANALYSIS -----

On groups defined by CRGM

89 (Unweighted) cases were processed.
1 of these were excluded from the analysis.
0 had missing or out-of-range group codes.
1 had at least one missing discriminating variable.
88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CRGM	Number of cases		Label
	Unweighted	Weighted	
0	39	39.0	
1	49	49.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRGM

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions.... 1
 Minimum cumulative percent of variance... 100.00
 Maximum significance of Wilks' lambda.... 1.0000

Prior probabilities

Group	Prior	Label
0	.44318	
1	.55682	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Cor	After Fcn	Wilks' Lambda	Chi-square	df	Sig
1*	.6601	100.00	100.00	.6306	0	.602359	40.299	13	.0001

* Marks the 1 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1
DEBT	.16794
COMP	.11891
GM	.86910
CF	-.05955
ELEV	.20773
DWGHT_1	.13904
DWGHT_2	.01868
DWGHT_3	-.07351
DWGHT_4	-.24107
PDICT_1	.01894
PDICT_2	.08334
PDICT_3	-.11106
FORECAST	.35721

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

	Func 1
GM	.85029
CF	.50304
ELEV	.36126
PDICT_3	-.31963
DEBT	.31722
DWGHT_1	.26584
COMP	.22398
FORECAST	.18339
DWGHT_2	.10485
PDICT_1	-.08148
DWGHT_3	.07809
PDICT_2	.02440
DWGHT_4	-.00557

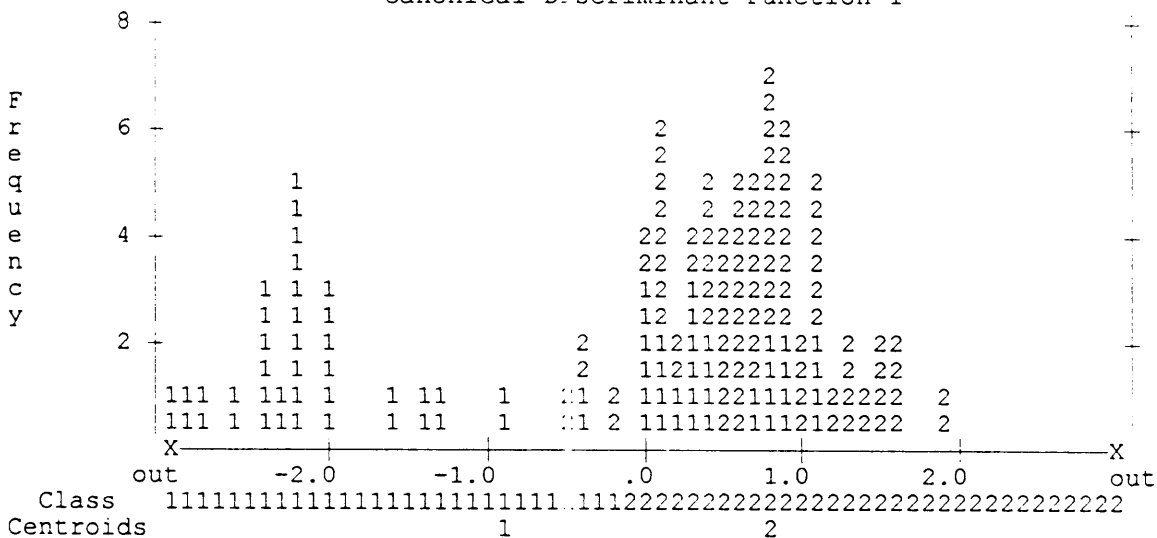
Canonical discriminant functions' evaluated at group means (group centroids)

Group	Func 1
0	-.90031
1	.71657

Symbols used in plots

Symbol	Group	Label
1	0	
2	1	

All-groups Stacked Histogram
Canonical Discriminant Function 1



Classification results -

Actual Group		No. of Cases	Predicted Group Membership	
-----			0	1
Group	0	39	21 53.8%	18 46.2%
Group	1	49	2 4.1%	47 95.9%

Percent of "grouped" cases correctly classified: 77.27%

Classification processing summary

89 (Unweighted) cases were processed.
0 cases were excluded for missing or out-of-range group codes.
1 cases had at least one missing discriminating variable.
88 (Unweighted) cases were used for printed output.
89 cases were written into the working file.

Appendix 4.2

Current Cash Flow Non-use/Use (CRCF) Discriminant Function Analysis

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRCF

89 (Unweighted) cases were processed.
1 of these were excluded from the analysis.
0 had missing or out-of-range group codes.
1 had at least one missing discriminating variable.
88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CRCF	Number of cases		Label
	Unweighted	Weighted	
0	15	15.0	
1	73	73.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRCF

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions..... 1
 Minimum cumulative percent of variance... 100.00
 Maximum significance of Wilks' Lambda.... 1.0000

Prior probabilities

Group	Prior	Label
0	.17045	
1	.82955	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Corr	After Fcn	Wilks' Lambda	Chi-square	df	Sig
1*	1.8025	100.00	100.00	.8020	0	.356820	81.927	13	.0000

* Marks the 1 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1
DEBT	-.14632
COMP	.01104
GM	.62361
CF	.65588
ELEV	.03669
DWGHT_1	.10771
DWGHT_2	.10540
DWGHT_3	-.11931
DWGHT_4	-.21314
PDICT_1	-.08235
PDICT_2	.20303
PDICT_3	.22597
FORECAST	.03675

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

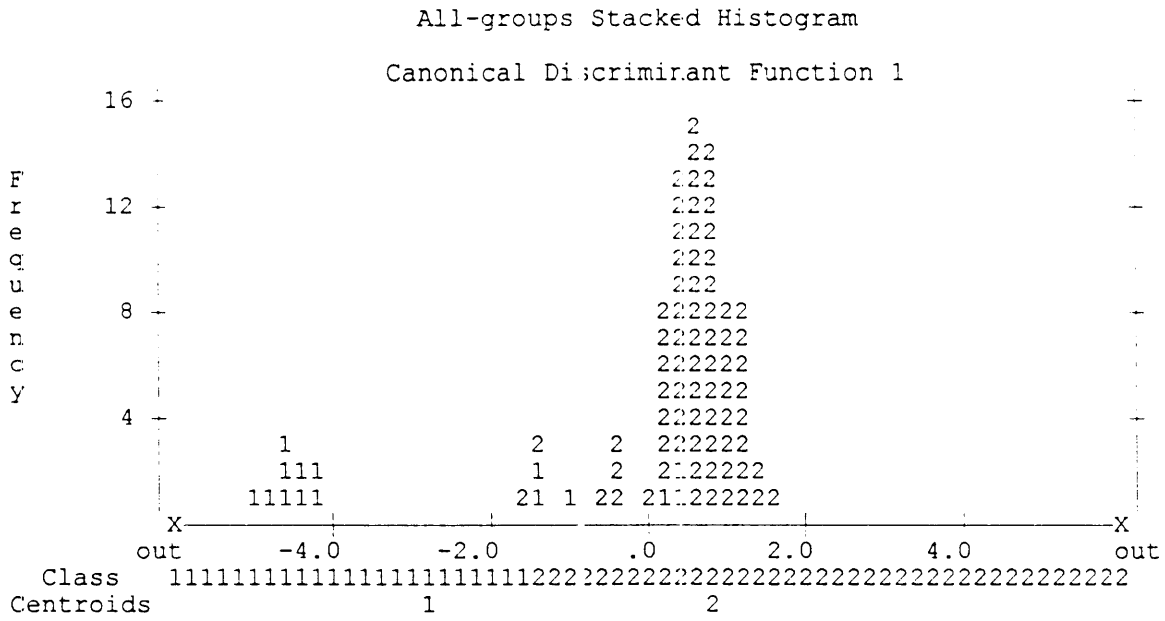
	Func 1
CF	.83085
GM	.67070
DWGHT_1	.24270
DWGHT_2	.19277
DEBT	.19274
PDICT_1	-.18091
ELEV	.13616
COMP	.06071
PDICT_3	-.04555
PDICT_2	.04015
DWGHT_3	-.03996
FORECAST	-.02966
DWGHT_4	.01668

Canonical discriminant functions evaluated at group means (group centroids)

Group	Func 1
0	-2.92796
1	.60164

Symbols used in plots

Symbol	Group	Label
1	0	
2	1	



Classification results -

Actual Group	No. of Cases	Predicted Group Membership	
		0	1
Group 0	15	9 60.0%	6 40.0%
Group 1	73	1 1.4%	72 98.6%

Percent of "grouped" cases correctly classified: 92.05%

Classification processing summary

- 89 (Unweighted) cases were processed.
- 0 cases were excluded for missing or out-of-range group codes.
- 1 cases had at least one missing discriminating variable.
- 88 (Unweighted) cases were used for printed output.

Appendix 4.3

Cash Flow Groups 1,2 and 3 (CFG) Discriminant Function Analysis

----- DISCRIMINANT ANALYSIS -----

On groups defined by CFG

89 (Unweighted) cases were processed.
1 of these were excluded from the analysis.
0 had missing or out-of-range group codes.
1 had at least one missing discriminating variable.
88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CFG	Number of cases		Label
	Unweighted	Weighted	
1	59	59.0	
2	14	14.0	
3	15	15.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CFG

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions..... 2
 Minimum cumulative percent of variance... 100.00
 Maximum significance of Wilks' Lambda.... 1.0000

Prior probabilities

Group	Prior	Label
1	.67045	
2	.15909	
3	.17045	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Corr	After Fcn	Wilks' Lambda	Chi-square	df	Sig
					:	0 .263280	105.428	26	.0000
1*	1.8433	84.59	84.59	.8052	:	1 .748593	22.875	12	.0288
2*	.3358	15.41	100.00	.8014	:				

* Marks the 2 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1	Func 2
DEBT	-.18711	-.39826
COMP	.06597	.53031
GM	.64520	.26603
CF	.64514	-.16534
ELEV	.08246	.44733
DWGHT_1	.06133	-.45322
DWGHT_2	.14974	.42928
DWGHT_3	-.08655	.31109
DWGHT_4	-.23149	-.15658
PDICT_1	-.03225	.48028
PDICT_2	.21935	.13879
PDICT_3	.22006	-.05256
FORECAST	.00060	-.35156

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

	Func 1	Func 2
CF	.81629*	-.21860
GM	.68859*	.16185
DWGHT_1	.23235*	-.20558
FORECAST	-.02822*	.02662
DWGHT_4	.01586*	-.01517
ELEV	.15786	.37779*
COMP	.07913	.35473*
DEBT	.17806	-.33654*
PDICT_1	-.16669	.32021*
DWGHT_3	-.02593	.29467*
PDICT_3	-.05819	-.25231*
DWGHT_2	.20476	.21644*
PDICT_2	.03711	-.05882*

* denotes largest absolute correlation between each variable and any discriminant function.

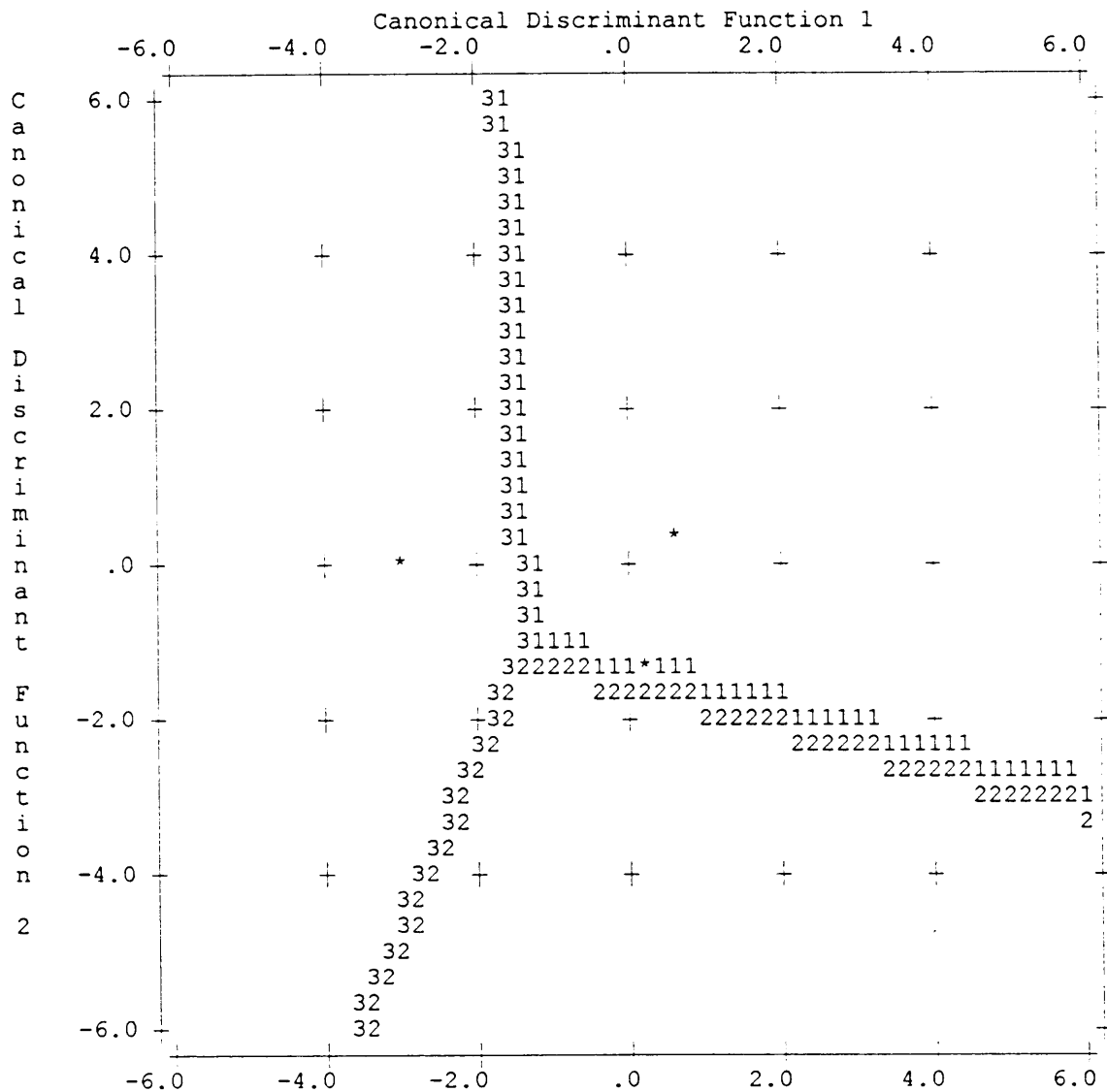
Canonical discriminant functions evaluated at group means (group centroids)

Group	Func 1	Func 2
1	.68199	.27332
2	.25939	-1.30475
3	-2.92460	.14269

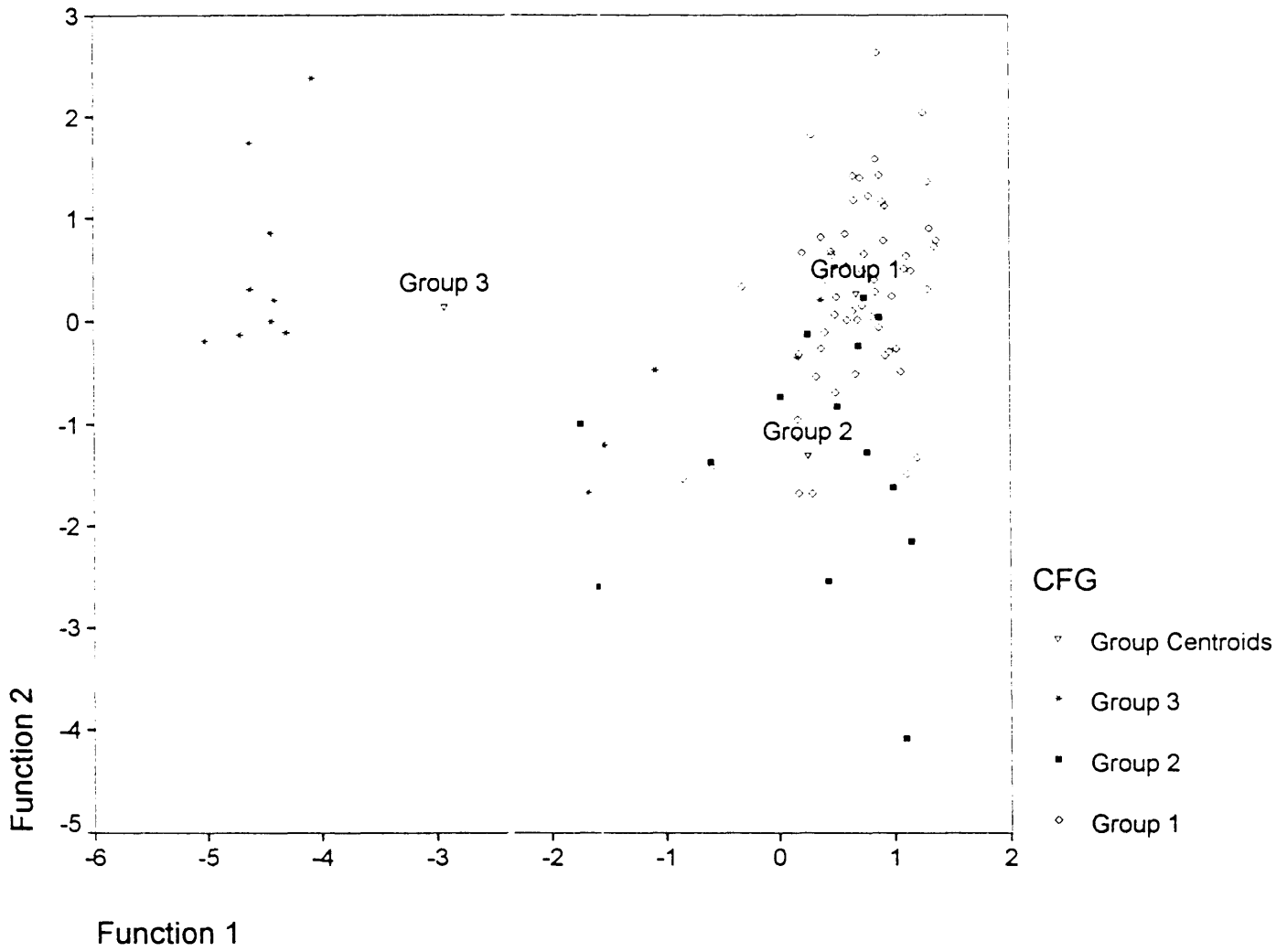
Symbols used in territorial map

Symbol	Group	Label
1	1	
2	2	
3	3	
*		Group centroids

Territorial Map * indicates a group centroid



Canonical Discriminant Functions



Classification results -

Actual Group	No. of Cases	Predicted Group Membership		
		1	2	3
Group 1	59	55 93.2%	4 6.8%	0 .0%
Group 2	14	7 50.0%	6 42.9%	1 7.1%
Group 3	15	4 26.7%	2 13.3%	9 60.0%

Percent of "grouped" cases correctly classified: 79.55%

Classification processing summary

- 89 (Unweighted) cases were processed.
- 0 cases were excluded for missing or out-of-range group codes.
- 1 cases had at least one missing discriminating variable.
- 88 (Unweighted) cases were used for printed output.
- 89 cases were written into the working file.

Appendix 5

Appendix 5.1

Alternate Current Gross Margins: Non-use/Use (CRGM) Discriminant Function Analysis

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRGM

89 (Unweighted) cases were processed.
1 of these were excluded from the analysis.
0 had missing or out-of-range group codes.
1 had at least one missing discriminating variable.
88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CRGM	Number of cases		Label
	Unweighted	Weighted	
0	39	39.0	
1	49	49.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRGM

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions..... 1
 Minimum cumulative percent of variance... 100.00
 Maximum significance of Wilks' Lambda.... 1.0000

Prior probabilities

Group	Prior	Label
0	.44318	
1	.55682	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Corr	After Fcn	Wilks' Lambda	Chi-square	df	Sig
1*	.3120	100.00	100.00	.4376	:	0 .762198	21.860	11	.0255

* Marks the 1 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1
DEBT	.50173
COMP	.08301
ELEV	.53883
DWGHT_1	.35482
DWGHT_2	.14131
DWGHT_3	.03385
DWGHT_4	-.04400
PDICT_1	-.09322
PDICT_2	.07006
PDICT_3	-.32079
FORECAST	.49730

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

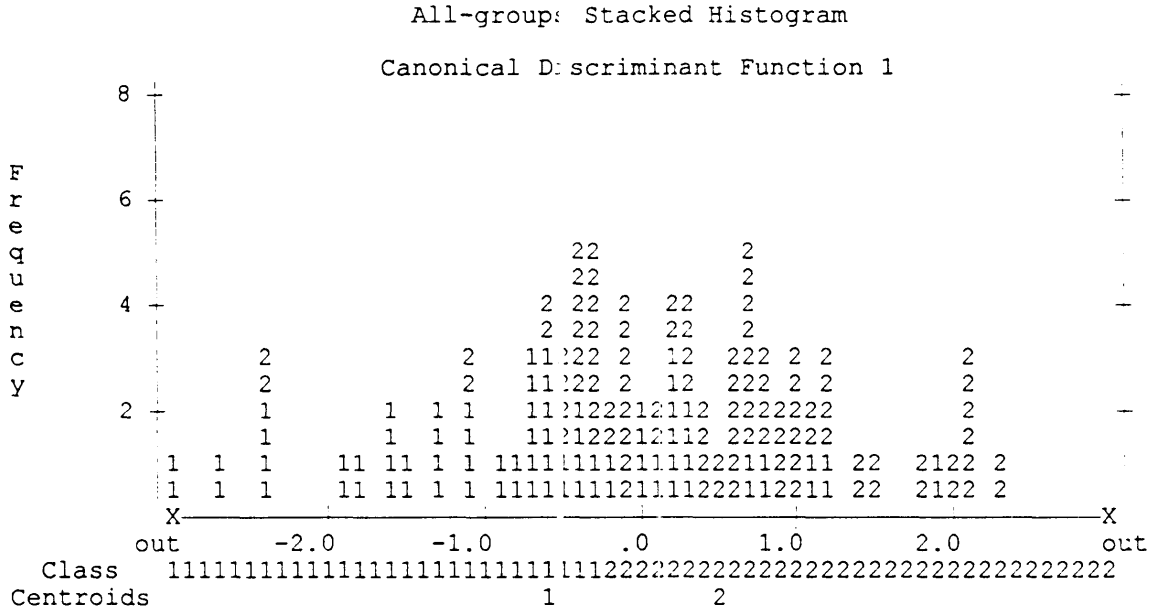
	Func 1
ELEV	.52548
PDICT_3	-.46493
DEBT	.46143
DWGHT_1	.38669
COMP	.32580
FORECAST	.26676
DWGHT_2	.15251
PDICT_1	-.11852
DWGHT_3	.11359
PDICT_2	.03549
DWGHT_4	-.00810

Canonical discriminant functions evaluated at group means (group centroids)

Group	Func 1
0	-.61894
1	.49262

Symbols used in plots

Symbol	Group	Label
1	0	
2	1	



Classification results -

Actual Group	No. of Cases	Predicted Group Membership	
		0	1
Group 0	39	25 64.1%	14 35.9%
Group 1	49	11 22.4%	38 77.6%

Percent of "grouped" cases correctly classified: 71.59%

Appendix 5.2

Alternate Current Gross Margins Non-use/Use (CRGM) Discriminant Function Analysis

----- DISCRIMINANT ANALYSIS -----

On groups defined by CRCF

- 89 (Unweighted) cases were processed.
- 1 of these were excluded from the analysis.
 - 0 had missing or out-of-range group codes.
 - 1 had at least one missing discriminating variable.
- 88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CRCF	Number of cases		Label
	Unweighted	Weighted	
0	15	15.0	
1	73	73.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CRCF

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions..... 1
Minimum cumulative percent of variance... 100.00
Maximum significance of Wilks' Lambda.... 1.0000

Prior probabilities

Group	Prior	Label
0	.17045	
1	.82955	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Corr	After Fcn	Wilks' Lambda	Chi-square	df	Sig
1*	.3338	100.00	100.00	.5003	:	0 .749741	23.186	11	.0166

* Marks the 1 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1
DEBT	.41295
COMP	-.07505
ELEV	.39592
DWGHT_1	.57400
DWGHT_2	.53739
DWGHT_3	-.10704
DWGHT_4	.00619
PDICT_1	-.34232
PDICT_2	.13631
PDICT_3	.13453
FORECAST	.24200

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

	Func 1
DWGHT_1	.56398
DWGHT_2	.44797
DEBT	.44790
PDICT_1	-.42041
ELEV	.31642
COMP	.14108
PDICT_3	-.10586
PDICT_2	.09330
DWGHT_3	-.09285
FORECAST	-.06892
DWGHT_4	.03877

Canonical discriminant functions evaluated at group means (group centroids)

Group	Func 1
0	-1.25998
1	.25890

Appendix 5.3

Alternate Cash Flow Groups 1,2 and 3 (CFG) Discriminant Function Analysis

----- DISCRIMINANT ANALYSIS -----

On groups defined by CFG

89 (Unweighted) cases were processed.
1 of these were excluded from the analysis.
0 had missing or out-of-range group codes.
1 had at least one missing discriminating variable.
88 (Unweighted) cases will be used in the analysis.

Number of cases by group

CFG	Number of cases		Label
	Unweighted	Weighted	
1	59	59.0	
2	14	14.0	
3	15	15.0	
Total	88	88.0	

- - - - - D I S C R I M I N A N T A N A L Y S I S - - - - -

On groups defined by CFG

Analysis number 1

Direct method: all variables passing the tolerance test are entered.

Minimum tolerance level..... .00100

Canonical Discriminant Functions

Maximum number of functions..... 2
 Minimum cumulative percent of variance... 100.00
 Maximum significance of Wilks' Lambda.... 1.0000

Prior probabilities

Group	Prior	Label
1	.67045	
2	.15909	
3	.17045	
Total	1.00000	

Canonical Discriminant Functions

Fcn	Eigenvalue	Pct of Variance	Cum Pct	Canonical Corr	After Fcn	Wilks' Lambda	Chi-square	df	Sig
					0	.572270	44.651	22	.0029
1*	.3606	55.92	55.92	.5148	1	.778634	20.017	10	.0291
2*	.2843	44.08	100.00	.4705					

* Marks the 2 canonical discriminant functions remaining in the analysis.

Standardized canonical discriminant function coefficients

	Func 1	Func 2
DEBT	.51309	-.03210
COMP	-.35482	.39592
ELEV	-.01377	.71075
DWGHT_1	.68253	.01143
DWGHT_2	.15950	.71526
DWGHT_3	-.28399	.23278
DWGHT_4	.06157	-.08042
PDICT_1	-.52366	.17206
PDICT_2	.01668	.21960
PDICT_3	.16590	-.00814
FORECAST	.37982	-.13060

Structure matrix:

Pooled within-groups correlations between discriminating variables
and canonical discriminant functions
(Variables ordered by size of correlation within function)

	Func 1	Func 2
DWGHT_1	.52282*	.23075
DEBT	.51644*	.03245
PDICT_1	-.48681*	-.02624
DWGHT_3	-.23412*	.19341
PDICT_2	.10031*	.01589
FORECAST	-.06457*	-.02669
DWGHT_4	.03643*	.01484
ELEV	.02049	.57415*
DWGHT_2	.20354	.52405*
COMP	-.09669	.42117*
PDICT_3	.06558	-.30281*

* denotes largest absolute correlation between each variable and any discriminant function.

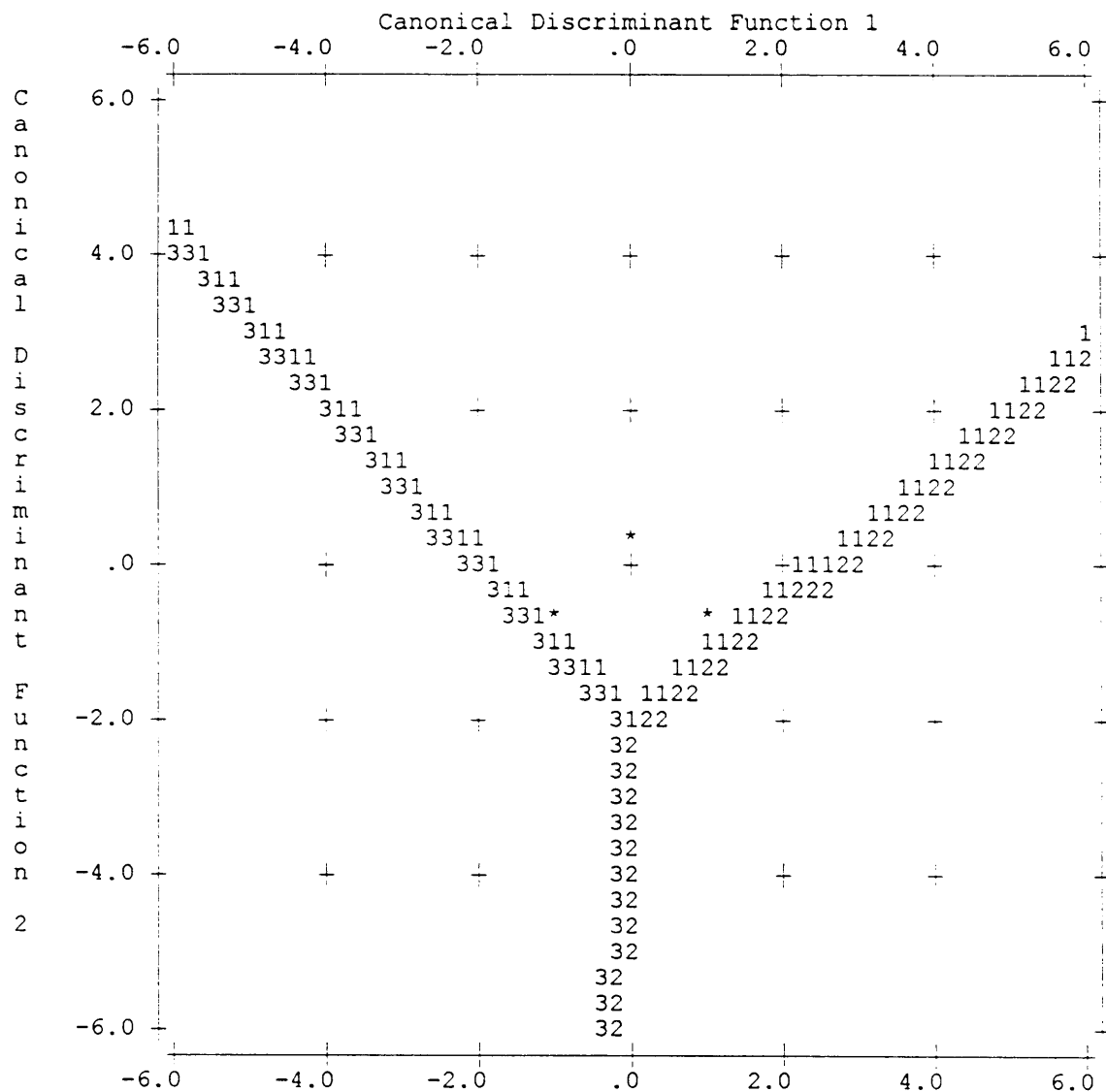
Canonical discriminant functions evaluated at group means (group centroids)

Group	Func 1	Func 2
1	.03401	.36615
2	.99137	-.82259
3	-1.05905	-.67243

Symbols used in territorial map

Symbol	Group	Label
1	1	
2	2	
3	3	
*		Group centroids

Territorial Map * indicates a group centroid



Classification results -

Actual Group	No. of Cases	Predicted Group Membership		
		1	2	3
Group 1	59	53 { 9.8%	4 6.8%	2 3.4%
Group 2	14	8 { 7.1%	6 42.9%	0 .0%
Group 3	15	11 3.3%	0 .0%	4 26.7%

Percent of "grouped" cases correctly classified: 71.59%

Classification processing summary

- 89 (Unweighted) cases were processed.
- 0 cases were excluded for missing or out-of-range group codes.
- 1 cases had at least one missing discriminating variable.
- 88 (Unweighted) cases were used for printed output.

REFERENCES

- Ackoff, L., (1967), 'Management Information Systems', Management Science 14, B-147 - B-156.
- Alderfer, C. P. and Bierman, H. (1970), 'Choices with risk: Beyond the mean and variance', Journal of Business 43 (3), 341 - 353.
- Anand, P. (1982), 'How to be right without being rational', Oxford Agrarian Studies 11, 158 - 172.
- Anderson, N. H. and Barrios, A. A. (1961), 'Primacy effects in personality impression formation', Journal of Abnormal and Social Psychology 63, 346 - 350.
- Anderson, H. H. and Hubert, S. (1963), 'Effects of concomitant verbal recall on order effects in personality impression formation', Journal of Verbal Learning and Verbal Behavior 2, 379 - 391.
- Anderson, N. H. (1968), 'A simple model for information integration', In Abelson, P. R., McGuire, E., Newcombe, T. M., Rosenberg, M. J. and Tannenbaum, P. H. (eds.), Theories of Cognitive Consistency: A Sourcebook Rand McNally Chicago (pp. 131-185)
- _____ (1969), Comments on "An analysis-of-variance model for the assessment of configural cue utilization in clinical judgment", Psychology Bulletin 72, 63 - 65.
- _____ (1970), 'Functional measurement and psychophysical judgment', Psychological Review 77, 153 - 170.
- _____ and Shanteau, J. C. (1970), 'Information integration in risky decision making', Journal of Experimental Psychology 84, 441 - 451.
- Anderson, J. R. (1976) Methods and Programs for Analysis of Risky Gross Margins Department of Agricultural Economic and Business Management, University of New England, Armidale.
- _____ (1982), 'Agricultural economics, interdependence and uncertainty', Australian Journal Of Agricultural Economics 26(2), 89 - 97.

- _____ (1974), 'Risk efficiency in the interpretation of agricultural production research' Review of Marketing and Agricultural Economics 42(3), 131 - 184.
- Andrus, R.R. (1971), 'Approaches of information evaluation', MSU Business Topics: Summer 1971 40 - 46.
- Anthony, R. N. (1965), A Framework For Analysis Harvard University Press, Boston.
- Asch, S. E. (1946), 'Forming impressions of personality', Journal of Abnormal and Social Psychology 41, 258 - 290.
- Ashton, R. H. and Ashton, H. A. (1990), 'Evidence-responsiveness in professional judgment: Effects of positive versus negative evidence and presentation mode', Organizational Behavior and Human decision Processes 46, 1 - 19.
- Baker, J. D. and Paarlberg, D. (1962), 'How accurate is outlook', Journal of Farm Economics 34, 509 - 519.
- Bar-Hillel, M. (1983), 'The base rate fallacy controversy', in Scholz R. W.(ed.) Decision Making Under Uncertainty Elsevier Science, North-Holland, 39 - 61.
- Bardsley, J.B. (1982) Farmers' assessment of information and its sources - an investigation using interactive computer techniques University of Melbourne, Melbourne.
- Barnard, C. S. (1975) 'Data in agriculture: A review with special reference to farm management research, policy and advice in Britain', Journal of Agricultural Economics 26, 289 - 331.
- Barnett, R. L. (1967) 'A model of the farm management process and its implications to the provision of decision making data', Seminar paper No3 Faculty of Agricultural Economics, University of New England, Armidale.
- Bateman, D. I. (1976) 'Agricultural marketing: A review of the literature of marketing theory and of selected applications', Journal of Agricultural Economics 27(2), 171 - 224.
- Batte, M. T., Jones E. and Schnitkey, G. D. (1990) 'Computer use by Ohio commercial farmers', American Journal of Agricultural Economics 72(4), 935 - 945.

- Beach, L. R. and Mitchell, T. R. (1978) 'A contingency model for the selection of decision strategies', Academy of Management Review 3, 439 - 449.
- _____, Barnes, V. E. and Christensen-Szalanski, J.J.J. (1986) 'Beyond heuristics and biases: A contingency model of judgemental forecasting', Journal of Forecasting 5, 143 - 157.
- _____ and Mitchell, T. R. (1987) 'Image theory: principles, goals, and plans in decision making', Acta Psychologica 66, 201 - 220.
- _____, Vlek, C. and Wagenaar, W. A. (1988) 'Models and methods for unique versus repeated decision making', Leiden Psychological Reports Experimental Psychology EP 04-88, 1 - 12.
- Becker, S. W. and Brownson, F. O. (1964) 'What price ambiguity? Or the role of ambiguity in decision-making', Journal of Political Economics 72, 62 - 73.
- Bessler, D. A. (1984) 'Subjective probability', in Barry, P. J. (ed) Risk Management in Agriculture Iowa State University Press, Ames, 43 - 52.
- Bettman, J. R., Johnson, E. J. and Payne, J. W. (1990) 'A componential analysis of cognitive effort in choice', Organizational Behavior and Human Decision Processes 45, 111 - 139.
- Beyth-Marom, R. (1982) 'How probable is probable? A numerical translation of verbal probability expressions' Journal of Forecasting 1, 257 - 267.
- Black, J. and Bulkley, G. (1988) 'The role of strategic information transmission in a bargaining model', The Economic Journal 98, 50 - 57.
- Blau, P. M. (1970) 'A formal theory of differentiation in organizations', American Sociological Review 35, 201 - 218
- Bock, I.M. (1976) Market Information and Farm Management Decision-Making, School of Agriculture and Forestry, University of Melbourne, Melbourne.
- _____ (1976a) Market Information Requirements of Primary Producers: A National Survey School of Agriculture and Forestry, University of Melbourne, Melbourne.

- Bonnen, J. T. (1975) 'Improving information on agriculture and rural life', American Journal of Agricultural Economics 57(4), 753 - 763.
- _____ (1977) 'Assessment of the current agricultural data base: An information systems approach' in Judge, G. G., Day, R. H., Johnson, S. R., Rausser, G. C. and Martin, L. R. (ed.) A Survey Of Agricultural Economics Literature Volume 2: Qualitative Methods in Agricultural Economics, 1940s to 1970s, University of Minnesota Press, Minneapolis.
- Brandt, J. A. and Bessler, D. A. (1983) 'Price forecasting and evaluation: An application in agriculture', Journal of Forecasting 2, 237 - 248.
- Brehmer, B. and Kuylenstierna, J. (1978) 'Task information and performance in probabilistic inference tasks', Organizational Behavior and Human Performance 22, 445 - 464.
- _____ (1980) 'In one word: not from experience', Acta Psychologica 45, 223 - 241.
- Breimyler, H. F. (1973) 'The economics of agricultural marketing : a survey', Review of Marketing and Agricultural Economics 41 (4), 115 - 165.
- Brien, J. P. (1983) 'Agricultural information systems; a lengthy past, a lively future', in McClellan D. (ed.) Agricultural Information Systems Australian Institute of Agricultural Science, Melbourne, 1 - 10.
- Brown, J., Turvey, C. G. and Lowry, C. (1992) 'B.E.A.R. plus: A computerized farm management and extension tool for financial planning and risk analysis', Canadian Farm Economics 23(1), 35 - 40.
- Brunswik, E. (1956) The Conceptual Framework of Psychology, University of Chicago Press, Chicago
- Buccola, S. T. (1984) 'Pricing efficiency and information use in risky markets', American Journal of Agricultural Economics 66(5), 711 - 916.
- Budescu, D. V. and Wallsten, T. S. (1990) 'Dyadic decisions with numerical and verbal probabilities', Organizational Behavior and Human Decision Processes 46, 240 - 263.

- _____, Weinberg, S. and Wallsten T.S. (1988) 'Decisions based on numerically and verbally expressed uncertainties' Journal of Experimental Psychology: Human Perception and Performance 14 (?), 281 - 294.
- Bullock, J. B. and Logan, S. H. (1969) 'A model for decision making under uncertainty', Agricultural Economics Research 21 (4), 109 - 115.
- Campbell, K. O. (1973) Agricultural Marketing and Prices, Cheshire, Melbourne.
- _____ and Fisher, B. S. (1982) Agricultural Marketing and Prices, Longman Cheshire, Melbourne.
- Cancian, F. (1980) 'Risk and uncertainty' in agricultural decision making', in Barlett P. F. (ed.) Agricultural Decision Making, Academic Press, 161 -175.
- Carrigan, D. (1990) 'Extension in the Queensland Department of Primary Industries (QDPI)', AIAS National Conference and Workshop on Agricultural Extension, AIAS, Occasional Publication No 50, Melbourne, 61 - 65.
- Carry, J. W. (1980) 'Towards an agenda for management education in agriculture', in Loftus L. and Carry J. W. (eds.) Towards an Understanding of Management Education In Agriculture, School of Agriculture and Forestry, University of Melbourne, Melbourne.
- Cassidy, P. A., Rogers, J. L. and Mc Carthy, W. O. (1970) 'A simulation approach to risk assessment in investment analysis', Review of Marketing and Agricultural Economics, 38 (1), 3 - 25.
- Chavas, J. P. and Pope, R. D. (1984) 'Information: Its measurement and valuation', American Journal of Agricultural Economics, 66(3), 705 - 710.
- Chandler, A. D. (1962) Strategy and Structure: Chapters in the History of the American Industrial Enterprise, MIT Press, Cambridge Mass
- Chervany, N. L. and Dickson, G. W. (1974) 'An experimental evaluation of information overload in a production environment', Management Science, 20, 1335 - 1344.

- Conrath, D. W. (1973) 'From statistical decision theory to practice: Some problems with the transition', Management Science, 19, 873 - 883.
- Cotterill, R. W. (1988) 'The design and impact of strategic management information systems', American Journal of Agricultural Economics, 70(2), 475 - 479
- Curley, S. P. and Yates, J. P. (1989) 'An empirical evaluation of descriptive models of ambiguity reactions in choice situations', Journal of Mathematical Psychology, 33, 397 - 427.
- Dardanoni, V. (1988) 'Optimal Choices under uncertainty: The case of two-argument utility functions', The Economic Journal, 98, 429 - 450.
- Davis, D. and Cosenza, R. M. (1985) Business Research For Decision Making, Kent Boston, Massachusetts.
- Davis, G. B. and Olson, M. H. (1985) Management Information Systems 2nd Ed, McGraw-Hill, New York.
- DeCanio, S. J. (1979) 'Rational expectations and learning from experience', Quarterly Journal of Economics, 93, 47 - 57.
- Delany, H. D. and Wallsten, T. S. (1977) 'Probabilistic information processing: Effects of a biased payoff matrix on choice and bids', Organizational Behavior and Human Performance, 20, 203 - 237.
- Dermer, J. D. (1973) 'Cognitive characteristics and the perceived importance of information', Accounting Review, 48, 511 - 519.
- Dillon, J. L. (1971) 'An expository review of Bernoullian decision theory in agriculture: Is utility futility?', Review of Marketing and Agricultural Economics, 39(1), 3 - 80.
- _____ (1977) The Analysis of Response in Crop and Livestock Production, Pergamon Press, Sydney.
- _____ and Trebeck, D. B. (1987) 'Decision theory and farm management', Melbourne Notes on Agricultural Extension, University of Melbourne, Melbourne.

- Dixon, J. (1967) 'Uncertainty and information in agriculture', The Farm Economist, 11(4), 147 - 161.
- Doherty, M.E. and Balzer, W. K. (1988) 'Cognitive feedback" in Human Judgment: The SJT View ed: Brehmer, B. and Joyce, C.R.B., Elsevier Science, North Holland, 163 - 197
- Doll, J. P. and Orazem, F. (1984) Production Economics: Theory with Applications, John Wiley and Son, New York.
- Doluschitz, R. and Schmisser, W. E. (1988) 'Expert systems: applications to agriculture and farm management', Computers and Electronics in Agriculture, 2, 173 - 182.
- Donaldson, L. (1995) American Anti-management Theories of Organization : A Critique of Paradigm Proliferation, Cambridge University Press, New York.
- Dorris, A. L., Sadosky, T. L. and Connolly, T. (1977) 'Varying data and information in a decision making task', Ergonomics, 20, 643 - 649.
- Dretske, F. I. (1983) 'Precis of knowledge and the flow of information', The Behavioral and Brain Sciences, 6, 55 - 90.
- Druce, P. C. (1966) 'Rural extension and the agricultural economist', Australian Journal of Agricultural Economics, 10, 97 - 111.
- Edelman, M. A., Schmiesing, B. H. and Olsen, D. R. (1990) 'Use of selected marketing alternatives by Iowa farmers', Agribusiness, 6(2), 121 - 132.
- Edwards, W. (1971) 'Bayesian and regression models of human information processing- A myopic perspective', Organisational Behavior and Human Performance, 6, 639 - 648.
- Einhorn, H. J. and Hogarth, R. M. (1985) 'Ambiguity and uncertainty in probabilistic inference', Psychological Review, 92, 433 - 461
- _____ (1985 a) 'A contrast/surprise model of updating beliefs'
Unpublished manuscript, Graduate School of Business, University of Chicago
Graduate School of Business, University Chicago.

- _____ (1986) 'Decision making under ambiguity', Journal of Business, Part 2 59(4), S225 - 250.
- Eisgruber, L. M. (1967) 'Micro and Macro-analytic potential of agricultural information systems', Journal of Farm Economics, 49, 1541 - 1552.
- _____ (1973) 'Managerial information and decision systems in the USA: historical developments, current status and major issues', American Journal of Agricultural Economics, 55, 930 - 937.
- Englander, T. and Tyszka, T. (1980) 'Information seeking in open decision situations' Acta Psychologica, 45, 169 - 176.
- Erev, I. and Cohen, B. L. (1990) 'Verbal versus numerical probabilities: Efficiency, biases and the preference paradox', Organizational Behavior and Human Decision Processes, 45, 1 - 18.
- Errington, A. (1989) 'The generation and use of standard data for farm management advice', Farm Management, 7 (1), 17 - 25.
- Evans, A. (1968) 'A study of the ability of farmers to read graphs', Melbourne Notes on Agricultural Extension, 2, 127 - 160.
- Falvey, J. L. (undated) An Introduction To Agricultural Marketing, MPW Australia, Melbourne.
- Fischhoff, B. and MacGregor, D. (1982) 'Subjective confidence in forecasts', Journal of Forecasting, 1, 155 - 172.
- Fischhoff, B. and Bar-Hillel, M. (1984) 'Focusing techniques: A short cut to improving probability judgements?', Organizational Behavior and human Performance, 34, 175 - 194.
- Fisher, B. S. and Tanner, C. (1978) 'The formulation of price expectations: an empirical test of theoretical models', American Journal of Agricultural Economics, 60(2), 245 - 248.

- _____ (1982) 'Rational expectations in agricultural economics research and policy analysis', American Journal of Agricultural Economics, 64 (2), 260 - 265.
- _____ (1983) 'Rational expectations in the Australian wool industry', Australian Journal of Agricultural Economics, 27(3), 212 - 220.
- Fox, J. (1984) 'Formal and knowledge-based methods in decision technology', Acta Psychologica, 56, 303 - 313.
- Freebairn, J. W. (1973) 'The value of information provided by a uniform grading system', Australian Journal of Agricultural Economics, 17(2), 127 - 139.
- _____ (1975) 'Forecasting for Australian agriculture', Australian Journal of Agricultural Economics, 19(3), 154 - 174.
- _____ (1978) 'An evaluation of outlook information for Australian agricultural commodities', Review of Marketing and Agricultural Economics, 46(3), 294 - 314.
- _____ (1976) 'Welfare implications of more accurate rational forecast prices', Australian Journal of Agricultural Economics, 20(2), 92 - 102.
- Gellatly, C. (1979) 'Forecasting NSW beef production, An evaluation of alternative techniques', Review of Marketing and Agricultural Economics, 47(2), 81 - 94.
- Gensch, D. H. and Svestka, J. A. (1984) 'A maximum likelihood hierarchical disaggregate model for predicting choice of individuals', Journal of Mathematical Psychology, 25(2), 160 - 178.
- _____ (1987) 'A two-stage disaggregate attribute choice model', Marketing Science, 6(3), 223 - 239.
- Giles, D. E. and Goss, B. A. (1981) 'Futures prices as forecasts of commodity spot prices: live cattle and wool', The Australian Journal of Agricultural Economics, 25, 1 - 13.
- Gillard, P. (1991) 'The management of crop sequences with computers in Tasmania' The Journal of Australian Institute of Agricultural Science, 4(6), 26 - 28.

- Gladwin, C. H. (1980) 'A theory of real-life choices: Applications to agricultural decisions', in Barlett, P. F.(ed.) Agricultural Decision Making: Anthropological Contributions to Rural Development, Academic Press, New York, 45 - 85.
- Glen, W. (1980) Information Generation and Decision-Making In The Small Enterprise Unit Unpublished Thesis, University of New England, Armidale.
- Goddard, E. (1985) 'The future role of the agricultural economist in outlook preparation', Canadian Journal of Agricultural Economics, 32, 86 - 97.
- Green, P. E. (1967) Critique of: "Ranking procedures and subjective probability distributions" Management Science, 14 (4), B-250 - B-252.
- Green Paper, National Rural Advisory Council (1974) Communication in Agriculture Report by Working Group, Australian Government Publishing Service, Canberra.
- Gum, R. L. and Blank, S. C. (1990) 'Designing expert systems for effective delivery of extension programming', American Journal of Agricultural Economics, 72(3), 539 - 547.
- Gutman, G. O. (1955) 'Investment and production in Australian agriculture', Review of Marketing and Agricultural Economics, 23(4), 237 - 310
- Hall, W. and Keynes, M. (1974) The Handling of Experimental Data, The Open University Press, London
- Halls, M. A. (1977) 'Farmers' use of market information', Melbourne Notes on Agricultural Extension, 14, 50 - 68. Faculty of Agriculture University of Melbourne and Department of Agriculture Victoria, Melbourne.
- Hammond, K. R. (1980) 'The integration of research in judgment and decision theory', Center for Research on Judgment and Policy, Report No. 226, University of Colorado, Boulder
- _____ (1981) 'Principles of organization in intuitive and analytical cognition', Center for Research on Judgment and Policy, Report No. 231, University of Colorado, Boulder

_____ (1986) 'A theoretically based review of theory and research in judgment and decision making', Center for Research on Judgment and Policy, Report No. 260, University of Colorado, Boulder

_____ and Summers, D. A. (1972) 'Cognitive Control', Psychological Review 79 (1), 58 - 67.

Hardaker, J. B. (1979) 'An overview of decision analysis in agriculture' in Blood P. R. & Williams W. T. (eds.) Refresher Training Course Notes on Computer Processing of Agricultural Data, Australian Institute of Agricultural Science (Qld Branch), Brisbane, 208 - 219.

Harling, K. F. and Quail, P. (1990) 'Exploring a general management approach to farm management', Agribusiness, 6(5), 425 - 441.

Harris, S., Crawford, J. S. and Gruen, F. H. (1974) The Principles of Rural Policy In Australia: A Discussion Paper, Australian Government Publishing Service, Canberra.

Hayward, B. (1985) 'The grain trader and market outlook usefulness', Canadian Journal of Agricultural Economics, 32, 77 - 85.

Heady, E. O. and Kaldor, D. R. (1954) 'Expectations and errors in forecasting agricultural prices' Journal of Political Economy, 62(1), 34 - 47.

Heath, C. and Tversky, A. (1991) 'Preference and belief: Ambiguity and competence in choice under uncertainty', Journal of Risk and Uncertainty, 4, 5 - 28.

Heiner, R. A. (1983) 'The origin of predictable behavior' American Economic Review, 73(4), 560 - 595.

Herath, H. M. G. (1982) 'Decision making models with special reference to applications in agriculture: A review and a critique', Oxford Agrarian Studies, 11, 139 - 157.

Hillier, F. S. (1963) 'The derivation of probabilistic information for the evaluation of risky investments', Management Science, 9(3), 443 - 457.

- Hoffman, P. J., Earle, T. C. and Slovic, P. (1981) 'Multidimensional functional learning (MFL) and some new conceptions of feedback', Organizational Behavior and Human Performance, 27, 75 - 102.
- Howell, W.C. and Burnett, S. A. (1978) 'Uncertainty measurement: A cognitive taxonomy', Organisational Behavior and Human Performance, 22, 45 - 68.
- Huber, G. (1982) 'Organizational information systems: determinants of their performance and behaviour', Management Science, 28(2), 138 - 155.
- Hudson, R. B. (1990) 'The changing environment for agricultural extension private consultant sector' AIAS National Conference and Workshop on Agricultural Extension, AIAS, Occasional Publication No 50, Melbourne, 4 - 8.
- Hughes, G. O. (1981) 'Agricultural economics', in Lilley, G. P.(ed.) Information Sources in Agriculture and Food Science, Butterworth, London, 500 - 525.
- Humphreys, P. and Berkeley, D. (1983) "Problem structuring calculi and levels of knowledge representation in decision making", in Scholz, R. W. (ed.) Decision Making Under Uncertainty, Elsevier Science, North-Holland, 121 - 157.
- Hunt, K. E. (1974) 'Market intelligence - which way now?', Farm Management, 2 (8), 435 - 444.
- Huseman, R., Galvin, M. and Prescott, D. (1991) Business Communication, Holt, Rinehart and Winston, Sydney.
- Irwin, F. W. (1953) 'Stated expectations as a function of probability and desirability of outcomes', Journal of Personality, 21, 329 - 335.
- _____ and Snodgrass, J. (1966) 'Effects of independent and dependent outcome values upon bets', Journal of Experimental Psychology, 71, 282 - 285.
- Jenkins, G. M. (1982) 'Some practical aspects of forecasting in organizations', Journal of Forecasting, 1, 3 - 21.

- Johnson, G. L. (1976) 'Philosophical foundations: Problems, knowledge and solutions. In agricultural change and economic method', European Review of Agricultural Economics, 3, 207 - 234.
- _____ (1979) 'Some lessons from the interstate managerial study (IMS)' in Roumasset, J. A., Boussard, J. and Singh, I. (ed.) Risk, Uncertainty and Agricultural Development, Agricultural Development Council, New York.
- Kahneman, D. and Tversky, A. (1972) 'Subjective probability: A judgement of representativeness', Cognitive Psychology, 3, 430 - 454.
- _____ and _____ (1973) 'On the psychology of prediction', Psychological Review 80, 237 - 251.
- _____ and _____ (1982) 'On the study of statistical intuitions' Cognition, 11, 123 - 141
- _____ and _____ (1982a) 'Variants of uncertainty', Cognition, 11, 143 - 157
- King, R. P. (1986) 'Management Information systems for agribusiness firms: Managerial problems and research opportunities', Agribusiness, 2 (4), 455 - 466.
- King, R. K. and Shuker, I. G. (1987) 'Strategic responses to changes in information technology', American Journal of Agricultural Economics, 69(5), 1056 - 1061.
- Klayman, J. (1985) 'Children's decision strategies and their adaptation to task characteristics', Organizational Behavior and Human Decision Processes 35: 179 - 201
- Klein, L. R. (1984) 'The importance of the forecast', Journal of Forecasting, 3, 1 - 9.
- Klein, K. K. (1987) 'Information, communication, and frustration: publication of interdisciplinary research in agriculture', Canadian Journal of Agricultural Economics, 34 (3), 151 - 162.
- Knox, R. E. and Hoffman, P. J. (1962) 'Effects of variation of profile format on intelligence and sociability judgments', Journal of Applied Psychology, 46, 14 - 20.

- Kohls, R. L. and Downey, W. D. (1972) Marketing of Agricultural Products Macmillan, New York.
- Koriat, A., Lichtenstein, S. and Fischhoff, B. (1980) 'Reasons for confidence', Journal of Experimental Psychology: Human Learning and Memory, 6, 107 - 118.
- Kozielecki, J. (1989) 'Towards a theory of transgressive decision making: Reaching beyond everyday life', Acta Psychologica, 70, 43 - 63.
- Lanzetta, J. T. and Driscoll, G. (1968) 'Uncertainty and importance as factors in information search', Journal of Personality and Social Psychology, 10, 479 - 488.
- Lee, G. E. and Nicholson, R. C. (1973) 'Managerial information (recording, data and decision) systems in Canada', American Journal of Agricultural Economics, 55 (5), 921 - 929.
- Levin, I. P., Johnson, R. D. and Faraone, S. V. (1984) 'Information integration in price-quality tradeoffs: the effects of missing information', Memory and Cognition, 12, 96 - 102.
- Levine, J. M., Samet, M. G. and Brahlek, R. E. (1975) 'Information seeking with limitations on available information and resources', Human Factors, 17, 502 - 513.
- Lewis, P. E. T. (1987) 'Short-run substitution in the sheep and beef industries', Australian Journal of Agricultural Economics, 31(3), 266 - 271.
- Lichtenstein, S. and Fischhoff, B. (1977) 'Do those who know more also know more about how much they know?', Organizational Behavior and Human Performance, 20, 159 - 183.
- Lively, R. T. and Nuthal, P. L. (1983) A Survey of Farmers' Attitudes to Information Agricultural Economics Research Unit, Lincoln College, Canterbury, New Zealand
- Long, B. H. and Ziller, R. C. (1965) 'Dogmatism and predecision information search', Journal of Applied Psychology, 49, 376 - 378.
- Longmire, J. L., Brideoake, B. R., Blanks, R. H. and Hall, N. H. (1979) 'A regional programming model of the grazing industry', Bureau of Agricultural Economics Occasional Paper No 48, AGPS, Canberra

- Longworth, J. W. (1972) 'The problem of meat marketing: Are marketing boards the answer?', The Australian Quarterly, March 14(1), 52 - 63.
- _____ (1969) 'Management games and the teaching of farm management', Australian Journal of Agricultural Economics, 13(1), 58 - 67.
- Loyns, R. M. A., Martin, L. J., Ashmead, R. W. and McCorquodale, B. L. (1987) 'Towards an improved model of farm management: the case for including marketing', Canadian Journal of Agricultural Economics, 34 (3), 70 - 82.
- Luce, R. D. and Weber, E. U. (1986) 'An axiomatic theory of conjoint, expected risk', Journal of Mathematical Psychology, 30, 188 - 205.
- Makeham, J. P. and Malcolm, L.R. (1988) The Farming Game, Rowprint Service, Melbourne
- March, J. G. and Shapira, Z. (1987) 'Managerial perspectives on risk and risk taking', Management Science, 33(11), 1404 - 1418.
- Markowitz, H. (1952) 'Portfolio selection', Journal of Finance, 7(1), 77 - 91.
- _____ (1959) Portfolio Selection, Wiley, New York
- Martin, L. and Garcia, P. (1981) 'The price-forecasting performance of futures markets for live cattle and hogs: A disaggregated analysis', American Journal of Agricultural Economics, 62(2), 209 - 215.
- Mason, R. O. (1975) 'Basic concepts for designing management information systems' in Rappaport, A. (ed.) Information for Decision Making: Quantitative and Behavioral Dimensions, Prentice-Hall, New Jersey.
- Mauldon, R. G. and Schapper, H. P. (1970) 'Random numbers for farmers', The Journal of the Institute of Agricultural Science, Dec, 279 - 284.
- _____ (1973) 'Financial control within commercial family farms', Australian Journal of Agricultural Economics, 17(1) 33 - 42.

- McArthur, D. (1977) 'Information sources for farmers from outside their farms', Agricultural Administration, 5, 275 - 280.
- McCall, J. J. (1970) 'Economics of information and job search', Quarterly Journal of Economics, 48, 113 - 126.
- McGrann, J. M., Karkosh, K. and Osborne, C. (1989) 'Agricultural financial analysis expert systems: Software description', Canadian Journal of Agricultural Economics, 37, 695 - 708.
- McIntosh, C. S. and Dorfman, J. H. (1990) 'A price forecasting competition: Introduction', American Journal of Agricultural Economics, 72(3), 786 - 787.
- _____ and _____ (1992) 'Qualitative forecast evaluation: A comparison of two performance measures', American Journal of Agricultural Economics, 74(1), 209 - 214.
- McKinion, J. M. and Lemmon, H. E. (1986) 'Expert systems for agriculture', Computers and Electronics in Agriculture, 1986, 31 - 40.
- Mill, S. J. and Longworth, J. W. (1975) SCAB: A Computer Management Aid, Department of Agriculture University of Queensland, Brisbane.
- _____ and _____ (1975) 'Stochastic-computerized-activity-budgeting for sheep enterprises', Australian Journal of Agricultural Economics, 19(2), 108 - 118.
- Miller, G. A. (1956) 'The magical number seven, plus or minus two: Some limits on our capacity for processing information', Psychological Review, 63, 81 - 97.
- Mitchell, T. R. and Beach, L. R. (1990) '... "Do I love thee? Let me count"... Towards an understanding of intuitive and automatic decision making', Organisational Behavior and Human Decision Processes, 47, 1 - 20.
- Montha, et al. (1982) Cited by Campbell (1982)

- Moore, C. V. and Snyder, H. J. (1969) 'Crop selection in high-risk agriculture', Agricultural Economics Research, 21 (4), 89 - 97.
- Munro, R. G. and Fisher, B. S. (1982) 'The Formulation of Price Expectations: An Empirical Study of Woolgrowers in New South Wales, Department of Agricultural Economics, Research Report No. 8', University of Sydney, Sydney.
- Muth, J. F. (1961) 'Rational expectations and the theory of price movements', Econometrica, 29 (3), 315 - 335.
- Mynatt, C. R., Doherty, M. E. and Tweney, R. D. (1977) 'Confirmation bias in a simulated research environment: An experimental study of scientific inference', Quarterly Journal of Experimental Psychology, 29, 85 - 95.
- Nakajima, Y. and Hotta, M. (1988) 'A developmental study of cognitive processes in decision making: information searching as a function of task complexity', Psychological Reports, 64, 67 - 79.
- Newell, A. and Simon, H. A. (1972) Human Problem Solving, Prentice-Hall, Englewood Cliffs.
- Nisbett, R. E., Krantz, D. H., Jepson, C. and Kunda, Z. (1983) 'The use of statistical heuristics in everyday inductive reasoning', Psychological Review, 90, 339 - 363.
- Olshavsky, R. W. (1979) 'Task complexity and contingent processing in decision making: a replication and extension', Organizational Behavior and Human Decision Performance, 24, 300 - 316.
- Ortiz, S. (1980) 'Forecasts, decisions, and the farmer's response to uncertain environments' in Barlett, P. F. (ed.) Agricultural Decision Making: Anthropological Contributions to Rural Development, Academic Press, New York, 177 - 202.
- Ozernoy, V. M. (1988) 'Some issues in designing an expert system for multiple criteria decision making', Acta Psychologica, 68, 237 - 253.
- Payne, J. W. (1973) 'Alternate approaches to decision making under risk: Moments versus risk dimensions', Psychological Bulletin, 80 (6), 439 - 453.

- _____ (1976) 'Task complexity and cognitive processing in decision making: an information search and protocol analysis', Organisational Behaviour and Human Performance, 16, 366 - 387.
- Perrow, C. (1967) 'A framework for the comparative analysis of organizations', American Sociological Review, 32, 194 - 208.
- Peterson, C. R. and Beach, L. R. (1967) 'Man as an intuitive statistician', Psychological Bulletin, 68, 29 - 46.
- Peterson, D. K. and Pitz, G. F. (1988) 'Confidence, uncertainty, and the use of information', Journal of Experimental Psychology: Learning, Memory and Cognition, 14(1), 85 - 92.
- Phillips, J. (1968) 'A revised approach to marketing', Review of Marketing and Agricultural Economics, 36 (1), 28-36.
- Purcell, W. D. (1969) 'Marketing, Price and the Theory of Communication', American Journal of Agricultural Economics, 51(5), 1110 - 1113.
- Pugh, D. S. and Hinings, C. R. (1976) Organizational Structure: Extensions and Replications: The Aston Programme II, Saxon House, Farmborough
- Reilly, F. K. (1989) Investment Analysis and Portfolio Management, Dryden, Chicago.
- Reyna, V. F. (1981) 'The language of possibility and probability: effects of negation on meaning', Memory and Cognition, 9 (6), 642 - 650.
- Reynolds, R. G. and Gardiner, B. (1980) 'Supply response in the Australian sheep industry: a case for disaggregation and dynamics', Australian Journal of Agricultural Economics, 24(3), 196 - 209.
- Reynolds, J. (1992) Computer Software for Agriculture, NSW Department of Agriculture, Orange.
- Richardson, R. A. (1979) 'Marketing strategies of statutory boards and corporations', Paper at 23rd Australian Agricultural Economics Society Annual Congerence : Canberra Feb 6-9

- Richardson, K. and Carthy, T. (1989) 'Concept models and concept functions: Inference from incomplete information', Acta Psychologica, 72, 81 - 102.
- Rickards, P. A. and McConnell, D. J. (1957) Professional Farm Management Guidebook No 3 Budgeting, Gross Margins and Programming for Farm Planning, University of New England, Armidale.
- Rosaasen, K., Giffin, G. and Storey, G. (1983) 'Information Deficiencies and Opportunities in the Canadian Feed Grain market', Canadian Journal of Agricultural Economics, 31, 68 - 79.
- Scandizzo, P. L., Hazell, P.B.R. and Anderson, J.R. (1983) 'Producers' price expectations and the size of the welfare gains from price stabilisation', Review of Marketing and Agricultural Economics, 51(2), 93 - 107.
- Schapper, H. P. (1979) 'Of primary importance', The Journal of the Australian Institute of Agricultural Science, 45(2), 109 - 113
- Schroeder, T. C. and Featherstone, A. M. (1990) 'Dynamic marketing and retention decisions for cow-calf producers', American Journal of Agricultural Economics, 72(5), 1028 - 1040.
- Sheahan, B. T. (1979) 'Farmer's use of media', Melbourne Notes on Agricultural Extension, 16, 29 - 38.
- Shepherd, G. S. (1952) Agricultural Price and Income Policy, Iowa State College Press, Ames.
- _____ and Futrell, G. A. (1980) Marketing of Farm Products, Iowa State University Press, Ames.
- Silver, M. (1981) 'Adaption to information impactedness: A survey', in Galatin, M. and Leiter, R. D. (eds.) Economics of Information, Martinus Nijhoff Publishing, Boston, 104 - 118.
- Simon, H. A. (1959) 'Theories of decision-making in economics and behavioral science', American Economic Review, 49(3), 253 - 283.
- _____ and Newell, A. (1971) 'Human problem solving: The state of the theory in 1970', American Psychologist, 26, 145 - 159.

Sjoberg, L. (1982) 'Aided and unaided decision making: Improving intuitive judgement', Journal of Forecasting, 1, 349 - 363.

Skillecorn, J. J. and Associates (1992) Market Reporting In The Australian Wool Industry, Australian Wool Corporation, Melbourne.

Slovic, P. (1966) 'Cue consistency and cue utilization in judgment', American Journal of Psychology, 79, 427 - 434.

_____ and Lichtenstein, S. C. (1968) The relative importance of probabilities and payoffs in risk taking', Journal of Experimental Psychology Monograph Supplement, 78 (3): Part 2,

_____ and _____ (1971) 'Comparison of Bayesian and regression approaches to the study of information processing in judgement', Organisation Behavior and Human Performance, 6, 649 - 744.

Smith, L. D. (1965) 'Short term use of market intelligence', The Farm Economist, 10 (10), 397 - 417.

Smith, L. H. (1967) 'Ranking Procedures and Subjective Probability Distributions', Management Science, 14 (4), B-236 - B-248.

Sonka, S. T. and Patrick, G. F. (1984) 'Risk management and decision making in agricultural firms', in Barry, P. J. (ed.) Risk Management in Agriculture, Iowa State University Press, Ames, 95 - 115.

_____ (1985) 'Information management in farm production', Computers and Electronics in Agriculture, 1, 75 -86.

_____, Hofing, S. L. and Changnon, S. A. Jr (1988) 'Evaluating information as a strategic resource: An illustration for climate information', Agribusiness, 4(5), 475 - 491.

Sporleder, T. L. (1983) 'Emerging information technologies and agricultural structure', American Journal of Agricultural Economics, 65, 388 - 394

- Stevens, (1991) 'Farm business management', Journal of the Australian Institute of Agricultural Science, 4(6), 24 - 25.
- Streeter, D. H. (1988) 'Electronic information - public or private good?', Agribusiness, 4(1), 39 -48.
- Sugden, R. (1986) 'New developments in the theory of choice under uncertainty', Bulletin of Economic Research, 38(1), 1 - 24.
- Svenson, O. (1979) 'Process description of decision making', Organizational Behavior and Human Performance, 23, 86 - 112.
- Thomas, D. W. (1955) 'Sociological aspects of the decision-making process', Journal of Farm Economics, 37, 1115 - 1118.
- Thornton, D. S. (1962) 'The study of decision making and its relevance to the study of farm management', The Farm Economics, 10(1), 40 - 56.
- Timko, M. and Loyns, R. M. A. (1989) 'Market information needs of prairie farmers', Canadian Journal of Agricultural Economics, 37, 609 - 627.
- Tisdell, C. A. and McDonald, P. W. (1979) Economics of Fibre Markets, Pergamon, Oxford.
- Toft, H. I., O'Hanlon, P. W. and Makeham, J. P. (1979) A Guide to Decision Making at the Start of a Drough, Department of Agricultural Economics and Business Management University of New England, Armidale.
- Tomek, W. G. and Robinson K. L. (1972) Agricultural Product Prices, Cornell University Press, Ithaca.
- _____ and _____ (1977) 'Agricultural price analysis and outlook', in Martin L. R. (ed.) A Survey of Agricultural Economics Literature Volume 1, University of Minnesota Press, Minneapolis.
- _____ and _____ (1981) Agricultural Product Prices, Cornell University Press, Ithaca

- Tucker, L. R. (1964) 'A suggested alternative formulation in the developments by Hirsch, Hammond, and Hirsch, and by Hammond, Hirsch, and Todd', Psychological Review, 71, 528 - 530.
- Turnovsky, S. J. (1974) 'Price expectations and welfare gains from price stabilization', American Journal of Agricultural Economics, 56(4), 706 - 716.
- Tversky, A. (1972) 'Elimination by aspects: A theory of choice', Psychological Review, 79(4), 281 - 299.
- _____ and Sattath, S. (1979) 'Preference trees', Psychological Reviews, 86(6), 542 - 573.
- _____ and Kahneman, D. (1986) 'Rational choice and the framing of decisions', Journal of Business, 59(4), S251 - S278.
- Ulvila, J. W. (1985) 'Decision trees for forecasting', Journal of Forecasting, 4, 377 - 385.
- Vere, D. T. and Griffith, G.R. (1990) 'Comparative forecast accuracy in the New South Wales prime lamb market', Australian Journal of Agricultural Economics, 34(2), 103 - 117.
- Vlek, C. (1984) 'What constitutes 'A good decision'?', Acta Psychologica, 56, 5 - 27.
- Waldie, B. (1989) 'Accounting software: The answer to better farm records', Canadian Journal of Agricultural Economics, 37, 727 - 732.
- Walker, D. (1985) 'Critique of current outlook practices', Canadian Journal of Agricultural Economics, 32, 70 - 76.
- Walker, F. W. (1990) 'A Tasmanian perspective', AIAS National Conference and Workshop on Agricultural Extension, AIAS, Occasional Publication No 50, Melbourne, 46 - 54.
- Waller, W. S. and Mitchell, T. R. (1984) 'The effects of context on the selection of decision strategies for the cost variance investigation problem', Organizational Behavior and Human Performance, 33, 697 - 413.

Wallsten, T. S. (1981) 'Physician and medical students bias in evaluating diagnostic information', Medical Decision Making 1: 145 - 164

_____ (1983) 'The theoretical status of judgemental heuristics', in Scholz, R. W. (ed.) Decision Making Under Uncertainty, Elsevier Science, North-Holland, 21 - 37.

_____ and Budescu, D. V. (1983) 'Encoding subjective probabilities: A psychological and psychometric review', Management Science, 29, 151 - 173.

_____, _____, Rapoport, A., Zwick, R. and Forsyth, B. (1986) 'Measuring the vague meanings of probability terms', Journal of Experimental Psychology, 115, 348 - 365.

_____, _____ and Erev, I. (1988) 'Understanding and using linguistic uncertainties', Acta Psychologica, 68, 39 - 52.

_____, Fillenbaum, S. and Cox, J. A. (1986) 'Base rate effects on the interpretation of probability and frequency expressions', Journal of Memory and Language, 25, 571 - 587.

Warr, P. G. (1990) 'Predictive performance of the World Bank's commodity price projections', Agricultural Economics, 4(3), 365 - 380.

Watson, G. K. (1983) 'Design concepts for management information systems in Australian agriculture', in McClellan, D. (ed.) Agricultural Information Systems, AIAS, Melbourne, 39 - 51.

Webster, J. P. G. (1979) 'The analysis of risky farm management decisions', Journal of Agricultural Economics, 28, 243 - 257.

Weeks, P. (1991) Market Reporting in the Beef Industry, Cattlemen's Union and United Grazier's Association, Canberra.

Wentz, W. B. (1972) Marketing Research: Management and Methods, Harper and Row, New York.

- Williams, D. B. (1951) 'Price expectations and reactions to uncertainty by farmers in Illinois', Journal of Farm Economics, 33 (1), 20 - 39.
- Williams, W. F. (1953) 'An empirical study of price expectations and production plans', Journal of Farm Economics, 35 (3), 355 - 371.
- Woodward, J. (1965) Industrial Organisation: Theory and Practice, Oxford University Press, London
- Wright, V. (1983) 'Some bounds to the relevance of decision theory', Australian Journal of Agricultural Economics, 27 (3), 221 - 230.
- Wrigley, J. and McLean, P. (1990) Australian Business Communication 2nd Ed, Longman Cheshire, London.
- Ymenta, D. B. and Torgerson, W. S. (1961) 'Man-computer cooperation in decisions requiring common sense. IRE transactions of the professional group on human factors in electronics HFE, 2 (1), 20 - 26.
- Young, D. L. (1984) 'Risk concepts and measures for decision analysis', in Barry P. J. (ed.) Risk Management in Agriculture, Iowa State University Press, Ames, 31 - 42.
- Zimmer, A. C. (1983) 'Verbal vs numerical processing of subjective probabilities', in Scholz, R. W. (ed.), Decision Making Under Uncertainty, Elsevier Science, North-Holland, 159 - 182.
- Zmud, R. W. (1979) 'Individual differences and MIS success: A review of the empirical literature', Management Science, October, 966 - 979.