

FARMERS

RECORD KEEPING AND

PLANNING PRACTICES: A POSTAL SURVEY

J. Ryde and P.L. Nuthall

Views expressed in Agricultural Economics Research Unit Discussion papers are those of the authors and do not necessarily reflect the views of the Director, other members of the Staff, or members of the Policy or Advisory Committees.

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THE AGRICULTURAL ECONOMICS RESEARCH UNIT
Lincoln College, Canterbury, N.Z.

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Major sources of funding have been annual grants from the Department of Scientific and Industrial Research and the College. However, a substantial proportion of the Unit's budget is derived from specific project research under contract to government departments, producer boards, farmer organisations and to commercial and industrial groups.

The Unit is involved in a wide spectrum of agricultural economics and management research, with some concentration on production economics, natural resource economics, marketing, processing and transportation. The results of research projects are published as Research Reports or Discussion Papers. (For further information regarding the Unit's publications see the inside back cover). The Unit also sponsors periodic conferences and seminars on topics of regional and national interest, often in conjunction with other organisations.

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PREFACE

The development of software for micro-computer use by farmers will benefit if the needs of the clients are established as clearly as possible. This paper, co-authored by Ms Jo Ryde (temporary researcher in the Department of Farm Management and Rural Valuation) and Dr. P. L. Nuthall (Head of the Kellogg Farm Management Unit), presents the results of a survey of farmers carried out to ascertain farmers' current planning and recording practices.

Other papers published by the A.E.R.U. in the field of farmers and computer technology are Discussion Papers No. 66 (December 1982) and No. 76 (November 1983).

P. D. Chudleigh
DIRECTOR

SUMMARY

With the advent of the personal computer (micro-computer) there is a need to develop software suitable for use by farmers. To gauge this requirement a postal survey of 1,500 farmers was conducted in early 1982 eliciting information on recording and planning practices as well as farmers' attitude to micro-computers.

The data collected suggest significant numbers of farmers do, in fact, keep detailed records particularly in the financial area, and make written plans in the form of documents such as a forecast budget.

The responses also indicated a positive view of micro-computers as an aid to management is held by many farmers.

However, there is most unlikely to be a perfect correlation between recorded intentions and what eventually takes place.

1. INTRODUCTION

With the advent and subsequent development of the micro-computer many farmers and agriculturalists believe an on-farm computer has the potential to be an important management aid. Computers can provide many of the functions required if management is to be efficient so, given the continuing decline in the cost of computers, there is clearly a point where the marginal returns and costs will be equated.

Some farmers maintain this point has already been reached, others that the cost of holding a computer will in fact decline to the point of equalling the returns within the next few years. A crucial part of an effective on-farm computer system is a set of programs or software capable of carrying out the jobs required. Production theory suggests the kinds of management information systems needed but in many cases what the farmer perceives as his requirement is different from that seen to be important by the theoretician. As the farmers' requirements must be met if computers are to be used in the first instance it is clearly important to determine these requirements.

As there are very few computers as yet being used on the farm it is not possible to rely on the comments of experienced users to determine farmers' requirements. Consequently this survey was designed to assess the recording and planning practices currently performed using manual methods under the assumption that this information would indicate the kinds of functions farmers perceive as being important.

It is not suggested, however, that the information is likely to cover the full range of required applications. The introduction of a computer extends considerably the bounds of the detail, complexity and extent of management information possible compared with existing tools (pencil, paper and calculator), so new possibilities exist.

Related to the whole question of desired application is the number of farmers who believe they might use a micro-computer. At the time the survey was conducted, it was considered useful to obtain an initial idea of the likely numbers to assess the potential payoff from developing educational programmes and software. This information can, of course, only be regarded as preliminary as the respondents have little real experience of micro-computers.

This paper does not contain an analysis of the data obtained but rather presents the information collected so it can be used by other workers interested in the whole field of information systems. The information is divided into a number of sections covering general information on the sample, and farmers' recording and planning practices for both financial and physical information as well as their attitude to micro-computers. Preceding these sections the sampling method and the questionnaire are discussed. A general discussion on the information presented is provided in a final section.

2.

2. THE QUESTIONNAIRE AND THE SAMPLE

A number of professional farm management consultants, teachers and programmers were consulted regarding the kinds of records and plans with which a farm might be concerned. Their suggestions formed the basis of the questions included in the questionnaire. The first version was pilot tested on fifteen farmers in mid-December 1981 and subsequently modified.

The nature of the data required meant it was possible to use a postal survey, thus enabling the sample size to be increased compared with an interview survey. A sample size of 1,500 was used - this being the maximum possible given the resources available.

Due to limited time available to select a sample it was necessary to use the electoral roles as a source of potential respondents. The preferred alternative to using the New Zealand Statistics Department to select a stratified sample was precluded due to the time required.

In order to ensure both a geographical and farm type spread in the sample specific numbers of farmers were randomly selected from specified electoral roles. The procedure was (using 1979/80 New Zealand Agricultural Statistics):-

- i) the proportion of each farm type in the total number of farms was determined,
- ii) 1,500 (the sample size) was multiplied by the proportion of each farm type to give the number of each type required (let this be n_i , $i = 1, 2 \dots$),
- iii) for each of the thirteen statistical areas (as defined by the New Zealand Department of Statistics), the following statistic (q) was determined:

$$q = \sum_i p_i n_i$$

where p_i = the proportion of farms of the i^{th} type in a statistical area

The value of q then gives the number of farms selected from a statistical area,

- iv) the rural electoral roles were then isolated for each statistical area
- v) the proportion of q to be selected from each role was then determined on the basis of the size of each role,
- vi) the number of farmers required from each role was then selected by dividing the number of pages in each role by the number of farmers required (let this be f) and then selecting the first person whose occupation was listed as being a farmer from every f^{th} page.

The questionnaires were sent at the beginning of January 1982 and follow up reminders were forwarded in February and March to all farmers who had not replied up to the time of the mailing. Included with each questionnaire was a statement describing micro-computers, their cost and attributes. A copy of the questionnaire and all letters sent at various stages to the potential respondents are included in the Appendices A to E. Replies received up to and including 25 June 1982 were included in the results.

3. THE RESULTS

The data obtained from the respondents are described in the following series of tables. The figure given for each class or category is the number of farmers in the class or category expressed as a percentage of the total number responding to the particular question. For each question the number of farmers responding is given (the n value).

Of the 1,500 questionnaires sent 1,075 were returned. Of these 220 were invalid for various reasons including the retirement of the farmer, the person receiving the questionnaire was not in fact a full time farmer, the addressee had moved, or the questionnaire was not completed correctly. If it is assumed that the same ratio (20.5%) of those that did not respond (425) would have been invalid the effective sample size would have been 1,195, (ie. 1500 (1-.205)). This would have given a response rate of 71.7%.

The Results are given in Tables 1 to 7:

TABLE 1
THE CHARACTERISTICS OF THE RESPONDENTS

a) <u>Age in Years</u> (n = 845)	<u>%</u>
Less than 30	16.7
31 - 40	34.4
41 - 50	25.1
51 - 60	16.6
Greater than 60	7.2

Note: 96.5% of the respondents were males (n = 849)

b) <u>Education - level of completion</u> (n = 855)	<u>%</u>
No formal education	0.2
Not beyond primary	8.1
Four years or less secondary	66.4
Five years or more secondary	8.7
Two years or less tertiary	10.6
Have three years or more tertiary	6.0

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c) <u>Years of Farming Experience</u> (n = 852)	<u>%</u>
Less than 2	0.7
2 - 5	7.9
6 - 10	15.0
11 - 20	31.1
21 - 30	26.3
Greater than 30	19.0

TABLE 2

THE CHARACTERISTICS OF THE RESPONDENTS' FARMS

a) <u>Type of Farm</u> (n = 854)	<u>%</u>	<u>Type of Farm</u>	<u>%</u>
Mixed Cropping	8.2	Sheep Fattening	15.5
Sheep Store	4.9	Cattle	3.7
Sheep and Cattle	25.2	Dairying	31.0
Pigs	0.7	Poultry	0.1
Horticultural	2.0	Other	8.7

b) <u>Farms with Stud Animals</u> - (n = 855)	<u>%</u>
Stud Sheep	7.8
Stud Cattle	10.9
Stud Pigs	0.8
No Studs	80.5

c) <u>Size of Farm - Hectares</u> (n = 844)	<u>%</u>
Less than 20	4.6
21 - 50	11.3
51 - 100	22.5
101 - 150	11.6
151 - 200	10.4
201 - 400	22.4
401 - 600	7.2
Greater than 600	10.0

d) Work Force - number of full time equivalent working on the farm over winter including the manager (n = 832)

<u>Number</u>	<u>%</u>
1	32.1
2	44.7
3	15.6
4	4.9
5	1.3
6 or more	1.3

TABLE 3

BACKGROUND TO RECORDING AND PLANNING

a) <u>Place of Office Work</u> (n = 812)		<u>%</u>
Farm Office		24.4
Kitchen Table		47.7
Both Office and Table		21.4
Other		6.5
b) <u>Type of People Consulted When Making Decisions</u> (n = 855)		<u>%</u>
Spouse		66.2
Accountant		64.0
Bank Manager		46.8
Family (excluding spouse)		40.6
Other Farmers		29.8
Farm Advisor		29.4
Discussion Group		21.3
Other Categories		5.6
No-one		4.4
c) <u>No. of People Consulted When Making Decisions</u> (n = 855)		<u>%</u>
1 or less		21.4
2		21.8
3		18.4
4		16.7
5 or more		21.7

TABLE 4

FINANCIAL RECORDS

a) <u>Number of Farmers Keeping Records</u> (n = 830)		<u>%</u>
Keep Written Records		79.5
Keep Records in Head		10.6
No Need for Records		9.9
b) <u>Types of Records Kept and/or Checked</u> (n = 660)		
	<u>%</u>	<u>% of all farms</u> ^a
Whole Farm Cash Book	44.1	34.0
Part Farm Cash Book	10.0	7.7
Bank Statements	80.9	62.5
Details of Assets and Loans	48.6	37.5
Full Taxation Accounts	51.4	39.6
Other	7.9	6.1

^a 20% do not keep any written records.

6.

c) Frequency of Updating and/or Checking Records (n = 660)
 (% of farms in each category)

Frequency of update &/or checking	Whole farm cash book	Part farm cash book	Bank state-ments	Assets and Loans	Tax A/cs	Other
Monthly or less	71.9	66.2	83.0	19.2	15.3	78.9
Three monthly	0.7	0.0	0.4	3.0	0.6	5.3
Six monthly	0.1	0.1	0.4	1.3	3.1	5.3
Annually	0.9	8.8	5.1	55.0	66.7	5.3
Irregularly	6.3	17.6	10.4	19.5	13.1	2.6
Other	0.5	5.9	0.8	2.0	1.2	2.6

d) No. of Categories Kept in a Cash Book (n = 320)
 (% of farms in each category)

	<u>Income Categories</u>	<u>Expenditure Categories</u>
Less than 5	48.8	21.8
6 - 10	32.8	19.5
Greater than 10	18.4	58.8

TABLE 5
FINANCIAL PLANNING

a) <u>No. of Farmers Making Financial Plans (n = 835)</u>		<u>%</u>
Yes - make plans		73.5
No - do in head		17.2
No - no need		9.2
b) <u>Types of Financial Plans Made (n = 614)</u>		
	<u>%</u>	<u>% of all farms</u>
Annual Whole Farm Budget	63.0	45.3
Period by Period Whole Farm Budget	33.7	24.2
Annual Part Farm Budget	11.2	8.1
Period by Period Part Farm Budget	18.2	13.1
Development Budget	16.8	4.9
c) <u>Extent of the Plans (n = 605)</u>		<u>%</u>
Roughly Jotted Down		59.3
Detailed and Written Out		40.7
d) <u>Frequency of Updating Plans (n = 550)</u>		<u>%</u>
Monthly		21.6
Three Monthly		4.4
Six Monthly		4.0
Irregularly		31.8
When Necessary		12.0
Annually		21.8
Other		4.4
e) <u>Practice of Comparing a Monthly Budget with Cash Book Results (n = 239)</u>		<u>%</u>
Constant Comparison		54.0
Occasional Comparison		43.5
Never Compare		2.5

TABLE 6
PHYSICAL RECORDS AND PLANNING

a) <u>No. of Farmers Keeping Records</u> (n = 842)		<u>%</u>
Records are Kept		86.6
All Records are Kept in Head		10.2
Records not required		3.2
b) <u>Types of Records Kept</u> (n = 729)	<u>%</u>	<u>% of all farms</u>
Paddock Records	50.6	43.2
Stock Records	97.4	83.0
Stock Feed Records	24.8	21.2
c) <u>Types of Paddock Records Kept</u> (n = 369)		<u>%</u>
Cultivation		44.7
Fertiliser		84.3
Spraying		47.7
Yields		33.1
Stock Grazing		36.9
Other		7.3
d) <u>Form of Paddock Records</u> (n = 369)		<u>%</u>
General Diary		68.0
Special Paddock Book		26.6
Other		14.1
e) <u>Types of Stock Records Kept</u> (n = 369)		<u>%</u>
Numbers Sold and Purchased		94.2
Births and Deaths		72.5
Individual Animal Performance		31.3
Animal Health		32.0
Group Performance		26.9
Other		9.7
f) <u>Form of Stock Records Kept</u> (n = 369)		<u>%</u>
General Diary		62.0
Special Stock Records Book		34.5
Computer Printout		19.3
Other		7.0
g) <u>Types of Feed Records Kept & Plans Made</u> (n = 181)		<u>%</u>
Feed Budget		26.5
Paddock Grazing Records		35.4
Supplementary Feed Records		80.2
Other		5.0

TABLE 7
MICRO-COMPUTERS

a)	<u>Knowledge of the Existence of Micro-Computers and their Use on Farms (n = 843)</u>	<u>%</u>
	Have heard of them	75.2
	Own a micro-computer	0.5
b)	<u>Belief in the Usefulness of a Micro-Computer on their Farm (n = 804)</u>	<u>%</u>
	Useless	13.2
	Of little use	26.0
	Of some use	33.5
	Useful	17.9
	Very useful	9.5
c)	<u>Time Before Buying a Micro-Computer (n = 810)</u>	<u>%</u>
	1 year	0.5
	2 years	2.6
	3 years	4.1
	4 years	2.0
	5 years	5.9
	Greater than 5 years	35.1
	Don't know	11.2
	Never	38.6
d)	<u>Attitude to Joint Ownership of a Micro-Computer (n = 829)</u>	<u>%</u>
	Would consider	20.7
	Would not consider	47.0
	Don't know	32.3
e)	<u>Willingness to Attend a Workshop on Micro-Computers (n = 819)</u>	<u>%</u>
	Willing to attend	37.0
	Not willing to attend	36.3
	Don't know	26.7

4. DISCUSSION

Considerable numbers of farmers reported that they keep records. Nearly 80% noted they keep written financial records and some 34% maintain they keep a cash book of which 72% update these monthly. Nearly half of all farmers said they prepare an annual whole farm budget and 40% of those

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making financial plans noted these were detailed written plans. Of course many interpretations can be placed on the constitution of a detailed written plan but despite this it is believed many observers would be surprised at the extent of record keeping and planning reported by the respondents. It should be noted, however, that the non-respondents are likely to be less inclined to record and plan than the farmers replying.

A high proportion of farmers also keep physical records (43% keep paddock records and 83% stock records). This would be expected by most observers as most of these records are likely to be extensive in nature particularly as some 60% of the records are kept in a general diary. This fact is interesting in that general diary records are not as easy to utilise later than records kept in specialist files due to the searching and sorting problems. This is where a micro-computer could be particularly useful. It is also interesting to note only 26% of the 181 farmers keeping feed records construct a feed budget (5% of all farmers replying). Potentially, feed budgeting and recording can play an important role in the efficient use of feed, but the large amount of work involved probably precludes its greater use. A micro-computer could alter this situation.

In January 1982 three-quarters of the respondents had heard about micro-computers and their use on farms. Given that micro-computers first appeared in the country around 1979 this is a large percentage. However, it is not possible to judge the extent and accuracy of this knowledge. Again, when interpreting the figures on farmers' attitudes to the usefulness of computers their lack of experience in the use of computers must be recognised. However, it is still relevant to note nearly two-thirds of all respondents believe they will eventually purchase a computer despite the \$9,000 cost recorded in the notes sent to them. The October 1983 cost is more like \$5,000 for a standard business computer. The decreasing price and the farmers' attitude to sharing a computer (only 21% said they would consider joint ownership) suggest there could well be significant numbers of all the respondents who eventually acquire an on-farm computer. However, in assessing the figures it must be remembered that the non-respondents would be less likely to make use of computers and so if they could have been included it is possible the uptake figures would have declined.

In analysing the results the relationships between the characteristics of the respondents and their recording and planning practices were assessed as was their attitude to micro-computers. These analyses indicated:

- a) the higher the level of formal education completed the more likely a farmer was to keep records and make plans,
- b) the younger a farmer was the more likely he was to keep records and make plans, and
- c) the more people a farmer discussed his records and plans with the more likely he was to keep records and make plans.

Similarly, the greater the level of education, the younger the farmer and the more people he discussed his affairs with the more likely he was to consider a micro-computer would be useful and the more he believed he would purchase one.

APPENDIX A

LETTER SENT WITH QUESTIONNAIRE

6 January, 1982

Dear Primary Producer,

In recent years there have been such tremendous developments in the computing industry that it is now possible for farmers to contemplate using a micro-computer as an aid to management. Before they can be of real benefit, however, pre-programmed instructions must be developed so that these machines are easy to use and in fact do the job farmers require of them.

To find out the kinds of recording and planning activities being used, I would be most grateful if you would contemplate the enclosed questionnaire and return it in the stamped and addressed envelope provided as soon as possible.

Your answers will be used to decide the types of micro-computer programmes that should be developed. The people in the Kellogg Farm Management Unit, based here at the College, will be particularly interested in the results as it is their job to prepare computer systems for farmers.

Your replies will be kept totally confidential. The only individual with access to them is Jo Ryde, the person responsible for carrying out this survey.

If you would like a copy of the results please indicate this in the comments section.

May I thank you for your co-operation.

Yours sincerely,

P.L. Nuthall
Senior Lecturer in Farm Management
(Officer-in-Charge,
Kellogg Farm Management Unit).

APPENDIX BGENERAL INFORMATION ABOUT MICRO-COMPUTERS

- * The micro-computer can be a useful tool to aid decision-making in farm management. As a tool, it will not replace farm consultants, accountants or advisers.
 - * With its ability to perform complex and repetitive calculations quickly the micro-computer saves a considerable amount of time that was previously spent working out such calculations manually.
 - * The computer's ability to store, retrieve and sort data can be used as on-going management tools and planning aids. Because previous results are stored between-month or between-year comparisons can easily be made.
 - * Both the above enable the farmer to test management decisions on the spot before the decisions are put into practice.
 - * Micro-computers are made up of a keyboard, electronic circuitry, screen and disk drive or cassette tape, all of which can fit on a desk top. These components are called hardware.
 - * The programmes which are put into the computer by the user to carry out particular tasks are known as software.
 - * Operation of most micro-computers does not require specialist training.
 - * The cost of a reasonably comprehensive machine is around \$9,000 at present. Costs are likely to decrease as demand increases and technology improves.
 - * It must be remembered, however, the purchase of a micro-computer does not necessarily solve the problem it is intended to. Therefore, farmers should consider all alternatives to make a decision that is justified economically.
-

APPENDIX C
FIRST FOLLOW-UP LETTER

18 February 1982

Dear Primary Producer,

About three weeks ago we sent you a Questionnaire about record keeping and planning procedures. If you have recently sent it back please regard this as a thank you for doing so. If not, we would greatly appreciate it if you, or whoever does the book work, would fill the questionnaire in and return it in the stamped addressed envelope as soon as possible.

We are very interested in what the practical farmer does and his opinion on future uses of micro-computers. Thus we are hoping to hear from as many farmers as possible.

Thank you for your help.

Yours sincerely,

J. Ryde (Ms)

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APPENDIX D

SECOND FOLLOW-UP LETTER

25 March, 1982

Dear Primary Producer,

About eight weeks ago we sent you a questionnaire about farm record keeping and planning procedures. So far we have not received your reply and thought you might have misplaced it. Therefore, I am enclosing another copy in the hope that whoever does the bookwork will complete and return it. If you have recently sent it back, thank you for doing so.

There are only 35 questions and it shouldn't take you more than 10 minutes to complete. Could you then return it in the next post using the stamped addressed envelope also enclosed.

Included in the envelope is an article providing some general information on micro-computers which you might find useful background in answering the last questions.

To get a true picture of what records farmers keep we are very keen to get replies from all farmers whether or not they keep formal records and whether or not they are interested in micro-computers. Your answers will enable to the Kellogg Farm Management Unit to prepare computer systems that are appropriate to what the practical farmer does.

We would like to get your replies back as quickly as possible. This way we can get the results out much faster. If you would like a copy of results please indicate this in the comments section.

I look forward to hearing from you and thank you for your help.

Yours sincerely,

J. Ryde (Ms)

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5. Do you run any stud stock on your farm?

- (i) Not applicable (iii) Cattle
(ii) Sheep (iv) Pigs

6. What size is your farm? _____ hectares (1 ha = 2.5 acres)

7. Total number of people working full time on the farm over winter including yourself, family labour, permanent and casual labour but excluding contract workers? _____

8. How long have you been actively farming? _____ years.

SECTION B : FINANCIAL RECORD KEEPING

9. Do you keep any financial records other than copies of invoices and statements for taxation purposes?

- (i) YES
(ii) NO - keep all the required information in your head
(iii) NO - have no need for keeping financial records

If answered NO - go to Section C.

10. If YES tick the kind(s) of financial recording and/or checking you carry out.

- (i) Whole farm cash book - for all times of income and expenditure;
(ii) Cash book - for particular parts of the farm only, e.g. cash book for sheep enterprise only;
(iii) Bank or Stock Firm Statements;
(iv) Detailed records of Assets and Loans;
(v) Full farm taxation accounts;
(vi) Other, please specify

11. How often do you keep check or update each of the records you ticked in Question 10? (please tick appropriate boxes)

	Monthly or Less	Annually	Irregularly	Other times (specify)
1) Whole farm cash book				
2) Part farm cash book				
3) Bank or Stock Firm Statements				
4) Detailed record of Assets & Loans				
5) Tax Accounts				
6) Other, specified				

12. How many categories do you keep in your cash book?

(i) Not applicable	<input type="checkbox"/>		
	<u>Income</u>	&	<u>Expenditure</u>
(ii) less than 5	<input type="checkbox"/>		<input type="checkbox"/>
(iii) 6 - 10	<input type="checkbox"/>		<input type="checkbox"/>
(iv) 10 - 15+	<input type="checkbox"/>		<input type="checkbox"/>

SECTION C : FINANCIAL PLANNING

13. Do you do any financial planning?

(i) YES	<input type="checkbox"/>
(ii) NO - keep required information in your head	<input type="checkbox"/>
(iii) NO - have no need for financial planning	<input type="checkbox"/>

If answered NO - go to Section D.

18.

14. If YES - do you prepare? (tick appropriate box(es))

- (i) An annual whole farm budget
- (ii) A period by period (e.g. monthly) whole farm budget
- (iii) An annual part farm or individual enterprise budget
- (iv) A period by period part farm or individual enterprise budget
- (v) A development budget covering several years
- (vi) Other planning procedures, please specify
.....

15. Are your plans?

- (i) Approximate, e.g. roughly jotted down
- (ii) Detailed and written out

16. How often do you update your written plans?

- (i) Not applicable
- (ii) Monthly
- (iii) Annually
- (iv) Irregularly, when you think of it
- (v) Other times, please specify

17. If you keep a cash book as well as prepare a monthly budget, do you constantly make comparisons between them?

- (i) Not applicable
- (ii) Yes
- (iii) Occasionally
- (iv) Never

SECTION D : PHYSICAL FARM RECORDS AND PLANNING

18. Do you keep any records on physical data such as stock numbers, stock production, crop yields?

- (i) YES
- (ii) NO - keep required information in your head
- (iii) NO - have no need for keeping physical records & plans

If answered NO - go to Section E.

19. If YES - Do you keep records of paddock activities?

- (i) YES
- (ii) NO - Go to Question 22

20. If YES - in your paddock records do you keep? (tick appropriate box(es))

- (i) Cultivation and drilling records
- (ii) Fertiliser records
- (iii) Spraying records
- (iv) Yields
- (v) Stock grazing records
- (vi) Other, please specify

21. Are these records kept ...?

- (i) In a general diary (iii) Other, please specify
- (ii) In a specialised paddock book

22. Do you keep any stock records?

- (i) YES
- (ii) Not applicale
- (iii) NO) Go to Question 25

23. If YES, in your stock records do you keep records of? (tick appropriate boxes)

- (i) Numbers sold and purchased
- (ii) Number of births and deaths for each class
- (iii) Individual animal performance
- (iv) Animal health
- (v) Animal performance on a group basis, e.g. wool production for a class of sheep
- (vi) Other, please specify

20.

24. Are these stock records kept

- (i) In a general diary
- (ii) In a specialised stock records book
- (iii) On computer printouts provided by a central organisation
- (iv) Other, please specify

25. Do you keep stock feed records?

- (i) YES
- (ii) Not applicable) Go to Section E
- (iii) NO

26. If YES, in your feed records do you

- (i) Prepare a feed budget
- (ii) Keep a paddock grazing record
- (iii) Keep a supplementary feed (hay, silage) record
- (iv) Other, please specify

SECTION E : GENERAL

27. Where do you mainly work on your records and plans?

- (i) Not applicable
- (ii) Farm office
- (iii) Kitchen table
- (iv) Use both kitchen table and office
- (v) Other places, please specify

28. Do you discuss your records and plans with any of the following?
(please tick appropriate box(es))

- (i) No one else
- (ii) Farm Adviser/consult.
- (iii) Spouse
- (iv) Other members of the family
- (vi) Bank or stock firm manager
- (vii) Other farmers
- (viii) A discussion group
- (ix) Others, please specify

29. Have you heard about micro-computers and their use on farms?

(i) YES (ii) NO

30. Do you use a micro-computer on your farm?

(i) YES (ii) NO

31. Does your accountant or adviser/consultant use a computer?

(i) Not applicable (iii) NO

(ii) YES (iv) Don't know

REFER TO ARTICLE ON MICRO-COMPUTERS

32. How useful do you think a micro-computer would be on your farm?

(i) Useless

(ii) Of little use

(iii) Of some use

(iv) Useful

(v) Very useful

33. How long do you think it will be before you invest in a micro-computer?

(i) Never (v) 4 years

(ii) 1 year (vi) 5 years

(iii) 2 years (vii) Over 5 years

(iv) 3 years

34. Would you consider joint ownership of a micro-computer with other farmers? (Your data on the computer is kept private)

(i) YES (ii) NO (iii) Don't know

We would appreciate any comments you might like to make: -----

Please return questionnaire in the stamped, addressed envelope.

Thank you very much for your co-operation.

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