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DISCUSSION PAPER

Institute of Agricultural Development in Central and Eastern Europe

DOCUMENTATION OF THE POLAND FARM SURVEY 2000

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ABSTRACT

This documentation summarises the technical information about the Poland farm survey 2000. This survey was recently carried out in co-operation with Polish partners by the Institute of Agricultural Development in Central and Eastern Europe (IAMO) in Halle (Saale), Germany. The topics covered in the documentation are a description and reprint of the questionnaire, sample design, survey organisation and implementation, data management, calculation of certain compound variables, and a brief assessment of the experiences made with the instrument.

JEL: C 81.
Keywords: Methods of data collection, microeconomic data, survey methodology.

ZUSAMMENFASSUNG

Diese Dokumentation fasst die technischen Informationen über den Poland farm survey 2000 zusammen. Es handelt sich hierbei um eine Befragung von polnischen Landwirten, die vom Institut für Agrarentwicklung in Mittel- und Osteuropa (IAMO) in Halle (Saale) in Zusammenarbeit mit polnischen Partnern durchgeführt wurde. Die in der Dokumentation behandelten Themenbereiche umfassen eine Diskussion und Wiedergabe des verwendeten Fragebogens, Stichprobenziehung, Organisation und Durchführung der Befragung, Datenverarbeitung, Berechnung einiger wichtiger zusammengesetzter Variablen, sowie eine knappe Einschätzung der mit dem Fragebogen im Feld gemachten Erfahrungen.

JEL: C 81.
Schlüsselwörter: Methoden der Datenerhebung, mikroökonomische Daten, Befragung.

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LIST OF ABBREVIATIONS

GUS	Central Statistical Office (Główny Urząd Statystyczny)
IAMO	Institute of Agricultural Development in Central and Eastern Europe
ODR	Extension Centre of Agriculture (Ośrodek Doradztwa Rolniczego)

1 INTRODUCTION[1]

The aim of this documentation is to summarise the technical information about the IAMO Poland farm survey 2000. This survey was carried out and financed by the Institute of Agricultural Development in Central and Eastern Europe (IAMO) in Halle (Saale), Germany. It was implemented in co-operation with members of Agricultural University of Szczecin, Agricultural University of Kraków, and of Cooperation Fund (Fundusz Spółpracy) in Warszawa, all in Poland. The author of this documentation was also the manager of the survey; the co-operation partners were GRZEGORZ SPYCHALSKI and MICHAŁ ŚWITŁYK from Szczecin, EWA TYRAN from Kraków, and URSZULA BUDZICH-SZUKAŁA from Warszawa. Starting with a workshop in Halle in October 1999, the fieldwork was done during spring and summer 2000; data entry and basic processing was finished in spring 2001.

A first objective of the research was to improve the understanding of the *general economic situation* of Polish farmers after transition to a market economy. Particularly with regard to structural and socio-economic conditions of farming little was known at the beginning of the study. A second objective was to learn more about the *financing of agricultural investment and production* and the *incidence of credit rationing* in rural areas. As the ability to invest in productive farm assets and to increase productivity by employing sufficient high-quality inputs was regarded as precondition for farm competitiveness in an enlarged EU, rural finance was believed to be a potential key bottleneck for farm development. A general outline of the objectives, hypotheses, and methods of the research project, particularly with regard to the second objective, is provided in PETRICK (1999).

The purpose was to establish a consistent database susceptible to both descriptive statistical analysis and econometric modelling. It was believed that the administration of a standardised questionnaire in face-to-face interviews with farmers was the method being most appropriate to achieve this goal. In fact, it is the standard method in comparable studies all over the world.

The survey consists of a random sample of 464 farms representing different legal forms in the former voivodships Szczecin, Tarnów, and Rzeszów. These regions were purposively selected to cover the different farm structures that can be found in different parts of the Polish territory. Although inductive logic supported by background statistics (e.g. GUS 1999a) may allow the generalisation of the findings of the survey for entire Poland, sampling theory does not permit this if applied strictly.

The document is organised as follows: Chapter 2 describes the questionnaire used in the interviews and highlights some specific features of it. Chapter 3 contains information on sampling issues. Organisation and implementation of the fieldwork is discussed in Chapter 4, while Chapter 5 presents some basics about data entry and processing. Chapter 6 outlines the way a number of important compound variables were calculated. Chapter 7 summarises the experience made with the questionnaire in the field, and Chapter 8 concludes with acknowledgements. Reprints of the questionnaire and the instructions for enumerators are given in the appendices.

2 SURVEY INSTRUMENT

The design of the questionnaire principally reflects the two main objectives of the survey. Questions on the different items to be surveyed were grouped into 16 sections including one

[1] I am grateful to STEFFEN ABELE, ULRICH FIEGE, and KLAUS FROHBERG for helpful comments on an earlier version of this paper. The usual disclaimer applies.

Table 1: Contents of the questionnaire

1	Identification and introduction
2	Family, off-farm employment
3	Income, savings, shocks
4	Education, public engagement
5	Farm size, assets
6	Crop production Livestock production
7	Workers, other expenses
8	Investment
9	Loan sources
10	Loan applications
11	Loans received
12	Further loan sources
13	Collateral, credit limit
14	Farm management practice, future development
15	Questions for the enumerator

Source: IAMO Poland farm survey 2000 questionnaire, see Appendix 1.

(the last) section with questions for the enumerator (Table 1). The questionnaire has many similarities with instruments used in comparable studies on rural development. In addition, the design of the sections dealing with the general economic situation of farmers was influenced by a questionnaire used previously by the World Bank, while the sections on credit issues were inspired by questionnaires used in studies of the Rural Finance Program at The Ohio State University (OSU; see e.g. SCHREINER et al. 1998). A facsimile of the English version of the questionnaire can be found in Appendix 1.

There is a body of literature dealing with the issue of how to best construct a questionnaire and pose questions.[2] Generally, the questionnaire should be organised in such a way that measurement errors of the various sources are avoided as far as possible (GROVES 1989, ch. 10). The current questionnaire was constructed according to the following principles:

- It starts with questions that are relatively simple to answer for the respondent in order to avoid an early refusal.
- Those questions that require most concentration on the side of the respondent are placed in the mid of the questionnaire, after interviewer and respondent become used to each other but before the respondent's attention might diminish.

[2] Questionnaire design is discussed e.g. in CASLEY and LURY (1981, ch. 7), POATE and DAPLYN (1993, ch. 7), SCHNELL et al. (1999, ch. 7). The first two of these references explicitly deal with surveys in rural areas. GROSH and MUÑOZ (1996) is a very comprehensive reference of methods used in the World Bank Living Standards Measurement Surveys.

- Filter questions are used in a such a way that questions irrelevant for certain respondents are skipped, but the interviewer is not forced to unnecessarily go back and forth within the questionnaire.
- All questions are accompanied by concise but sufficiently detailed instructions for the enumerator in italics to guide him through the questionnaire and to ensure a uniform approach during the interviews.
- Sections that differ in their topic or focus are connected by transitory questions or by explanations that have to be read aloud to the respondent.
- As far as possible closed questions were used that can be unambiguously answered and more easily processed and interpreted.

The various sections of the questionnaire are mostly self-explaining. The questionnaire begins with a list of banks from which credit was requested and/or obtained. This list was put on the front page to allow easy reference during later sections of the questionnaire. Section 1 covers the identification of the stratum the respondent belongs to. For reasons of protection of personal data, address and name of the farmer were not noted on the questionnaire. Section 1 furthermore divides respondents in those running a family farm on the one hand and employed managers on the other. Since part of the farms were legal persons, questions on household composition etc. make little sense to ask and were therefore skipped for this group.

Sections 2 to 4 contain questions on household composition, occupation of household members, education, income sources, and savings behaviour. Sections 5 to 8 encompass detailed information on production activities including yields, revenues, and sales channels of plant and animal products, input use, assets and machinery of the farm, labour force, and expenses. Sections 9 to 14 entail the core questions dealing with investment and finance including information on investment expenses, loan sources, loan applications, credit contracts, credit from suppliers, traders, relatives, and friends, and collateral. Section 15 closes with questions on farm management practice; Section 16 is intended to provide information on the course and success of the interview.

The reference period throughout the questionnaire is the year 1999. Only questions on investment and bank loans refer to the period 1997-99. Since these events occur less frequently, the intention was to ensure a sufficient number of cases in the sample.

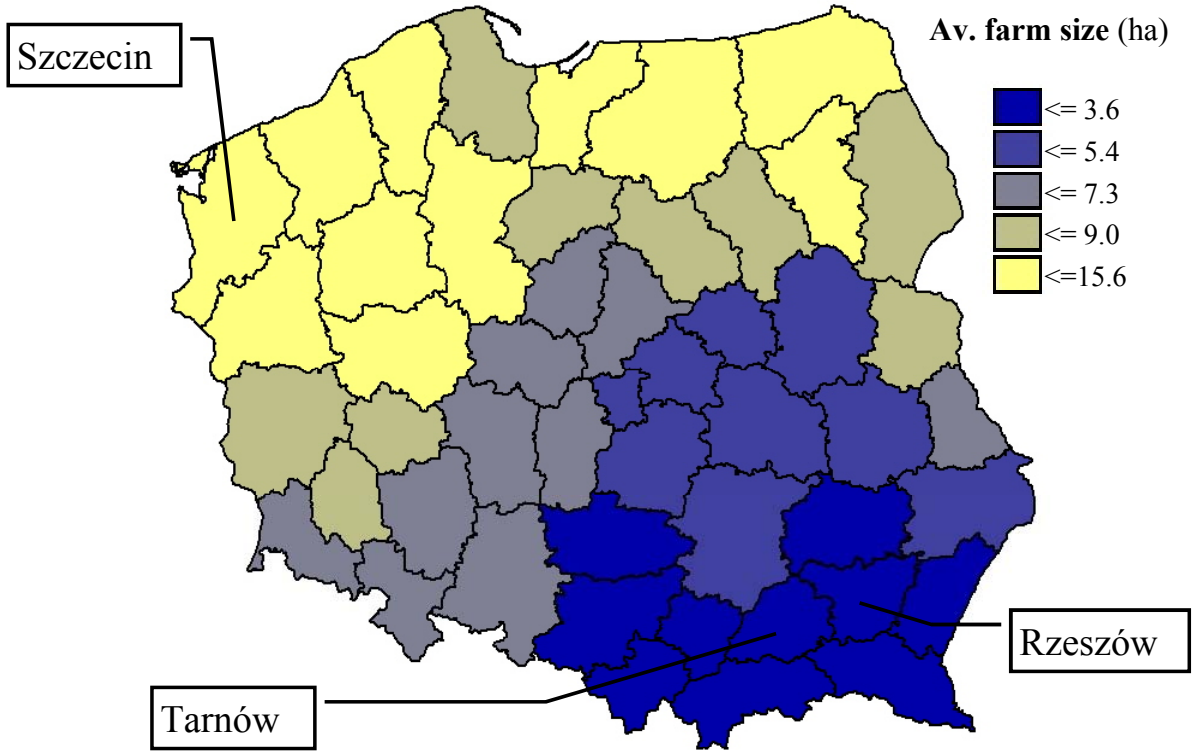
3 SAMPLE DESIGN

3.1 Stratification and sample size

Mainly due to historical reasons, the organisation and structure of agricultural production in Poland is highly region-specific. In the southern and eastern parts of the country, a very small-structured peasant agriculture predominates, with more than 75% of all farms cultivating less than 5 ha of land (e.g. in the regions of Małopolskie and Podkarpackie, see GUS 1998b and Figure 1). In contrast to this, the North and North-west of Poland is characterised by a more diverse farm structure with a higher share of large-scale farms, which is a reflection of the previous importance of state enterprises in agriculture (Państwowe Gospodarstwa Rolne, PGR). Accordingly, the absolute number of farms in a given area increases from the North-west to the South-east of Poland. As a peculiarity, also under the socialist regime, agriculture in Poland never was completely collectivised. State farms in the North had been mainly established as a result of the re-organisation of former German estates after World War II and

administrative land allotment in subsequent years. However, after transition to a market economy, these state farms were liquidated or turned into the property of the Agricultural Property Agency of the State Treasury (Agencja Własności Rolnej Skarbu Państwa, AWRSP). This agency in turn sells or leases out the land to private farmers.[3]

Figure 1: Survey regions and farm sizes in Polish voivodships



Source: Own presentation based on GUS (1998b).

As a result of these restructuring processes, the share of *state-managed farms* in Poland had fallen to less than 8% in 1997 (GUS 1999a, p. 9; 1997 is the latest year for which information is available) and its share has presumably further dropped since then. Furthermore, more than half of the land belonging to state-managed farms was not under cultivation in 1997 (i.e. fallow, GUS 1999a, p. 19). The state-sector thus has completely lost its importance. Within the *private sector*, besides the individual farms (indyvidualne gospodarstwa rolne) a number of other forms of farm organisations are considered in the official statistics (GUS 1998b, pp. 166-7). These are 'co-operative farms' (spółdzielnie produkcji rolniczej), 'private companies in home property' (spółki krajowe prywatne), 'other private entities in home property' (pozostałe jednostki własności prywatnej krajowej), 'private entities in foreign ownership' (własność zagraniczna), and 'private entities in mixed ownership' (własność mieszana). They are potentially important in terms of absolute numbers only for the North-western regions, where they partly emerged from restructured state farms. However, their exact delimitation from each other is unclear and is further confused by the ongoing changes of ownership status during the past decade. An examination of their internal management structure has shown that it is quite heterogeneous (FEDYSZAK-RADZIEJOWSKA et al. 1999).

[3] The spatial structure of Polish agriculture in general is discussed e.g. by GÓRZ and KUREK (1998), JAKSCH et al. (1997), and WECŁAWOWICZ (1996). BARCZYK (1962) and PHILIPP (1983) analyse developments between the second world war and the 1990's. MILCZAREK (2000) and ZIETARA (1995) provide more details on the post-transition period.

These facts formed the basis of the construction of the sample in the current study. Since it was clear from the beginning that due to financial limitations only a small number of regions could be surveyed, three distinct former voivodships were purposively selected that would ensure a maximum variance of the overall sample in terms of farm structure. The fact that an administrative reform was carried out in Poland that replaced the former 49 old by 16 newly created voivodships as of 1. January 1999 (see CZYŻ 1999) posed some difficulties for the sampling procedure. On the one hand, a lot of statistical data still complies with the former administrative units. Most prominently, this applies to the survey frame that was used in the current study. On the other hand, all kind of statistical reference material newly published by the Central Statistical Office (Główny Urząd Statystyczny, GUS) is now aligned with the new structure, which makes comparisons a bit more complicated. It has a further negative side-effect for the researcher, since a lot of data is now presented in much less detail due to the reduction in the number of voivodships from 49 to 16.

An important property of the current sample is that it *does not adopt* the definition of an individual farm used by GUS. According to GUS, individual farms (indyvidualne gospodarstwa rolne) are "farms exceeding 1 ha of agricultural land, tended by farmers on their own land or rented land" (GUS 1999b, p. 352). In fact, this is a rather technical definition that says little about the real activity of 'farmers'. As can be seen from Table 2, which is based on data of the agricultural census, in the groups of smaller farms a considerable share of households did not generate their primary share of income from agriculture. Instead, the main sources were off-farm employment or public transfers. A similar picture draws Table 3, which shows that less than half of all individual farmers in Poland in fact conduct production for the market. In 1996, the majority of individual farms solely or mainly produced for own consumption or did not produce anything at all.

Table 2: Income structure of individual farms in 1996

Group of farms	no. in ths	major source of household income (more than 50%) in %		
		agriculture	off-farm employ-ment	public transfers and pensions
total	2041.4	37.6	21.7	21.3
1-2 ha	462.2	6.2	38.4	35.1
2-5 ha	667.6	20.0	27.4	28.3
5-10 ha	520.8	54.0	13.0	13.4
10-15 ha	217.2	78.6	5.3	4.9
15 and more ha	173.6	88.7	2.6	1.9

Source: modified from GUS (1999a, Table 10(340), p. 384).

Since the survey was interested in farmers that are at least to some extent engaged in commercial agricultural activities, the definition of GUS was not very appropriate to be used as a survey frame. In case a simple random sample had been drawn out of the GUS frame, there would have been the danger of having very few cases of interest for the purpose of the survey. Therefore, another frame was chosen, namely the database of farmers of the official extension service ODR (Ośrodek Doradztwa Rolniczego, Extension Centre of Agriculture). In Poland, almost all extension to farmers is provided by this public service, the ODR database is therefore likely to encompass all farmers relevant for the survey. ODR has a decentralised network

Table 3: Purpose of production of individual farms in 1996

Purpose of production	%
non producing	10.1
producing solely for own consumption	10.9
producing mainly for own consumption	33.1
producing mainly for the market	45.9
total	100.0

Note: Non producing farms including those for which value of production could not be determined.
Source: GUS (1999a, chart p. 40).

of branches in all voivodships of the country, where the data on the farms of the respective region can be made available. As will be explicated below, this database roughly contains around one third of the farmers of the GUS data, usually (compared with the GUS frame) the larger and more commercially active farms. The survey database is, however, no proper subset of the GUS frame, since *all legal forms of the private sector were included*. For reasons mentioned above, the survey only distinguished whether a given farm was owner-operated or run by a hired manager, and whether it was in foreign ownership, but did not differentiate legal forms of farms.

The first step in selecting the final research regions was to establish contacts with local co-operation partners. These were found in the Agricultural Universities of Szczecin and Kraków. In a second step, the former voivodships Szczecin in the North-west and Tarnów and Rzeszów in the South were chosen for the fieldwork. Since, in a national perspective, more farms are located in the South-east of the country, the sample size and the size of the survey area were chosen accordingly. As a result, the size of the Southern sub-sample is bigger than in the North. For the same reason, two voivodships were selected in the South compared to one in the North (Figure 1). The former were selected as neighbouring voivodships mainly for technical reasons, to save supervision and travel costs, and because a locally experienced team of surveyors was available for these regions.

The final sample consists of 464 farms; 120 from Szczecin, 108 from Tarnów, and 236 from Rzeszów. Within the given geographic boundaries of the three voivodships, it is a stratified one-stage random sample. In total there are 22 strata, seven forming the Szczecin voivodship, four the Tarnów, and eleven the Rzeszów voivodship. The 22 strata are identical with administrative districts (powiat). Table 4 shows a detailed breakdown of the stratification of the sample and the relation between the GUS database and the survey frame.

For two reasons the comparability between the GUS data and the survey frame is limited to some extent. First, as discussed before, the survey frame is no proper subset of the GUS database, since the latter also includes legal forms other than individual farms. Second, apart from the voivodship boundaries, also the *powiat* boundaries were slightly changed in the process of administrative reform, and data on the powiat level is only available for these adjusted boundaries (GUS 1998a). Numbers taken from GUS on the powiat level thus comply with the new structure of districts, while the data of the survey frame still complies with the old boundaries. This makes the numbers given in Table 4 not fully comparable.

Table 4: Stratification of survey sample

Stratum (powiat)	no. of individual farms according to GUS definition	no. of private sector farms in survey frame	no. of farms in frame in % of no. of farms in GUS statistic*	no. of private sector farms in sample	no. of farms in sample in % of no. of farms in frame	inflation factor
kamieński incl. Swinoujście	1519	468	30.81	10	2.14	46.80
gryficki	2270	740	32.60	14	1.89	52.86
szczecinecki incl. Szczecin	3628	1850	50.99	22	1.19	84.09
goleniowski	2834	985	34.76	18	1.83	54.72
stargardzki	3245	1480	45.61	22	1.49	67.27
gryfiński	3184	1920	60.30	19	0.99	101.05
pyrzycki	2208	860	38.95	15	1.74	57.33
Szczecin total	**18888**	**8303**	**43.96**	**120**	**1.45**	**69.19**
bocheński	10327	2349	22.75	16	0.68	146.81
brzeski	10944	2642	24.14	21	0.79	125.81
dąbrowski	8653	3141	36.30	20	0.64	157.05
tarnowski incl. Tarnów	23786	5224	21.96	51	0.98	102.43
Tarnów total	**53710**	**13356**	**24.87**	**108**	**0.81**	**123.67**
dębicki	12216	3517	28.79	26	0.74	135.27
mielecki	12234	4277	34.96	28	0.65	152.75
kolbuszowski	8771	3395	38.71	18	0.53	188.61
leżajski	8125	2112	25.99	15	0.71	140.80
łańcucki	9138	1839	20.12	14	0.76	131.36
ropczycko-sędziszowski	9812	2737	27.89	19	0.69	144.05
stalowowolski	7355	1780	24.20	15	0.84	118.67
niżański	8322	3062	36.79	17	0.56	180.12
rzeszowski incl. Rzeszów	23005	3035	13.19	47	1.55	64.57
tarnobrzeski incl. Tarnobrzeg	7746	1813	23.41	16	0.88	113.31
strzyżowski	9033	2060	22.81	21	1.02	98.10
Rzeszów total	**115757**	**29627**	**25.59**	**236**	**0.80**	**125.54**
Sample total	**188355**	**51286**	**27.23**	**464**	**0.90**	**110.53**

Note: * Survey frame is no proper subset of GUS database on individual farms, see discussion in text.
Source: GUS statistics according to GUS (1998a); own calculations.

3.2 Weighting

Since sample sizes were not drawn as a constant fraction of the number of farms in the respective frame on the powiat level (i.e. the sample is not self-weighting), a weighting procedure is necessary to obtain statistics that are representative for the studied population as a whole. This weighting procedure assigns to each observation a so-called inflation factor, which can be interpreted as the number of farms in the population the single observation stands for. Inflation factors were calculated according to the following formula (see DEATON 1997, p. 50):

$$(1) \qquad w_{is} = \left(n_s \pi_{is}\right)^{-1}.$$

In this formula, w_{is} is the inflation factor of element i in stratum s, n_s the sample size of stratum s, and π_{is} the sampling probability of element i in stratum s. In our case, the sampling probability is constant for a given stratum and thus given by:

$$(2) \qquad \pi_{is} = \pi_s = \frac{1}{N_s},$$

with N_s the number of elements in the survey frame of stratum s. Table 4 shows the inflation factors for each stratum of the sample.

3.3 Non-response and replacement procedure

The number of total refusals of respondents (unit non-responses) is shown by Table 5. This information is only available for each of the three survey regions as a whole. All of the reported refusals are non-neutral, i.e. respondents were not willing to answer the questionnaire. Still, the number of refusals is exceptionally low. If we suppose proper reporting of refusals, these low numbers may be the result of a high degree of acquaintance between respondents and surveyors and thus a high willingness to co-operate (see below).

Table 5: Non-response rates

Region	no. of refusals (unit non-responses)	in % of sample size
Szczecin	18	15.0
Tarnów	6	5.6
Rzeszów	6	2.5
Sample total	30	6.5

Source: Own calculations.

To deal with the problem of unit non-responses, within each stratum a number of extra respondents were randomly drawn and used instead of the refusals.

As a general observation, similar to the unit non-responses, also item non-responses in the questionnaires were low.

4 SURVEY ORGANISATION AND IMPLEMENTATION

4.1 Design, translation, testing

The design of the survey was due to myself, based on discussion with the co-operation partners during a workshop in October 1999. The pre-test of the questionnaire was done in early 2000 by administering the pre-version of the questionnaire to a purposively chosen sample of 20 farmers in each region. After the pre-test, a number of changes had to be made for the final version. Particularly, a number of questions were initially posed as open questions that were transformed into closed ones after the pre-test, since more detailed knowledge about potential responses was made available by the pre-test.

The questionnaire was prepared in English by myself and then translated into Polish by a professional translator under the supervision of Ms. Budzich-Szukała. Both the translator and the supervisor were acquainted with the subject, which guaranteed a high quality of translation.

4.2 Enumerators and interviews

The data collection in the field was done by local interviewers on a commercial basis. These interviewers operated under the supervision of the co-operation partners in the regions. Since interviewers had collected agricultural data on a farm level in the survey regions on various occasions before, they were usually well acquainted with the respondents. Furthermore, little additional training beyond explaining the general purpose of the survey and some general rules of behaviour was necessary (see Appendix 2 for a summary of instructions for enumerators). The number of respondents interviewed by a single enumerator usually did not exceed 10. Together with the fact that most interviewers did hold a university degree, these circumstances resulted in a very high quality of work provided by the interviewers.

The interviews were usually conducted in a single visit. Single interviews took about 90 to 120 minutes on average, which in few cases resulted in complaints about the length of the interview on the side of the respondents. Where necessary, additional information was collected by telephone after the face-to-face interview were finished. Although farmers did not obtain any material benefit from the survey, the reception given to enumerators was generally good.

4.3 Survey costs

The major cost items of the survey were remuneration of academic research partners on the one hand and interviewers on a per questionnaire basis on the other hand. All survey-related expenses amounted to approximately 18,100 €, or 39 € (35 US$) per questionnaire. This does not include costs of the IAMO infrastructure and payment of the survey manager. It can be concluded that the IAMO Poland farm survey thus was good value for money: DEATON (1997, p. 40) reports average costs of the World Bank Living Standards Measurement Surveys of around 150 to 250 US$ per respondent, while sample sizes often are 2,000 and more; average surveys carried out by social scientists in Germany with similar sample sizes report 75 to 100 € per questionnaire.

5 DATA MANAGEMENT

After all interviews were finished, the questionnaires were transferred to Halle as hardcopies. According to a code plan, the data entry was then done by directly using the SPSS surface. All

further data management was done with SPSS. The complete data set was saved into one master file.

Data verification and cleaning was carried out by carefully checking ranges and relationships between variables. Most checks were performed at the time of data entry. After the data files were completed, for a number of items further calculations were made to check for any inconsistencies. Particularly, it was looked at whether area sizes of different land uses or crops added to total land area, and whether prices (unit values) of products and inputs were in plausible ranges. The calculation of compound variables (see below) further identified a number of implausible entries, which were then cross-checked with the questionnaire hardcopies.

Missing data generally was not replaced by any substitute value. In a number of cases, missing values were coded with special "9", "99", or "999"-codes, particularly if the context did not make clear whether there should be a number at a certain place or not.

6 CALCULATION OF COMPOUND VARIABLES

6.1 Introductory remarks

The raw data collected in the interviews was used to calculate a number of compound variables, i.e. variables that are functions of variables directly recorded during the interviews. The way three of the most well known of the compound variables were calculated is briefly described in the following. This of course does not mean that these are the *only* compound variables that can be calculated from the survey data. However, it also does not imply that they are those for which the survey data is *most suitable*. For example, the survey was not designed as a living standards measurement survey, and the (extremely costly) measurement of income is thus only possible in a second best quality from the given data. The survey *was* designed to allow the calculation of a number of highly specific compound variables e.g. on credit limits and contractual choice on credit markets. Their calculation is often related to certain theoretical concepts which to explain is not the purpose of a general documentation; it has to be discussed in the specific publications on the subject. In contrast to that, the variables presented here are likely to be used in several overview analyses such as PETRICK et al. (2001). In order to avoid cumbersome repetition of the calculation procedures they are given in this documentation.

6.2 Subsistence

Any appropriate measure of economic farm performance has to value those products that are not sold through market outlets but are consumed directly by the household. The raw data of the Poland farm survey 2000 includes statements both about *produced* and about *sold* farm products (both in quantity units) as well as about sales revenues (in monetary units). If unit values are calculated as sales revenues divided by quantity sold, the difference between sold and produced goods times the unit values of the sold goods is a first measure of the value of subsistence production. Potential problems of this measure, however, are that (a) products not sold may be used as intermediate inputs for other products and (b) there may be no sales at all of some products, so that no unit value is available for these products. Disregarding problem (a) may lead to double counting of value added and thus result in measures of farm performance that are biased upwards.

The survey data does not include detailed information about all uses of produced goods but only the quantity that was sold at the market. Products were therefore divided into two groups

according to their suspected primary use within the farm household. Potatoes, vegetables, fruits, meat, milk, and eggs were counted as completely used for human nutrition (if not sold at the market), while all other non-sold products (e.g. cereals) were counted as completely used as intermediate inputs for animal production. This procedure may result in some inaccuracy, particularly since potatoes may well be used for animal production rather than for human nutrition, and cereals vice versa. Overall, however, it is believed that this method will result in acceptable figures of subsistence production.

The problem of missing unit values for certain products was solved by calculating average prices of all reported unit values within each of the three survey regions. Regional averages were then used as imputed prices for all households in the respective region where unit values were not available. The sum of quantities of products used for human nutrition according to the above categorisation valued with their unit values (if available) or with imputed prices is regarded as the total value of subsistence production per farm household. Table 6 summarises the way of calculation.

Table 6: Calculation of total value of subsistence production

Calculation of unit values
For each agricultural good produced and *sold:*
Unit value = Sales revenue ÷ Quantity sold.
For each agricultural good produced but not *sold:*
Unit value = Regional average unit value based on non-missing observations.
Calculation of total value of subsistence production
As subsistence products count potatoes, vegetables, fruits, meat, milk, and eggs.
For each of this products:
Product value of subsistence production = |(Quantity sold – Quantity produced)| * Unit value.
The total value of subsistence production results as the sum of all product values.

Source: Own presentation.

6.3 Agricultural profit

Agricultural profit is principally calculated as gross revenue from agriculture minus total expenses. It does not include allowances for owned factors, e.g. equity capital or family labour. A detailed breakdown of how profit is calculated is given by Table 7. Most of the single items can be taken directly from the survey responses. The value of subsistence production was computed as described in Section 6.2.

Depreciation is calculated for machinery and buildings only. Machinery is depreciated linearly over a period of 14 years. This results in an annual allowance of 7% of the machinery value stated by the respondents used for the profit calculation. Buildings are depreciated over 25 years, implying an annual allowance of 4%. An average depreciation is thus used. The consequence is that, for growing enterprises, actual depreciation is understated, and for shrinking enterprises it is overstated. For the purposes of the survey, however, it is regarded as sufficiently accurate.

Taxes include land and income tax, though most farmers (at least natural persons) are exempted from the latter. No allowances are made for the rental value of owner-occupied dwellings and for social security contributions.

There may arise a problem of distinguishing agricultural activities from non-agricultural businesses undertaken by members of the farm households. Generally, the information collected on non-agricultural businesses during the survey is much less detailed than that on agricultural activities. Profits from non-agricultural businesses are only measured in relation to agricultural profits. To differentiate on the side of the expenses, a separate item for expenses on non-agricultural activities was included in the questionnaire. It can thus be assumed that non-agricultural expenses are not confounded with agricultural expenses to a large extent (though they may be indistinguishable in certain cases, e.g. for small-scale processing). Generally, the problem should be less severe, since only 10% of all respondents reported any non-agricultural profits at all.

Table 7: Calculation of agricultural profit

Sales revenue from plant and animal products
+ Value of subsistence production
Gross revenue from agriculture
Expenses on input purchases (incl. machinery services)
+ Land rent
+ Wage payments
+ Machinery and buildings maintenance
+ Energy, fuel, lubricants
+ Veterinary expenses
+ Interest payments
+ Depreciation
+ Taxes
Total expenses for agricultural production
Gross revenue from agriculture
- Total expenses for agricultural production
Agricultural profit after interest and taxes

Source: Own presentation.

6.4 Income

A specific feature of the questionnaire is the way the household income is calculated. This variable is of major importance for many researchers but as a concept often irrelevant for household members, particularly if the income consists of a number of fluctuating sources. It therefore might make little sense to directly ask for the monthly (or yearly) income of a household, because the respondent might simply not know it. Furthermore, income might be a sensitive issue that is socially undesired (both if it is perceived to be exceptionally low or high), and direct statements of income may thus be biased.

It is therefore often extremely costly to properly measure income in household surveys (DEATON 1997, p. 29; MCKAY 2000). Usually, a detailed accounting framework is imposed

on the data, and even several distinct modules of the various components are put into the questionnaire. To avoid this time and concentration consuming procedure, and since accurate measurement of living standards was only of secondary concern in the survey, the approach in the current questionnaire is different. It focuses on *income from agriculture* and records the different parts of this *in absolute numbers* (i.e. as agricultural profit as described in Section 6.3). Other income sources such as public transfers, remittances, or off-farm employment might be of major importance as well, particularly for the small farm households in the Southern research regions. However, their detailed origin and composition are of less importance for the current survey. These other shares are therefore considered only in *relative terms*, i.e. respondents are asked to give the percentage shares of the different income sources including agricultural production (Question 3.3). This has the advantage that – potentially socially undesired – absolute monetary values of monthly income figures can be avoided. Since it is easily recognisable that the shares have to sum up to 100 percent, a high probability of valid answers can be expected. Combined with the absolute numbers from agricultural income, the overall value and structure of total income can be computed.

However, this simplified procedure does not come without costs. The major challenge is how to deal with negative values for income from agriculture for the given recall period. Under these circumstances, no reasonable imputations for the other income components can be made. The procedure was thus to use gross agricultural revenue per individual farm multiplied by the median regional profit rate as a reference for imputing total income, with a median profit rate for each of the three former voivodships (see Table 8). This results in positive values for the modified measure of farm profit as long as more than half of the farms achieve positive profits. As a consequence, however, the statements on total household income can only be regarded as approximate.

Table 8: Calculation of income

The questionnaire provides relative income shares (in % of total income) of various income sources including agricultural production. Absolute values are available only for profit from agricultural production. The absolute value of a given other source s *is calculated as follows:*

$$\text{Value of income source s} = \text{gross agricultural revenue} * \text{regional profit rate} * \frac{\text{share of agriculture}}{\text{share of source s}}.$$

Source: Own presentation.

7 EXPERIENCE MADE WITH THE QUESTIONNAIRE

To give a first assessment of the experiences made with the survey instrument, it must be stated that the field work documented a high suitability of the questionnaire. The different types of questions generally worked well, including the relatively complex tables in the medium part of the questionnaire. Data verification procedures showed that most answers collected were plausible and useful. The data quality exceeded prior expectations of the research team. Item non-responses remained in acceptable ranges, which even allowed the calculation of very complex compound variables for a large fraction of the sample. For example, agricultural profit could be calculated for more than 90% of the respondents, although for some it was a function of more than 70 single items. Questions with recall periods of up to three years also seemed to produce useful and complete results.

An important lesson is that the problem of socially undesired questions was apparently less severe than expected. It seems that questions on different sources of income, savings, or in-

formal credit could have been even more detailed and deep than in the current version of the questionnaire. Furthermore, it might have been possible also to collect the volume of various income sources in absolute numbers, which would have made obsolete the not fully satisfying procedure of income calculation outlined in Section 6.4.

Table 9: Survey evaluation by interviewers

	%
What was the degree of co-operation and interest of the interviewed person?	
- didn't want to co-operate	0.3
- had only little interest	12.7
- were more or less indifferent	32.0
- had some interest	46.5
- was very interested	8.5
How well-versed was the person to answer the questions?	
- not well-versed	3.5
- little well-versed	18.4
- relatively well-versed	65.7
- very well-versed	12.4
What was the degree of privacy during the enumeration?	
- completely private, no other person present	39.6
- relatively private, with other persons dropping in and leaving sometimes, but not intervening	23.0
- other family members were permanently present, but not intervening	10.5
- other family members were permanently present and intervening from time to time	24.3
- other family members and non-members were present and intervening	2.6
With regard to your experience as enumerator, this enumeration worked...	
- quite bad	0.6
- worse than normal	6.5
- normal	67.9
- better than normal	18.5
- very good	6.5

Source: Own calculation based on results of IAMO Poland farm survey 2000.

Table 9 summarises the evaluation of the survey given by the interviewers themselves. The table allows a number of tentative conclusions. First, more than half of the respondents had some or even much interest in responding to the surveyors. Second, the interviewers usually were successful in talking to those persons on the farm that were competent to respond to the questions posed. However, in a number of interviews, several respondents participated in the interviews which might have led to biases (see Appendix 2 for some of the issues involved). However, the overall evaluation by the interviewers obviously was positive.

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APPENDIX 1: QUESTIONNAIRE

Poland farm survey 2000

Institute of Agricultural Development in Central and Eastern Europe (IAMO)
Halle (Saale), Germany

Agricultural University of Krakow, Poland

Agricultural University of Szczecin, Poland

Number of questionnaire:_____

Reference list: Banks from which information on loans was collected

This list contains information to which reference will be made during the interview. Please put in the data at the time indicated in the questionnaire.

Name of the bank	Location	Loan application? (yes = X)	Received credit? (yes = X)
A			
B			
C			
D			
E			
F			

1 Identification and introduction

Powiat:_____

Gmina:_____

Personal Introduction: *Please introduce yourself.*

Introduction to the survey: *Give a brief description of the aim of the survey*.

Confidentiality: *Indicate that the information collected in this survey is treated as absolutely confidential and that personal information is kept separately from the responses to the questions. Ensure that only those person(s) directly involved in the interview are present during the enumeration.*

Date, time when beginning the enumeration:_____

Read: If not stated otherwise, all questions in this questionnaire refer to 1999, i.e. the previous year.

1.1 Is this farm headed by a manager or is it a family farm?

1. ❑ headed by manager (or group of managers). *Go to section 4*.
2. ❑ family farm.

2 Family, off-farm employment

2.1 How many persons permanently live in the household including children? _____ persons.

2.2 Could you please answer the following questions regarding those members of the household, who are at least age 15 or older (born before 01.05.1985):

Write down first name of each person →	A	B	C	D	E	F	G	H
2.2.1 Which is the sex of _____?								
1. masculine	01	01	01	01	01	01	01	01
2. feminine	02	02	02	02	02	02	02	02
2.2.2 What is the age in years of _____?								
2.2.3 Which is the relation of _____ to the head of the household? (*Mark with O.)*								
	01	01	01	01	01	01	01	01
1. head of the household	02	02	02	02	02	02	02	02
2. wife/ husband	03	03	03	03	03	03	03	03
3. son/ daughter of head	04	04	04	04	04	04	04	04
4. grandchild of head of the household	05	05	05	05	05	05	05	05
5. brother/ sister of head	06	06	06	06	06	06	06	06
6. brother/ sister of head's wife/ husband	07	07	07	07	07	07	07	07
7. father of head of the household	08	08	08	08	08	08	08	08
8. mother of head of the household	09	09	09	09	09	09	09	09
9. father of head's wife	10	10	10	10	10	10	10	10
10. mother of head's wife	11	11	11	11	11	11	11	11
11. other member of family	12	12	12	12	12	12	12	12
12. no relative								
2.2.4 In 1999, did _____ work on your land (own or rented) or in your house or in your buildings?								
1. yes	1	1	1	1	1	1	1	1
2. no (*Go to next person)*	2	2	2	2	2	2	2	2
2.2.5 In which of the following activities was _____ engaged in 1999? *(Read options and mark those which apply, multiple answers possible*)								
1. agricultural works for market production or self consumption	1	1	1	1	1	1	1	1
2. caring for livestock	2	2	2	2	2	2	2	2
3. processing livestock	3	3	3	3	3	3	3	3
4. housework	4	4	4	4	4	4	4	4
5. formal education (school etc.)	5	5	5	5	5	5	5	5
6. maintaining a shop or kiosk	6	6	6	6	6	6	6	6
7. manufacturing, sewing, other industrial activities	7	7	7	7	7	7	7	7
8. agrotourism	8	8	8	8	8	8	8	8

2.3 Did a member of the household work outside your land or house as employee or own-account worker?

1. yes ❑
2. no ❑ *Go to question 2.5.*

2.4 Please state the following information concerning those persons of the household who have an employment outside your land or house and who are at least age 15 or older. *(The following questions are concerned with those persons working outside the land or house.)*

Use personal code from question 2.2 →	A	B	C	D	E	F	G	H
2.4.1 Which was the main involvement of _____ in 1999? *(Read options and mark those options which apply)*								
1. agriculture, fishery	1	1	1	1	1	1	1	1
2. public sector, administration, teaching, health	2	2	2	2	2	2	2	2
3. catering, tourism	3	3	3	3	3	3	3	3
4. other services, trade, transport	4	4	4	4	4	4	4	4
5. industry, construction, mining	5	5	5	5	5	5	5	5
6. other	6	6	6	6	6	6	6	6
2.4.2 How much time did _____ spend working there in total in 1999? (*Put in number and indicate unit of measurement*)	____	____	____	____	____	____	____	____

2.5 Is there a heir or successor to whom the farm will be transferred in the future?

1. Yes ❑
2. No ❑
3. Don't know ❑

3 Income, savings, shocks

Read: Now I would like to ask you for some brief information on the income you receive and your savings activities.

3.1 What do you do in order to be prepared for eventual future expenses? *(Read options and mark those which apply)*

1. keep money at a private place at home ❑ yes ❑ no
2. hold savings at a bank ❑ yes ❑ no
3. investment in investment funds ❑ yes ❑ no
4. give money to another person in the village ❑ yes ❑ no
5. nothing ❑ yes ❑ no
6. other, specify_____ ❑ yes ❑ no

3.2 Did your household receive any remittances from relatives or friends from abroad in cash or in kind?

1. yes ❑
2. no ❑

3.3 How much in percent did the following sources contribute to your household income in the previous year (estimated, after taxes)? *(Read options and put down percentage values of shares*)

1. profits from agriculture _____ %
2. income from off-farm employment, wages +_____ %
3. transfers (pensions, benefits, grants) +_____ %
4. profits from non-agricultural businesses +_____ %
5. sale of assets +_____ %
6. other (remittances, land rent, dividends, interests, etc.) +_____ %

total = 100 %

3.4 How much cash income does your family need per month in order to live "normally"?

1. _____ Zł/month
2. ❑ don't know

3.5 Do you save a regular amount of money on a monthly, weekly, or yearly base?

1. yes ❑
2. no ❑

3.6 Did your household experience one of the following events in the previous three years (1997-1999)? (*Read options and mark those which apply)*

1. marriage of a family member	❑ yes	❑ no
2. harvest failure	❑ yes	❑ no
3. loss of employment of a family member	❑ yes	❑ no
4. severe illness or stay in hospital	❑ yes	❑ no
5. flood, hailstorm, fire	❑ yes	❑ no
6. loss or theft of machinery	❑ yes	❑ no
7. death of a family member	❑ yes	❑ no

4 Education, public engagement

Read: The following section is concerned with education and public engagement.

The following questions concern the head of the household or the farm manager respectively.

4.1 Which is your highest degree of formal education? (*Do not read options, mark those which apply*.)

1. ❑ primary school
2. ❑ not completed primary school
3. ❑ vocational school
4. ❑ liceum/ technical school
5. ❑ university

4.2 Are you engaged in one of the following organisations? *(Read options and mark those which apply)*

1. registered member of a co-operative bank	❑ yes	❑ no
2. member of supervisory board of a co-operative bank	❑ yes	❑ no
3. member of a credit union	❑ yes	❑ no
4. member of any other co-operative	❑ yes	❑ no
5. member of rural trade union	❑ yes	❑ no
6. delegate in agricultural chamber	❑ yes	❑ no
7. elected member of regional authoritative bodies	❑ yes	❑ no
8. member of a political party	❑ yes	❑ no

4.3 Have you been born in this village?

1. yes ❑
2. no ❑

4.4 If not born in this village, for how many years do you live here? For _____ years.

4.5 If not born in this village, in which voivodship or region did you live before?
In _____.

Only if talking to a manager:

4.6 What is your age? _____ years.

5 Farm size, assets

Read: At next, we turn to the size and equipment of the farm.

5.1 Please state the following information on your land use (end of 1999) in ha.

	total	arable	orchards	pastures, meadows	forest	idle, other
Total land cultivated						
of which: owned						
leased from APA						
leased from others						

5.2 How much land is let to other persons? _____ ha

5.3 Do you have final titles to all land you own?

1. yes ❑
2. no ❑

5.4 Does the farm or parts of it belong to a person or company of foreign nationality?

1. yes ❑
2. no ❑

5.5 Which of the following assets belong to the farm? (*Read all options, mark those which apply*)

1. residential house ❑ yes ❑ no
2. car(s) ❑ yes ❑ no
   if yes specify hp _____, year of manufacturing _____of newest car
3. stable(s) ❑ yes ❑ no
4. barn(s) ❑ yes ❑ no
5. greenhouse(s) ❑ yes ❑ no
6. sprayer(s) ❑ yes ❑ no
7. combine(s), harvester(s) ❑ yes ❑ no
8. draught animals (horse etc.) ❑ yes ❑ no
9. telephone ❑ yes ❑ no
10. computer (PC) ❑ yes ❑ no

5.6 How many tractors belong to the farm? _____ (*Put in number*)

5.7 If one or more: What are the power and the age of your tractor(s)? (*Put in numbers for one or several tractors as applicable*)

	Horsepower (hp)	Year of manufacturing
Tractor 1		
Tractor 2		
Tractor 3		
Tractor 4		

5.8 Are some of the buildings linked to the water pipe network?

1. yes ❑
2. no ❑

5.9 Are some of the buildings linked to the sewage network?

1. yes ❑
2. no ❑

5.10 Please estimate the value of assets of your farm at the end of 1999:

1. farm machinery, equipment, vehicles _____ , ____thousands Zł
2. land under cultivation and in own property _____ , ____thousands Zł
3. livestock _____ , ____thousands Zł
4. farm buildings _____ , ____thousands Zł
5. inventories of farm products _____ , ____thousands Zł
6. other tangible farm assets _____ , ____thousands Zł
7. savings and other monetary assets _____ , ____thousands Zł

6 Crop production

Read: The following section is concerned with the agricultural production.

6.1 In 1999, did you cultivate any crops, did you keep animals, or did you both? (*Do not read options, mark those which apply.*)

❑ 01. both cultivated crops and kept animals
❑ 02. only cultivated crops and did not keep animals
❑ 03. only kept animals and did not cultivate crops → *Skip this section and continue with section 7*.

6.2 In the previous three years,... (*Read options*)

1. did you introduce new crops? ❑ yes, which?_____
   ❑ no
2. did you increase your cropland? ❑ yes
   ❑ no
3. did you decrease your cropland? ❑ yes
   ❑ no

6.3 If you introduced new crops or changed the cropland area, which was the main reason to do that? (*Do not read options, mark those which apply, please give one answer*)

1. It was recommended by the extension service ❑
2. I expect a good price for the product ❑
3. I had a good occasion to buy the seeds ❑
4. it was recommended by a neighbour/ friend/ family member ❑
5. I obtained credit for it ❑
6. the soil is particularly appropriate for the crop ❑
7. it is not profitable to cultivate anymore ❑
8. other, specify_____ ❑

6.4 Please state the following information concerning your production on arable land in 1999.

Crop	Area sown	Quantity harvested	Quantity sold (cash or barter)	Sales revenue	Main sales channel 1. co-operative/ production group 2. wholesaler 3. commodity exchange 4. processing company 5. governmental intervention programme 6. private sales (other farmer etc.) 7. others
	ha	quintals	quintals	thousands Zł	*Insert code number*
Wheat					
Rye					
Barley					
Other cereals					
Potatoes					
Sugar beets					
Oilseeds					
Pulses					
Vegetables					
Fruits and berries					
Fodder crops					
Other crops					

6.5 Did you conclude long-term contracts with wholesalers or processing company in 1999?

1. ❑ yes
2. ❑ no

6.6 Which of the following types of inputs did you use in 1999? *(Read options and mark those which apply)*

1. certified seed ❑ yes ❑ no
2. mineral fertiliser ❑ yes ❑ no
3. pesticides ❑ yes ❑ no

6.7 Which total expenses for seed did you have in 1999? _____ , ___ thousands Zł

6.8 Which total expenses for fertiliser did you have in 1999? _____ , ___ thousands Zł

6.9 Which total expenses for pesticides did you have in 1999? _____ , ___ thousands Zł

6.10 Which total expenses for hiring machinery services did you have in 1999? _____ , ___ thousands Zł

6.11 Where did you buy seed, fertiliser and pesticides in 1999? (*Read options and mark those options which apply*)

1. co-operative ❑ yes ❑ no
2. retail shop ❑ yes ❑ no
3. wholesaler ❑ yes ❑ no
4. neighbour ❑ yes ❑ no
5. factory ❑ yes ❑ no
6. Centrala Nasienna ❑ yes ❑ no
7. other ❑ yes ❑ no

if yes, specify_____

7 Livestock production

If no animals are kept (question 6.1): Skip this section and continue with section 8.

Read: Now I would like to ask you some questions regarding the livestock production.

7.1 In the previous three years,... (*Read options*)

1. did you introduce a new type of animal? ❑ yes , which? _____ ❑ no
2. did you increase the number of animals? ❑ yes ❑ no
3. did you decrease the number of animals? ❑ yes ❑ no

7.2 If you introduced new animals or changed the number of animals, what was the main reason to do that? (*Do not read options, mark those which apply, give one answer*)

1. It was recommended by the extension service ❑
2. I expect a good price for the product ❑
3. I had a good occasion to buy the animals ❑
4. it was recommended by a neighbour/ friend/ family member ❑
5. I obtained credit for it ❑
6. it is not profitable to keep anymore ❑
7. other, specify_____ ❑

7.3 Please state the following information concerning your livestock-production.

Animal	At the end of 1999, how many head of animals did you have?	How many live animals did you sell in cash or barter in 1999?	Sales revenue	Main sales channel 1. slaughterhouse 2. local butcher 3. co-operative/ production group 4. wholesaler 5. commodity exchange 6. private sales 7. governmental intervention programme 8. other
	heads	heads	thousands Zł	*Insert code number*
Cattle				
of which dairy cows				
Pigs				
Sheep, Goats				
Poultry				
Horses				
Other				

7.4 Which total expenses for purchased fodder did you have in 1999? _____ , ___ thousands Zł

7.5 Please state the following information concerning your animal products.

Be sure that animals mentioned as sold in question 7.3 are not put in here again!

Product	How much did you produce in 1999?	How much did you sell in cash or barter in 1999?	Sales revenue	Main sales channel 1. co-operative/ production group 2. slaughterhouse 3. local butcher 4. wholesaler 5. private sales 6. governmental intervention programme 7. other
	kg	kg	thousands Zł	*Insert code number*
Meat (pork, beef, chicken, etc.)				
Milk				
Eggs (1000 pcs)				
Other				

8 Workers, other expenses

8.1 How many people worked on the farm in 1999? *(Put in numbers.)*

	Permanent, during most of the year full time or part time	Occasional/ seasonal	Number of days worked in 1999 (estimation)
Household members			
Friends and relatives			
Hired workers			

8.2 From your knowledge or experience, what is the typical daily wage for a hired farm worker in your region in 1999?

3. _____ Zł/day
4. ❑ don't know

8.3 Which expenses did you have in 1999 for the following items? (*Read items and put in number if appropriate*)

1. land rent _____ , ___thousands Zł in total
2. machinery and buildings maintenance _____ , ___thousands Zł in total
3. light and power _____ , ___thousands Zł in total
4. fuel, lubricants _____ , ___thousands Zł in total
5. veterinary costs _____ , ___thousands Zł in total
6. interest payments _____ , ___thousands Zł in total
7. wages _____ , ___thousands Zł in total
8. social contributions (incl. KRUS, ZUS, pensions) _____ , ___thousands Zł in total
9. land and income tax _____ , ___thousands Zł in total
10. other expenses (incl. non-agr. businesses) _____ , ___thousands Zł in total

9 Investment

Read: The next section deals with your investment activities.

9.1 Which of the following investment was undertaken in the previous three years (1997 – 1999)? (*Read options and mark those which apply)*

1. buy land ❑ yes ❑ no
2. renovate or extend residential building ❑ yes ❑ no
3. renovate or extend farm buildings ❑ yes ❑ no
4. buy car ❑ yes ❑ no
5. buy tractor ❑ yes ❑ no
6. buy other agricultural machinery ❑ yes ❑ no
7. buy machinery/equipment for non-agr. use ❑ yes ❑ no
8. buy animals ❑ yes, which?_____ ❑ no
9. buy plants ❑ yes, which? _____ ❑ no
10. buy personal computer system (PC) ❑ yes ❑ no
11. buy mobile phone ❑ yes ❑ no
12. link farm to/ modernise the drinking water network ❑ yes ❑ no
13. link farm to/ modernise the sewage network ❑ yes ❑ no
14. link farm to/ modernise the electricity network ❑ yes ❑ no
15. link farm to/ modernise the telephone network ❑ yes ❑ no
16. link farm to/ modernise the gas network ❑ yes ❑ no
17. modernise the heating system ❑ yes ❑ no
18. establish/ renovate guestrooms for agrotourism ❑ yes ❑ no
19. improve roads and/ or farmyard ❑ yes ❑ no
20. other, specify_____ ❑ yes ❑ no

9.2 Please state the following information concerning investment in the previous three years. *(Complete for all investment projects undertaken as stated above.)*

Put down number of investment project as marked with "yes" in question 9.1→	Number	Number	Number	Number	Number	Number
9.2.1 How much was the total value of investment? *in thousands Zł*						
9.2.2 In which year did you make this investment?						
9.2.3 How much in percent did the following sources contribute to the financing of the investment _____? (*Read options below and put down percentage values of shares*)						
a. retained profits/ own savings	____%	____%	____%	____%	____%	____%
b. credit from banks	+___%	+___%	+___%	+___%	+___%	+___%
c. credit from supplier	+___%	+___%	+___%	+___%	+___%	+___%
d. hire purchase	+___%	+___%	+___%	+___%	+___%	+___%
e. credit from credit union	+___%	+___%	+___%	+___%	+___%	+___%
f. credit from family, relatives, friends, neighbours	+___%	+___%	+___%	+___%	+___%	+___%
g. sale of assets	+___%	+___%	+___%	+___%	+___%	+___%
h. other, specify _____	+___%	+___%	+___%	+___%	+___%	+___%
total	= 100 %	= 100 %	= 100 %	= 100 %	= 100 %	= 100 %

9.3 How much in percent did the following sources contribute to the financing of input purchase (seeds, fertiliser, fodder concentrate, etc.) in the previous year? *(Read options and put down percentage values of shares*)

1. retained profits/ own savings	_____ %
2. credit from banks	+_____ %
3. credit from supplier	+_____ %
4. hire purchase	+_____ %
5. credit from credit union	+_____ %
6. credit from family, relatives, friends, neighbours	+_____ %
7. sale of assets	+_____ %
8. other, specify _____	+_____ %
total	= 100 %

10 Loan sources

Read: Now I would like to ask you some questions concerning your experiences with loan applications and credit supply at banks.

10.1 Was there any time in the past three years that you had the intention of applying for credit at a particular place but changed your mind because you thought the application might be turned down?

1. yes ❑
2. no ❑

10.2 In the previous three years, did you ever collect information from a bank regarding the requirements of a loan application?

1. yes ❑ *Go to question 10.4.*
2. no ❑

10.3 Which are the reasons for you not to collect information about credit applications at a bank? (*Do not read, mark those options which apply, please give one answer.)*

1. I fear the bank would not approve my loan application	❑
2. too high interest rates	❑
3. I don't have collateral	❑
4. I fear to lose collateral	❑
5. I cannot offer a co-signer	❑
6. I fear I could not repay	❑
7. too much bureaucracy at a bank	❑
8. it is too risky to be indebted	❑
9. I generally do not make use of bank services	❑
10. I have other sources of finance	❑
11. banks work too slowly	❑
12. I mistrust the bank	❑
13. don't know	❑
14. other, specify_____	❑

Go to section 13.

10.4 From which banks did you collect the information on loan applications?

Write down all banks mentioned and their location in the reference list on the front page of the questionnaire.

10.5 At which bank did you apply for a loan?

Mark banks in the list on the front page of the questionnaire.

10.6 From which banks did you receive a credit in the previous three years?

Mark banks in the list on the front page of the questionnaire.

10.7 Please state the following information concerning your bank use in the previous three years.

Put down name of all banks stated in the reference list →	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
10.7.1 What is the approximate distance in kilometres to the branch of _____ from which you collected the information?						
10.7.2 Which means of transport do you usually use to go there? (*Read options and mark those which apply*)						
1. walk	1	1	1	1	1	1
2. public transport (bus, train, etc.)	2	2	2	2	2	2
3. own car	3	3	3	3	3	3
4. other, specify_____	4	4	4	4	4	4
10.7.3 Please identify those banks from which you collected information but did not apply for a loan.	❑	❑	❑	❑	❑	❑
10.7.4 Concerning these banks: Which was the major reason for you not to apply at_____ ? *(Read options, mark those which apply*)						
1. the interest rate was too high	01	01	01	01	01	01
2. they didn't offer the amount that I needed	02	02	02	02	02	02
3. they didn't offer loans for the purpose I needed	03	03	03	03	03	03
4. I did not agree with their collateral requirements	04	04	04	04	04	04
5. I did not agree with their repayment terms	05	05	05	05	05	05
6. they didn't offer subsidised loans	06	06	06	06	06	06
7. they didn't offer personal/ business advice	07	07	07	07	07	07
8. too much bureaucracy	08	08	08	08	08	08
9. the bank works too slowly	09	09	09	09	09	09
10. I feared I could not repay	10	10	10	10	10	10
11. I mistrust the bank	11	11	11	11	11	11
12. they didn't offer savings facilities	12	12	12	12	12	12
13. other, specify_____	13	13	13	13	13	13

11 Loan applications

11.1 Please state the following information concerning your loan applications in the previous three years. *Concerns the most recent loan application at each bank.*

Write down those banks where "loan application = yes" (list on front page) →	Bank	Bank	Bank	Bank
11.1.1 Which was the major reason for you to apply at_____ ? *(Do not read options, mark those which apply*)				
1. it's the closest bank	01	01	01	01
2. it's the only choice I had	02	02	02	02
3. they offer subsidised loans	03	03	03	03
4. I knew somebody at the bank personally	04	04	04	04
5. they had the most attractive offer for me	05	05	05	05
6. they have a friendly staff	06	06	06	06
7. I made good experiences with them	07	07	07	07
8. a friend/ family member recommended them	08	08	08	08
9. they offer savings facilities	09	09	09	09
10. I am a member of the bank	10	10	10	10
11. other, specify_____	11	11	11	11
11.1.2 How often did you visit _____ before you finally submitted the application?				
11.1.3 What time did you spend in total at _____ in order to apply for the loan?				

Write down those banks where "loan application = yes" (list on front page) →	Bank	Bank	Bank	Bank
11.1.4 Which was the stated purpose of the loan in the application? (*Do not read options, mark those which apply)*				
1. buy inputs (seeds, fertiliser, chemicals, fodder)	01	01	01	01
2. buy animals or plants	02	02	02	02
3. buy land	03	03	03	03
4. renovating or extension of buildings	04	04	04	04
5. buy car	05	05	05	05
6. buy tractor	06	06	06	06
7. buy other agricultural machinery	07	07	07	07
8. buy non-agr. machinery/equipment	08	08	08	08
9. buy household equipment	09	09	09	09
10. repay other debts	10	10	10	10
11. other, specify _____	11	11	11	11
11.1.5 Did you apply for a subsidised loan?				
1. yes	1	1	1	1
2. no	2	2	2	2
11.1.6 Did you apply for one of the following programmes? (*Read options and mark those which apply)*				
1. ARiMR	1	1	1	1
2. AWRSP	2	2	2	2
3. Co-operation Fund (Agrolinia)	3	3	3	3
4. other, specify_____	4	4	4	4
5. no programme loan	5	5	5	5
11.1.7 Which types of collateral did the loan application entail? (*Do not read options, mark those which apply)*				
1. residential building	01	01	01	01
2. machinery, equipment	02	02	02	02
3. car	03	03	03	03
4. jewellery	04	04	04	04
5. animals	05	05	05	05
6. land	06	06	06	06
7. household assets	07	07	07	07
8. money at a bank account	08	08	08	08
9. stocks of harvested crops	09	09	09	09
10. monthly income	10	10	10	10
11. third party guarantee	11	11	11	11
12. other, specify _____	12	12	12	12
13. no collateral	13	13	13	13
11.1.8 How much do you estimate the value of the collateral? (in thousands Zł)				
11.1.9 Apart from the collateral, which other covenants did the application entail? (*Read options and mark those which apply)*				
1. submit business plan	01	01	01	01
2. present document of support from ODR	02	02	02	02
3. present ownership certificate of collateral	03	03	03	03
4. present personal income statement	04	04	04	04
5. obligation to produce a certain product	05	05	05	05
6. obligation where to sell the products	06	06	06	06
7. obligation where to buy inputs	07	07	07	07
8. obligation to become a member of the co-operative bank	08	08	08	08
9. other	09	09	09	09
10. no covenants	10	10	10	10

Write down those banks where "loan application = yes" (list on front page) →	Bank	Bank	Bank	Bank
11.1.10 Which further cash expenses due to the following reasons came up in the process of credit application? (*Read options and put in cash expenses as applicable)*				
1. bank fee	1 _____ Zł	1 _____ Zł	1 _____ Zł	1 _____ Zł
2. compulsory purchases of other bank services	2 _____ Zł	2 _____ Zł	2 _____ Zł	2 _____ Zł
3. legal fee	3 _____ Zł	3 _____ Zł	3 _____ Zł	3 _____ Zł
4. insurance fees	4 _____ Zł	4 _____ Zł	4 _____ Zł	4 _____ Zł
5. gifts	5 _____ Zł	5 _____ Zł	5 _____ Zł	5 _____ Zł
6. cash expenses due to compulsory contracts with ODR, or co-signers	6 _____Zł 7 _____ Zł	6 _____Zł 7 _____ Zł	6 _____Zł 7 _____ Zł	6 _____Zł 7 _____ Zł
7. cash expenses due to visits of loan officers				
8. cash expenses due to evaluation of collateral	8 _____ Zł	8 _____ Zł	8 _____ Zł	8 _____ Zł
9. cash expenses for meals	9 _____ Zł	9 _____ Zł	9 _____ Zł	9 _____ Zł
10. no further expenses	10	10	10	10
11.1.11 Which further time expenses due to the following reasons came up in the process of credit application? (*Read options and put in time expenses as applicable)*				
1. time expenses due to compulsory contracts with ODR, or co-signers	1 _____ h	1 _____ h	1 _____ h	1 _____ h
2. time expenses due to visits of loan officers	2 _____ h	2 _____ h	2 _____ h	2 _____ h
3. time expenses due to evaluation of collateral	3 _____ h	3 _____ h	3 _____ h	3 _____ h
4. time expenses due to certain social obligations (e.g. meals)	4 _____ h	4 _____ h	4 _____ h	4 _____ h
5. no further expenses	5	5	5	5
11.1.12 How much time passed by between the submission of the application to _____ and the decision whether to grant the credit? *(in days)*				
11.1.13 Did you have another credit from this bank before?				
1. yes	1	1	1	1
2. no	2	2	2	2
11.1.14 Did you obtain the credit in the end?				
1. yes *(Go to next application.)*	1	1	1	1
2. no	2	2	2	2
11.1.15 What were the reasons for not obtaining the loan? (*Do not read options, mark those which apply, multiple answers possible)*				
1. business plan was not approved by the bank	1	1	1	1
2. the bank did not accept my collateral	2	2	2	2
3. I changed my plans	3	3	3	3
4. I did not find a guarantor/ co-signer	4	4	4	4
5. the subsidised funds were depleted	5	5	5	5
6. I did not accept interest rate demanded by _____	6	6	6	6
7. I did not accept repayment term demanded by _____	7	7	7	7
8. other, specify_____	8	8	8	8
9. I don‘t know the reasons	9	9	9	9

Important: Ensure that questions 11.1.1 to 11.1.15 are answered for all banks where the respondent applied for credit (reference list on the front page)!

12 Loans received

Read: In the following I would like to ask you some questions on the loans you received.

12.1 Please state the following information concerning the loans received in the previous three years. *Concerns most recent loans at each bank*.

Write down those banks where "received credit = yes" (list on front page) →	Bank	Bank	Bank	Bank
12.1.1 In the end, how much money was disbursed? (*in thousands Zł)*				
12.1.2 Would you have liked to borrow more at the same interest rate (without change of collateral requirements and repayment term)?				
1. yes	1	1	1	1
2. no	2	2	2	2
12.1.3 In what respect did the terms differ from your expectations? (*Do not read options, mark those which apply, multiple answers possible)*				
1. smaller loan amount than applied for	1	1	1	1
2. higher interest rate than expected	2	2	2	2
3. shorter repayment term than expected	3	3	3	3
4. higher demand for collateral than expected	4	4	4	4
5. other, specify _____	5	5	5	5
6. did not differ	6	6	6	6
12.1.4 For which purpose did you use the loan? (*Do not read options, mark those which apply)*				
1. buy inputs (seeds, fertiliser, chemicals, fodder)	01	01	01	01
2. buy animals or plants	02	02	02	02
3. buy land	03	03	03	03
4. renovating or extension of buildings	04	04	04	04
5. buy car	05	05	05	05
6. buy tractor	06	06	06	06
7. buy other agricultural machinery	07	07	07	07
8. buy non-agr. machinery/equipment	08	08	08	08
9. buy household equipment	09	09	09	09
10. repay other debts	10	10	10	10
11. other, specify _____	11	11	11	11
12.1.5 Between your visit at _____ to submit the application and the visit to receive the loan, how often did you visit _____?				
12.1.6 What was the date of approval? (DD.MM.YY)				
12.1.7 What was the repayment period of the loan?	_____	_____	_____	_____
12.1.8 What was the interest rate of the loan at the day of approval? (per year)	_____%	_____%	_____%	_____%
12.1.9 Was the interest rate fixed or variable?				
1. fixed	1	1	1	1
2. variable	2	2	2	2
3. don't know	3	3	3	3
12.1.10 Did you receive the money at _____ at one time all together?				
1. yes	1	1	1	1
2. no, how many disbursements?	2, _____	2, _____	2, _____	2, _____
12.1.11 How did you receive the money? *(Read options and mark those which apply)*				
1. transfer to my bank account	1	1	1	1
2. in cash	2	2	2	2
3. as a cheque	3	3	3	3
4. direct payment to supplier	4	4	4	4
5. other, specify _____	5	5	5	5

Write down those banks where "received credit = yes" (list on front page) →	Bank	Bank	Bank	Bank
12.1.12 In which form has/ had the repayment of the interest to be made? *(Do not read options, mark those which apply)*				
1. monthly instalments	1	1	1	1
2. quarterly instalments	2	2	2	2
3. yearly instalments	3	3	3	3
4. entire interest at the end of the repayment period	4	4	4	4
5. other form, specify_____	5	5	5	5
12.1.13 In which form has/ had the repayment of the principal to be made? *(Do not read options, mark those which apply)*				
1. monthly instalments	1	1	1	1
2. quarterly instalments	2	2	2	2
3. yearly instalments	3	3	3	3
4. entire principal at the end of the repayment period	4	4	4	4
5. other form, specify_____	5	5	5	5
12.1.14 During the loan application and the repayment period, have there been visits of representatives of_____ at your farm?				
1. yes, how many?	1,_____	1,_____	1,_____	1,_____
2. no	2	2	2	2
12.1.15 Do you keep a current or savings account at this bank? *(Multiple answers possible)*				
1. current account	1	1	1	1
2. savings account	2	2	2	2
3. none	3	3	3	3

Important: Ensure that questions 12.1.1 to 12.1.15 are answered for all banks from which the respondent received a credit (list on front page)!

12.2 Did you once reschedule a loan in the previous three years?

1. yes ❑
2. no ❑

12.3 In the previous three years, did you repay a loan with delay?

1. yes ❑
2. no ❑

13 Further loan sources

13.1 In 1999, did you purchase a good or input on credit or as hire purchase (kredyt od dostawcy, skonto, kredyt ratalny) (excluding clothes and food)?

1. yes ❑
2. no ❑ *Go to question 13.3.*

13.2 Please state the following information on the four largest purchases on credit in 1999.

	Purchase 1	Purchase 2	Purchase 3	Purchase 4
13.2.1 What did you purchase on credit? (*Do not read options, mark those which apply)*				
1. inputs (seeds, fertiliser, chemicals, fodder)	01	01	01	01
2. animals or plants	02	02	02	02
3. car	03	03	03	03
4. agricultural machinery/equipment	04	04	04	04
5. non-agr. machinery/equipment	05	05	05	05
6. household durables	06	06	06	06
7. other, specify _____	07	07	07	07
13.2.2 What is the approximate distance in kilometres to the supplier from which you purchased on credit?				
13.2.3 How much was the down payment for _____? (*in Zł)*				
13.2.4 What was the total price of _____including down payment? (*in Zł)*				
13.2.5 At the time of purchase, how much would you have had to pay for _____ if pay in cash (include discount for prompt payment)? (*in Zł)*				
13.2.6 How much did you have to pay additionally as fees or commissions to get this purchase on credit? *(in Zł)*				
13.2.7 Which types of documents did you sign or deliver? *(Do not read options, mark those which apply)*				
1. promissory note	01	01	01	01
2. private contract	02	02	02	02
3. notarised contract	03	03	03	03
4. income statement	04	04	04	04
5. other	05	05	05	05
6. no documents to provide	06	06	06	06
13.2.8 Which types of collateral did you provide? *(Do not read options, mark those which apply)*				
1. good/input remains property of supplier until final payment	01	01	01	01
2. machinery, equipment, car	02	02	02	02
3. stocks of harvested crops	03	03	03	03
4. third party guarantee	04	04	04	04
5. other, specify _____	05	05	05	05
6. no collateral	06	06	06	06
13.2.9 What was the payment term for the purchase on credit (time period in which the credit had to be re-paid)?				
13.2.10 What was the interest rate of the purchase on credit if any?	_____%	_____%	_____%	_____%
13.2.11 How much money did you pay back, including interest? *(in Zł)*				

13.3 In 1999, did you take credit from a credit union or from the family, relatives, friends, or neighbours?

1. yes ❑
2. no ❑ *Go to section 14.*

13.4 Please state the following information on the four largest loans from credit unions, the family, relatives, friends, or neighbours received in 1999.

	Loan 1	Loan 2	Loan 3	Loan 4
13.4.1 From where did you receive the credit?				
1. credit union	01	01	01	01
2. family, relatives, friends, neighbours	02	02	02	02
13.4.2 How much did you borrow? (*in Zł*)				
13.4.3 What was the repayment period of the loan?	_____	_____	_____	_____
13.4.4 What was the interest rate of the loan at the day of negotiation? *(indicate reference period)*	_____% per _____	_____% per _____	_____% per _____	_____% per _____
13.4.5 Did you provide any collateral?				
1. yes	01	01	01	01
2. no	02	02	02	02

14 Collateral, credit limit

14.1 Please answer the following questions concerning potential collateral use.

Read questions below and put in items on the right.	a. land	b. residential building	c. machinery	d. car	e. your monthly income	f. household assets	g. harvest
14.1.1 Would you be willing to pledge _____ as collateral for a bank loan?							
1. yes (*Go to next column.*)	1	1	1	1	1	1	1
2. no	2	2	2	2	2	2	2
3. I don't possess this item (*Go to next column.)*	3	3	3	3	3	3	3
4. I don't know (*Go to next column.*)	4	4	4	4	4	4	4
14.1.2 If no, why not? (*Do not read options and mark those which apply*)							
1. I don't want to jeopardise my livelihood	1	1	1	1	1	1	1
2. I don't want to loose my farm	2	2	2	2	2	2	2
3. I need this asset	3	3	3	3	3	3	3
4. other	4	4	4	4	4	4	4

14.2 What was the total amount of outstanding credit at the end of 1999 including bank and other loans? _____ , ____ thousands Zł

14.3 What is the highest amount of credit you think your farm can get from the following sources, regardless of your current demand for credit? (*Read options and put in figures as respondet.)*

1. credit from banks _____ , ___ thousands Zł
2. credit from trader or supplier _____ , ___ thousands Zł
3. credit from own family, relatives, friend, neighbour _____ , ___ thousands Zł
4. credit from credit unions _____ , ___ thousands Zł

15 Farm management practice, future development

Read: Finally, we now turn to some issues of farm management practice.

The questions concern the head of the household or the farm manager respectively.

15.1 For how many years are you engaged in farming? _____ years.

15.2 For how many years do you own or manage the farm? _____ years.

15.3 How often did you make use of a governmental/ private advisory service in the previous year? _____ times

15.4 Did you participate in additional training courses for farmers?

1. yes ❑
2. no ❑

15.5 Do you use one of the following sources of professional information? (*Read options and mark those which apply*)

1. professional journals ❑ yes ❑ no
2. conversation with neighbour ❑ yes ❑ no
3. field demonstrations ❑ yes ❑ no
4. radio ❑ yes ❑ no

15.6 Do you have...

1. a permanent book-keeping in your enterprise? ❑ yes ❑ no
2. a current account at a bank? ❑ yes ❑ no

15.7 Which of the following types of insurance do you have? *(Read options and mark those which apply)*

1. personal liability insurance ❑ yes ❑ no
2. fire insurance for buildings ❑ yes ❑ no
3. crop insurance ❑ yes ❑ no
4. other (not KRUS, ZUS), specify_____ ❑ yes ❑ no

15.8 The following questions concern the access to public organisations.

Ask questions below and put in items on the right.		a. technical school	b. next bank	c. next bus stop	d. next market place	e. supplier of inputs	f. agricultural service unit	g. local gmina administration	h. office of ODR
15.8.1 How many km is the distance to _____?									
15.8.2 What is the means of transport most often used to go there? *Mark with X*	walk								
	public transport (bus, train etc.)								
	own car								
	other								

15.9 Which are your future plans concerning farming activities? (*Read options and mark those which apply.)*

1. plan to increase farm size ❑ yes ❑ no
2. plan to specialise in certain branches. Which?_____ ❑ yes ❑ no
3. plan to exit farming and to find off-farm employment ❑ yes ❑ no
4. plan to invest in certain assets. Which?_____ ❑ yes ❑ no
5. pass on farm to next generation ❑ yes ❑ no
6. other, specify _____ ❑ yes ❑ no
7. don't plan any changes ❑ yes ❑ no

Read: Thank you very much for your assistance.

16 Questions for the enumerator

16.1 At what time did you complete the enumeration? _____

16.2 What was the degree of co-operation and interest of the interviewed person?

1. didn't want to co-operate ❑
2. had only little interest ❑
3. were more or less indifferent ❑
4. had some interest ❑
5. was very interested ❑

16.3 How well-versed was the person to answer the questions?

1. not well-versed ❑
2. little well-versed ❑
3. relatively well-versed ❑
4. very well-versed ❑

16.4 What was the degree of privacy during the enumeration?

1. completely private, no other person present ❑
2. relatively private, with other persons dropping in and leaving sometimes, but not intervening ❑
3. other family members were permanently present, but not intervening ❑
4. other family members were permanently present and intervening from time to time ❑
5. other family members and non-members were present and intervening ❑

16.5 With regard to your experience as enumerator, this enumeration worked...

1. quite bad ❑
2. worse than normal ❑
3. normal ❑
4. better than normal ❑
5. very good ❑

Enumerator:

Date:

Signature:

Comments by the enumerator:

APPENDIX 2: INSTRUCTIONS FOR ENUMERATORS

Poland farm survey 2000

Institute of Agricultural Development in Central and Eastern Europe (IAMO)
Halle (Saale), Germany

Agricultural University of Krakow, Poland

Agricultural University of Szczecin, Poland

INSTRUCTIONS FOR ENUMERATORS

Purpose of the survey

The main purpose of the Poland farm survey 2000 is to collect basic information on the situation of different types of farms in two regions of Poland. Specific attention is paid to the access of farmers to credit and the use of loans on the farms. These topics are of high relevance for political decision makers, particularly with regard to an appropriate rural development strategy for Poland, decisions on subsidising credit, and paving the way for a Polish membership of the EU. Furthermore, the survey is of substantial interest for scientists who want to understand the processes of farm development and investment in different environments as well as the impact of credit and interest subsidies on farm income and performance. The overall goal of the survey is thus to provide information and knowledge for research on future improvements of living conditions and opportunities for income generation and employment in rural areas.

The survey is jointly organised by the German Institute of Agricultural Development in Central and Eastern Europe (IAMO) in Halle(Saale), the Agricultural University of Krakow, and the Agricultural University of Szczecin. The results of the data collection will in no way be exploited for commercial purposes. The data will be treated as absolutely confidential and will solely serve scientific purposes.

The target group of the survey comprises private farms of all legal forms that cultivate at least 1 ha of land. The survey is carried out in two regions of Poland (in the new voivodships Zachodniopomorskie and Malopolskie). In each region, a total of 300 farms should be surveyed. The farms are selected by a random sample procedure and the addresses of the farms will be given to the enumerators in advance.

Design of the questionnaire

The questionnaire is designed for face-to-face interviews with farmers or farm managers. The questions have to be read aloud to the respondent and the questionnaire must be filled in by the enumerator according to the answers.

The questionnaire comprises 15 thematic sections plus one section with questions for the enumerator. The questions are numbered consecutively in each section, some of them contain sub-questions. Principally, there are two types of questions: open and closed. Open questions require the enumerator to put down the answer in words, while closed questions provide certain answer categories that have to be marked with X. Answers to open questions must be made in clear and sufficiently detailed formulations. Questions are accompanied by short instructions for the enumerator in *italics*. Sometimes, answer categories must be read, sometimes not. This is regulated in order to ensure a uniform situation during all interviews.

The front page of the questionnaire contains a reference list concerning bank contacts of the respondents. This list will be used for later reference during the interview and should be filled in at the time indicated in the questionnaire (section 10).

The questionnaire starts with a filter question on whether the farm is headed by a farm manager or is a family farm. Those farms headed by a manager can skip the sections 2 and 3 of the questionnaire, which are only for family farms.

Section 2, as some later sections, has questions in tables. In some cases, the top row of these tables must be filled in by the enumerator. The enumerator should then ask all questions of the table for all columns, one column after the other. Frequently, answer categories are provided and only the respective number of the category must be marked in the respective column. In some questions, the item on the top of the column must be put in verbally in the formulation of the question. If this is necessary, the question contains a bottom line like the following _____ . If answer categories have the instruction such as *Go to next person* (or the respective item on the top), the remaining questions in the table should be skipped for the current column, and one should continue with the next column, again with the first question in the table.

Certain questions, such as 1.1 or 2.3, have the instruction to jump to a later question or section in case of a specific answer (e.g. *Go to question 2.5*). The questions in between must be left out then.

Questions 4.1 to 4.5 are concerned with the head of the household or the farm manager respectively. In the exceptional case that they are not interviewed themselves, the answers still must contain that information which applies to the head of the household or the manager.

Section 6 also starts with a filter question on the agriculture activities. In the (rare) case that a farm solely cultivates crops or solely keeps animals, the respective sections on the missing activity can be skipped.

Question 9.2 and 9.3 require the enumerator to put in percentage values regarding the shares of different financing sources. These percentage values should be as exact as possible and must add to 100%.

Section 10 comprises the instructions to fill in the reference list on the front page. This list will be used later for the tables in questions 10.7, 11.1 and 12.1. Note that question 10.7 refers to all banks from which the respondent collected information on loan applications, question 11.1 refers only to those banks where the respondent applied for credit, and question 12.1 refers to those banks from which the respondent in fact obtained credit.

Section 16 consists of questions for the enumerator. These should not be read to the respondent during the interview, but should be answered by the enumerator after the completion of the interview. The questions are very helpful to assess the credibility and validity of the responses before and should be answered with care.

Completed questionnaires should be signed by the enumerator. The last page also provides space for any further comments by the enumerator.

Conducting the interview

Personal interviews are social situations that are affected by a lot of circumstances. These concern the behaviour and appearance of the enumerator (e.g. his clothes, his friendliness), the environment of the interview situation (e.g. whether other persons apart from the respondent are present, enter or leave the room, whether the

telephone rings etc.), the mood of enumerator and respondent and so on. The enumerator should act in such a way that the willingness of the respondent to give clear and true answers is maximised. At the same time, however, his privacy must be protected and his limited capacity in terms of time and patience must be taken into account. Enumerators thus should address the respondents in a courteous, patient, and respectful way. It is of utmost importance to ensure a smooth and private atmosphere during the interview, where only those persons are present that are directly interviewed (in the ideal case only the farmer or the farm manager).

The interviews must be made with the farmer or the farm manager themselves. It is indispensable to contact the respondents in advance and to fix an appointment with them when to conduct the interview. This should ensure that respondents have the time to concentrate on the interview. The average interview will take a total of 60 to 90 minutes, which should be taken into account when making the appointment.

The first step in conducting the interview is to introduce oneself and the purpose of the survey (see above). Furthermore, it should be stressed that the information is treated as absolutely confidential and that it is solely used for scientific (and not for commercial) purposes.

When posing the questions, the enumerator must avoid to influence the answer of the respondent. In cases the respondent has difficulties in understanding a question, the enumerator must try to explain its meaning in a neutral way, not implying a certain answer. This also concerns the non-verbal behaviour of the enumerator (facial expression, avoid impatient tapping with the pen).

In case a respondent refuses to answer a certain question, this question must be skipped. Notes should then be made directly at the question and at the end of the questionnaire about the questions the respondent refused to answer.

The first contact to the respondent (usually when making the appointment) should bring clarity about the respondents willingness to take part in the interview. If respondents refuse to participate in an interview at all, these respondents should not be visited. In this case, they will be replaced by another respondent, and the enumerator will obtain an additional address for an interview.

Completed questionnaires should be returned to the organisers immediately after the interview has been finished and all information has been collected. The organisers will check their completeness, plausibility and consistency and will pay the enumerators in accordance with the contractual agreement.

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