

THE ECONOMIC RESEARCH SERVICE (ERS/USDA)

Organization, main activities and indications for future cooperation

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ACKNOWLEDGEMENT

Many of the ERS's staff and in particular dr John E. Lee Jr., who invited us to the ERS, were very kind in giving their time and expertise to inform us about the activities of the ERS. The detailed preparation of the program during our visit and the very open atmosphere in the scientific discussions gave us an excellent opportunity to get acquainted with the ERS. We did not only discover a number of issues of mutual interest, but also found a willingness to learn from each other. Both, we hope, will be good bases for future cooperation.

Jan C. Blom
Paul J.J. Veenendaal

1. INTRODUCTION

From May 11th to May 21st 1993 Jan C. Blom and Paul J.J. Veenendaal visited the Economic Research Service (ERS) of the U.S. Department of Agriculture in Washington D.C. This visit was initiated by the Agricultural Economics Research Institute (LEI-DLO) in The Hague following the report of the visitation committee where it was suggested to benefit from international cooperation. John E. Lee Jr., administrator of the ERS and chairman of the visitation committee, was responsible for the organization of the program during this visit. The program was prepared by Cheryl Christensen, International Programs Coordinator of the ERS and was actually executed by many different employees of the ERS.

The aim of our visit to the ERS was to indicate possibilities for a fruitful future exchange of knowledge and employees as well as to identify research areas that offer opportunities for future cooperation. In exploring these possibilities the ERS's staff gave information about a number of subjects, indicated in advance by LEI-DLO, and raised additional topics suitable for cooperation.

This report contains a short description of the ERS, its main characteristics and overall structure, and information concerning the subjects discussed as well as indications for future actions. An organization scheme of the ERS and a list of names, telephone numbers and fields of interest of the people we actually met at the ERS are presented in two annexes.

2. THE ECONOMIC RESEARCH SERVICE (ERS)

The ERS was established in 1961 by the U.S. Department of Agriculture (USDA) under the authority of the Agricultural Marketing Act of 1946. Being a part of the Ministry of Agriculture the ERS has a government based budget. Within the USDA the ERS collaborates frequently with the Foreign Agricultural Service (FAS) and the National Agricultural Statistics Service (NASS).

The mission of the ERS is 'to provide economic and other social science information and analysis for improving the performance of agriculture and rural America' 1).

The ERS is located in the centre of Washington D.C., 1301 New York Avenue, near the White House and all Ministries, which facilitates the ERS's function to support the Federal Government with agricultural economic and social information.

In 1993 the budget amounts to nearly 60 million dollar, for a staff of 840 full time equivalents. The ERS has four large divisions:

- Agriculture and Rural Economics Division (ARED, 146 fte's);
- Agriculture and Trade Analysis Division (ATAD, 141 fte's);
- Commodity Economics Division (CED, 183 fte's);
- Resources and Technology Division (RTD, 151 fte's).

The remaining staff works at the Office of the Administrator, the Data Service Centre or is involved in joint activities with other departments of the USDA 2).

Our first impression of the ERS is that of a research organization which is efficiently organized and which has its core research in monitoring international agricultural markets. The bottom-line of this kind of research is to answer the question 'What do developments mean for U.S. agricultural exports?' This research is mainly done in the ATAD and CED. The research focuses on both short and long term developments. Information about short term developments is published in the *Situation and Outlook* series. Publication of this information takes place after approval by the World Agricultural Outlook Board (WAOB) and according to a precise schedule for the coming year. In order to achieve this timely publication and approval, special lockup procedures are organized for the WAOB. This means that on the day of publication the information is discussed with the WAOB in an isolated room (no telephone and curtains drawn down). The information is released after approval by the WAOB, but not before 3.00 p.m. in order not to influence the Commodity Exchanges in the U.S.

The so-called base line research focuses on long term developments in the U.S. and the world. This information is regularly updated and mainly for internal usage. The base line procedure is a strong organizing concept within the ERS, because all divisions contribute to this information and these contributions have to be made consistent. The Farm Sector Financial Analysis Branch, within the ARE-Division, integrates all the

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- 1) Quoted from: The Economic Research Service in 1993, ERS/USDA, Washington, 1993.
 - 2) See annex 1 for more details about the organizational structure of ERS.

base line information for the U.S. farming sector and checks the information for consistency.

Besides these so-called core activities, the ERS provides good documentation and analysis of farm income developments in the U.S.. It has developed a series of consistent statistics of the financial situation of the farm sector at state level. And more recently the ERS has been producing regular forecasts of farm income in the U.S. in the *Situation and Outlook* series. In 1984 it started the *Farm Costs and Return Survey* which is a very interesting source for more detailed information about activities at farm level.

We have seen only a part of the ERS and therefore our impression is a partial one. The discussions we had about technology and environment indicated a shift in the orientation to new aspects of environmental concern. An interesting question is what technological development means for input usage in the agricultural sector. Historically environmental issues were related to erosion and water availability/quality, while recently the interest shifted to the contamination of water resources with pesticides and nutrients. At global level there is a growing interest for the consequences of the greenhouse effect, and this issue has been picked up by the ERS too. The ERS analyzes environmental issues on a regional scale in order to estimate the effects on international trade. This research is mainly done in the RT-Division but has linkages with other divisions, for instance with ATAD.

The Agricultural Economics Research Institute (LEI-DLO) differs from the ERS in size, focus and organization. LEI-DLO is a foundation which is financed for about 65% by the Ministry of Agriculture, Nature Management and Fisheries. About 35% of the resources come from other ministries, governmental organizations or the private sector.

LEI-DLO has about 250 full staff equivalents for research and documentation. About 90 of them are fully occupied with documentation. The ERS's staff is mainly focused on research. The available data within LEI-DLO are in the first place related to its own documentation work. This means that LEI-DLO has detailed technical and economic information of Dutch agricultural and horticultural enterprises. The international data are of limited scope compared to the information available at the ERS.

The research of LEI-DLO is oriented towards the Dutch agricultural sector. The Common Agricultural Policy (CAP) is analyzed in order to estimate its consequences for the Dutch agricultural sector. International market studies are done on an ad hoc basis. The orientation of the ERS is far more international, with the aim of course of monitoring the international trade position of the U.S. agricultural sector. This international focus is reflected in the organization of the ERS. LEI-DLO uses substantial resources for detailed research into the evaluation of environmental policies in the Netherlands and the EC. With respect to the environment the ERS seems to be more globally orientated; issues within the U.S. are only incidentally dealt with.

It is our impression that the ERS's activities are far more integrated than LEI-DLO work is. There may be several reasons for this. In the first place the bottom-line question about the U.S. position in international trade is clear and this makes it easier and more necessary to integrate activities. The documentation task within LEI-DLO has a similar clear aim. The way the analysis is supported with a common methodology as the *Country Projections and Policy Analysis* (CPPA) model-builder and data analysis facilities like TS-View will stimulate cooperation and exchange of information among analysts. The majority of research projects within LEI-DLO are just studies on their own. The programming of research within

LEI-DLO, where single studies are part of a larger program is a stimulus to integrate research. On the other hand the development of LEI-DLO in the direction of a market oriented research institute hinders the integration of research, just like the diversity of research subjects and the relatively small staff do.

3. SUBJECTS

In this section a brief report is given of the discussions we had with staff-members of the ERS on different subjects. Studies and reports on the subjects mentioned are referred to as well 1).

3.1 U.S. agricultural policy

The analysis of U.S. food and agricultural policy is a subject of the Domestic policy group within the Western Hemisphere Branch. This group approaches the U.S. agricultural policy from a sectoral perspective. The main instruments are: 1. the FAPSIM-model, especially for the base line exercise; 2. mathematical programming for regional analysis; 3. econometric studies.

3.2 International markets

The international market research is subdivided into regional trade areas, according to the organizational structure of the ERS. Within the ERS researchers in the different commodity and regional areas have a common methodology and model structure available for their analyses. The Country Projections and Policy Analysis (CPPA) model-builder is a flexible spreadsheet approach which can easily be combined with data analyses (TS-View) and stimulates the exchange of information between different branches and divisions within the ERS. This approach makes it possible to cross-link several commodity models.

Literature:

Hjort, K. and P. van Peteghem

The CPPA Model-Builder: Technical structure and programmed options in version 1.3.

North American Free Trade Area for Agriculture (NAFTAA). The ERS made an analysis of the expected consequences of the agreement. The agreement consists of a number of bilateral trade-agreements with the U.S.. President Clinton wants to include agreements with respect to the environment and labour.

Literature:

Goodloe, C. and M. Simone

A North American Free Trade Area for Agriculture: The role of Canada and the U.S.-Canada Agreement

Forsythe, K. and L. Neff

The U.S. Enterprise for the Americas Initiative: Support for the Western Hemisphere Economic and Trade Reform

1) The literature mentioned in this section is available in the library of LEI-DLO.

Effects of the North American Free Trade Agreement on U.S. Agricultural Commodities.

Agriculture in a North American Free Trade Agreement: Analysis of liberalizing trade between the United States and Mexico.

Burfisher, M.E., R.M. House and S.V. Langley
'Free Trade Impacts on the U.S. and the Southern Agriculture', in: The Southern Journal of Agricultural Economics

Eastern Europe and the Former Soviet Union (FSU). The ERS is spending considerable time on collecting and analyzing information about the FSU and Eastern Europe. They are working on 'country' reports and databases of the important member states of the Commonwealth of Independent States (CIS). They are well informed about Eastern Europe.

Literature:

Cochrane, N.J. et al.
Agricultural Policies and Performance in Central and Eastern Europe, 1989-92

Agriculture in the New Central Europe, in Agricultural Outlook, special reprint.

Far East. The Far East was only discussed with respect to Japan. The ERS did a study into the future development of the agricultural markets in Japan. This information is used for the base line. The analysis is available in:

Coyle, W.T.
Prospects for Japanese Agriculture, towards the 21st century

Western Europe. The focus of the ERS on Western Europe is mainly EC oriented. We discussed the consequences of short term changes in EC market prices for U.S. exports of corn glutenfeed and soybeanmeal. To address problems like this linear programming models are used. During the GATT-negotiations a special Task Force for the EC-U.S. trade relationship was established which was available 24 hours a day to inform the USDA and other government officials about possible consequences of all issues under discussion within GATT. Our visit was used to exchange views on the expected effects of the Mac Sharry policy and to comment on modelling work within the ERS.

Literature:

Western Europe: Agriculture and trade report; CAP reform, GATT and currency crises top news on the eve of the EC's single market (1992). This is a yearly report in the *Situation and Outlook* series.

3.3 Farm accountancy

Farm accountancy analyses are done in the Farm Sector Financial Analysis Branch. We discussed three different activities: 1. financial analyses at sector level; 2. forecasting agricultural income and; 3. the financial performance of farm businesses. The financial analysis combines a number of different sources to produce a consistent picture of the agricultural sector's financial situation at state level (See for methodology and definitions page 1-11 in State Financial Summary).

Literature:

State Financial Summary, 1991; Economic indicators of the farm sector.

Strickland, R.P., C. Johnson, R.P. Williams
Ranking of States and Commodities by Cash Receipts, 1991.

Ahearn, M.C., J.E. Perry, H.S. El-Osta
The Economic Well-Being of Farm Operator Households, 1988-1990.

The forecast of agricultural income is a continuous activity and is reported four times a year. Long run forecasts are also made for the base line scenario. The forecasting methodology is similar to the LEI-DLO one, using information about price and quantity components of receipts and costs. The base line activity in this branch is seen as an integration of the analysis done elsewhere within the ERS.

Literature:

Agricultural Income and Finance, Situation and Outlook report

The analysis of the financial performance of farm businesses is based upon the *Farm Costs and Return Survey*, which gives information about individual farms and comes closest to the European Farm Accountancy Data Network (FADN) (see 3.10, data bases). On the basis of this survey a number of reports about cost prices for different products are issued by the ERS.

Literature:

Morehart, M.J., J.D. Johnson and D.E. Banker
Financial Performance of U.S. Farm Businesses 1987-1990.

Jenkins, J.E. and W.D. McBride
Characteristics and Production Costs of U.S. Grain Sorghum Farms, 1990.

McBride, W.D.
Characteristics and Production Costs of U.S. Soybean Farms, 1990.

Salassi, M.
Characteristics and Production Costs of U.S. Rice Farms, 1990.

3.4 Technology assessment

Within the RT-Division we discussed a number of issues related to technological development with Jet Yee. Most of the analyses are of a retrospective character, which is different from technology assessment. Three main research areas were indicated: 1. analyses of public research policy; 2. factors that affect adoption of new technologies; 3. influence of technological development on input demand and farm structure.

The U.S. is changing from public research to a private one. This means that there is a shift from fundamental to applied research. One of the issues is how to improve the incentives for private research, for instance by giving property rights. Research has been done into the rate of invention and the rate of adoption. Furthermore the rate of return on research has been investigated as well as the trends in research and the efficiency of it.

Among the factors that affect the adoption of new technologies are the level of the fixed costs and the characteristics of the technology.

In discussing management improvement related to water quality with Zena Cook the issue was raised whether knowledge and technology transfers were stimulated more by special projects or by demonstration projects. Their findings led to the conclusion that special projects were most successful. The special project approach is comparable to the Dutch project for integrated arable farms.

The effects of technological development on input demand, farm structure, human health and water quality are also studied in a retrospective way. Biotechnology is becoming more important and might stimulate technology assessment in the prospective way.

3.5 Non-food use of agricultural products

The ERS only recently started research into the non-food use of agricultural products. This research has been funded by AARC/USDA/Environment. The ERS has experience with economic analysis of bio-ethanol production from corn. The ERS is preparing a *Situation and Outlook* report for industrial uses of agricultural materials. This report will contain information on: starches and carbohydrates, fats and oils, fibres, animal products, forest products, natural plant products, natural rubber, resins and other products. The 1992 Yearbook of Agriculture, a publication of the USDA, is completely devoted to alternative uses of agricultural products. This field of study is seen as one of the areas where research has to be stimulated.

Literature:

New Crops, New Uses, New Markets: 1992 Yearbook of Agriculture

3.6 Marketing

Although the core of the ERS is focused on market analysis, marketing is only a minor item on its research agenda. Since the beginning of the 1980's the U.S. focus has been on the international market share, especially for major crops as corn, soybeans and wheat. Grain quality is seen as one of the instruments to improve the position of the U.S. in the international market. The domestic grain grading is based on the Federal Grain Inspection System. Export grade is not defined. The 1990 Farm Bill wanted to change this practise and the ERS was asked to do research into the quality perceptions of foreign buyers. This was done by means of interviewing traders and users of U.S. cereals in several countries: wheat, 18 countries; corn, 9 countries; soybeans, 10 countries. This qualitative information was analyzed with a methodology developed by Reed, Binks and Ennew, based on simple indices and resulting in an attainment index.

Literature:

Pick, D., et al.

Quantitative assessment of U.S. wheat performance for service and quality characteristics.

Sun, T.Y. and J.R. Blaylock

An evaluation of fluid milk and cheese advertising.

3.7 Macro economic effects on agriculture; the influence of debt crises

The effects of macro economic developments on the agricultural sector still receive minor attention in agricultural economics research in Europe and the U.S.. The reason for this may be that the macro economic development is seen as given instead of as an instrument for agricultural policy. Although this is true it does not justify the neglect in research. Matthew Shane carried out some interesting and relatively simple research into the expected development of the foreign debt position of 79 developing countries under different scenarios. This study relates the foreign debt situation of these countries to the export position of U.S. agriculture and comes to conclusions for the U.S. position with respect to the international debt crises. In the Netherlands a similar interest exists with respect to the export of agricultural and horticultural products.

Literature:

Shane, M. and D. Stallings
The World Debt Crisis and Its Resolution (1987).

3.8 Environment

Historically, the interest that the U.S. and the ERS have in the environment is related to erosion and water quality. Nowadays the issue of water quality is placed in a broader context and takes also account of the usage of agro-chemicals and fertilizers. The research program is related to the Farm Bill. The U.S. environmental concern, which is the responsibility of the Department of the Interior, has a strong regional component. A project is going on for instance on the water quality of Chesapeake Bay. On the other hand there is an interest in global environmental issues for two reasons: 1. as an issue on its own and; 2. as an aspect that will influence the foreign trade position of the U.S.. In the first category research into the effects of a climatic change caused by the greenhouse effect is analyzed globally with the help of a Geographic Information System (GIS). In the second category research into the nitrate regulation and other environmental policies or prospected policies are analyzed in order to indicate the agricultural trade effects.

Literature:

Osborn, C.T. and R.E. Heimlich
The Conservation Reserve Program: Status, Future and Policy Options; a paper presented in Kansas City, Missouri, March 14-16, 1992.

Heimlich, R.E.
Developing a Geographic Information System for Economic Analysis.

Sullivan, J., H. McDowell and K. Forsythe
Relationships of Agricultural Trade and the Environment.

Liapis, P.S.
Environmental and Economic Implications of EC Alternative EC Policies.

Haley, S.L.
Environmental and Agricultural Policy Linkages in the European Community: the nitrate problem and the CAP reform.

Leuck, D.J.
Policies to Reduce Nitrate Pollution in the European Community and the Possible Effects on Livestock Production.

Rendleman, C.M.

Estimation of Aggregate U.S.Demands for Fertilizers, Pesticides and Other Inputs: a model for Policy Analysis.

3.9 Methodology and software

The development of software and hardware is very prominent in the U.S.. A lot of software is easily available at attractive prices. This influences the knowledge about software in a very positive way. Within the ERS a GIS is available which runs at a powerful workstation and shows the results on a colorscreen with the option of a colorprint. Agapi Somwaru and Charles Hallahan of the Data Service Center within the ERS informed us about their research (non-linear systems estimation using GAMS, non-parametric estimation and importance sampling) and about several software packages: GAMS, LIMDEP, Mathematica, TS-View, S-Plus, Rats, Gauss, Shazame. We visited the GAMS Development Corporation where this mathematical programming package was demonstrated. A demo has been installed for 60 days on the LEI-DLO VAX-System. TS-View has been developed within the ERS. This is software for analyzing time-series data with graphical options and econometric tools. For any future visit to the ERS or the U.S. in general it seems advisable to indicate what kind of software is needed and to spend some time on detecting software that is interesting from the economic research point of view.

3.10 Data sources

Within the USDA the tasks with respect to domestic statistics are delegated to the NASS (National Agricultural Statistics Service). The ERS sometimes cooperates with the NASS to collect data, as in the case of the Farm Costs and Return Survey (FCRS). NASS and ERS decide together on what data should be asked for in this survey. The data from the survey are available within the ERS in the ARE-Division. The ERS and the NASS have strict rules for disclosing information from the FCRS. Trespass of these rules can be fined up to \$10.000 or imprisonment for maximally one year. In many cases the ERS merely relies on the NASS for national agricultural data. So, for national agricultural data the ERS is dependent on the NASS.

For international data the ERS is an interesting source, but again it is not a primary one. In collecting data the ERS depends on national sources and in many cases the primary data are combined with information from the Foreign Agricultural Service (FAS) and sometimes with research done within the ERS itself. International sources, FAO and World Bank ('Stars') in particular, are also heavily used by the ERS. These international sources are also combined with own information and thereby made more accurate. The information concerning agriculture in the world, reflected in trade, production and consumption figures, is available for research within the ERS in the ATA-Division. The ERS developed user-friendly software (TS-View and versions thereof) in order to facilitate the use of these extensive data bases.

The ERS (and FAO also) is working on trade flow statistics. A methodology to solve the problem of having two (different) observations for one trade flow has been developed by Tom Vollrath.

4. POSSIBILITIES FOR EXCHANGE AND COOPERATION

4.1 Possible forms of exchange and cooperation

In principle there are three possibilities to cooperate:

- **Knowledge exchange.** The ERS and LEI-DLO are working in the same field, partly addressing the same questions and in some areas their activities are complementary. Both can profit from an exchange of knowledge. It has to be kept in mind that especially policy sensitive subjects in the U.S. or in the EC or the Netherlands should be treated accordingly. Both organizations have comparable experience in this field however and are quite capable to handle these situations. Modern facilities like E-mail, faxes and telephone make it very easy to develop this kind of cooperation.
- **Exchange of staff.** Two aspects are important here: the research subject and the personnel aspect. The emphasis could be more or less related to the period of exchange: short period exchanges will be subject oriented, whereas long period exchanges will have a stronger impact on personnel. Short periods are exchanges for a couple of weeks in order to do specific research, profiting from the facilities in the ERS or LEI-DLO. In this way one has the possibility to do some analysis in an environment where relevant issues can be easily discussed with experts. Long period exchanges will be oriented to the person involved. This offers him or her opportunities to do some more fundamental research in another environment and to profit from the expertise available. Of course the cooperation between the ERS and LEI-DLO will benefit from such exchanges. Mutual understandings will improve and the organizations get acquainted with each other's work. Both forms of staff exchange will be an integrated part of human resource development, but the second one gives more scope in this respect.
- **Common projects.** Knowledge and staff exchange may lead in the future to common projects. Projects in the field of expertise development may be the easiest to organize and will be profitable to both organizations. In some cases it may be possible to contract research, but the exploration of these possibilities should be preceded by a further discussion of the conditions which make contract research acceptable.

4.2 Some areas and subjects for exchange and cooperation

Farm accountancy

Supply the ERS with information concerning the EC and Dutch FADN:

- Definition of income and costs measures
- Information about the collected entries
- Population and reliability

Compare production costs in the U.S. with those of the countries of the EC.

Methodological issues

Cooperation with the ERS in the field of EC and EC/U.S.-modelling. Information exchange of methodological issues in general equilibrium modelling, productivity measurement, income accounting for environmental damage. Though both the ERS and LEI-DLO are active in these fields, there are considerable methodological differences in approach.

Policy studies relating to European agriculture

Both LEI-DLO and the ERS have made assessment studies of the likely impacts of the Mac Sharry reform and the Blair House agreement on EC-agriculture. The ERS is investigating the possible consequences of EC-enlargement (EFTA-countries and CMEA-nations). LEI-DLO is engaged in a long term scenario study (Agriculture 2015), scanning alternative futures for EC and Dutch agriculture. Timely exchange of research approach and research outcomes might benefit policy analysis both at the ERS and at LEI-DLO.

Data handling with TS-View

The ERS gave LEI-DLO the TS-View program to analyze time series. This program can be combined with different time series. LEI-DLO will explore the possibilities to combine it with LEI-DLO data and supply the data files to the ERS.

Non-food use of agricultural products

The ERS will explore the possibilities to visit The Hague in order to exchange information about non-food use of agricultural products. Achievements along these lines will be profitable for farmers in the U.S. and the EC. For these reasons cooperation between the ERS and LEI-DLO, that are both doing research in this field, should be stimulated.

Nitrate regulation in the EC

The ERS has done research into the consequences of possible effects of the EC nitrate rule. LEI-DLO is also studying this subject and will send a paper to the authors about the modelling work for the Netherlands concerning nitrate supply-utilization accounts.

Implementation of environmental policies

Both in Europe and the U.S. farmers fear to be disadvantaged by environmental rules. In the ERS and LEI-DLO research is being done to evaluate the possible consequences. By providing farmers in the U.S. and the EC with information about these consequences, research will stimulate mutual understanding among farmers and thus provide a basis for acceptance of environmental policies.

Knowledge exchange in the field of environment

The ERS's research has been focused at global problems. LEI-DLO focuses mainly on the Netherlands and the EC. Incidentally LEI-DLO is involved in studies in other parts of the world. It would be very useful for LEI-DLO to have the opportunity to use ERS-data or research results in these circumstances. This argument might also go the other way around for environmental research done by LEI-DLO, even though it is especially focused on the Netherlands. LEI-DLO has ample experience with economic analysis with respect to the environment. The concepts developed might be applicable to the U.S. and other countries in the world as well.

Software in the U.S.

Compared to the Netherlands, and thus LEI-DLO, the U.S., and thus ERS, go ahead with software and hardware. Regular visits to the ERS will give LEI-DLO the opportunity to stay informed about the latest developments at the ERS and more generally in the U.S.. Moreover it is attractive to buy software in the Washington D.C. area, given the ample supply of software at moderate prices in a number of different stores.

ANNEXES

ANNEX 1 STRUCTURE OF THE ECONOMIC RESEARCH SERVICE

Office of the
Administrator

DIVISIONS

(I) ARED	(II) ATAD	(III) CED	(IV) RTD
Agriculture and Rural Economy	Agriculture and Trade	Commodity Economics	Resources and Technology

BRANCHES

<p>Farm and rural economy</p> <p>Farm sector financial analysis</p> <p>Finance and development policy</p> <p>Human resources and industry</p> <p>National economy and history</p>	<p>Africa and the Middle East</p> <p>Asia and the Pacific Rim</p> <p>Europe</p> <p>Western Hemisphere</p> <p>Markets and competition</p> <p>Trade and development analysis</p>	<p><i>Situation and Outlook</i> coordination staff</p> <p>Commodity and trade analysis</p> <p>Crops</p> <p>Livestock, dairy and poultry</p> <p>Food economics</p> <p>Marketing economics</p> <p>Specialty agriculture</p>	<p>Environmental and health risk</p> <p>Land and global resources</p> <p>Productivity and emerging technologies</p> <p>Resource policy</p> <p>Water</p>
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STAFF YEARS FULLTIME EQUIVALENTS (FY1993)

146	141	184	151
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REMAINING ACTIVITIES

Data Service Center (DSC)
Part of the USDA's:
 Economic Analysis Staff
 Economics Management Staff
Research for the Office of Energy

TOTAL STAFF YEARS OF THE ERS IN FULLTIME EQUIVALENTS (FY1993) 840

ANNEX 2 STAFF MEMBERS WE ACTUALLY MET BY DIVISION AND SUBJECT

(I) ARED

Name	Subject	Tel. no.
Johnson, James	Chief of the farm sector financial analysis branch	219-0800
McElroy, Robert G.	Forecasting agricultural income and finance	219-0800
Morehart, Mitchell J.	Cost and return survey	219-0801
Strickland, Roger	Farm income (historic data)	219-0804
Farmer, Linda	Farm-related income	219-0807
Williams, Robert	Cash receipts	219-0804
McGath, Christopher	Production expenses	219-0804
Banker, David	Data source management	219-0801

(II) ATAD

Name	Subject	Tel. no.
Dunmore, John C.	Associate Director of ATAD	219-0699
Overton, C.E.	Global trade and production data and software	219-0700
Vollrath, Thomas L.	Trade data analysis and adjustment	219-0705
Kelch, David R.	Europe branch, EC/U.S.-CPPA-Model	219-0620
Herlihy, Michael T.	EC agricultural policy	219-0620
Haley, Mildred	EC/U.S.-CPPA-Model	219-0620
Foster, Christian J.	FSU agricultural sector analysis	219-0620
Liefert, William M.	FSU agricultural sector analysis	219-0620
Lundell, Mark R.	East European agricultural sector analysis	219-0621
Langley, Suchada V.	NAFTAA-impact study	219-0689
Simone, Mark V.	NAFTAA/Canada	219-0689
McClain, Emily A.	South America, Brazil	219-0689
Valdes, Constanza M.	South America	219-0668
Coyle, William T.	Asia and Pacific Rim; Japan 2000	219-0610
Normile, Maryanne	Policy handbook; U.S. grains and oilseeds demand	219-0620
Reinsel, Robert D.	Agricultural policy analysis U.S.	219-0687
House, Robert M.	U.S.-regional nonlinear mathematical programming	219-0694
Hjort, Kim C.	The CPPA model-builder	219-0705
Shane, Matthew D.	The world debt crisis	219-0700
Krissoff, Barry	Development analysis	219-0680
Missiaen Margaret B.	Food aid analysis	219-0630
Webb, Alan	Grain quality	219-0610
Pick, Daniel	Attainment index	219-0680
Haley, Stephen L.	Armington model and environment and trade	219-0680
Sullivan, John	Environment and agricultural trade	219-0680
Liapis, Peter S.	Environmental and agricultural policies	
Leuck, Dale J.	Nitrate in the EC	219-0680

(III) CED

Name	Subject	Tel. no.
Harwood, Joy	Commodity analysis; CPPA-Model	219-0840
Whitton, Carolyn L.	S&O; lockup procedure	219-0824
Morgan, Nancy R.	Oilseeds	219-0825
Gajewski, Gregory R.	Non-food use of agricultural products	219-0085

(IV) RTD

<i>Name</i>	<i>Subject</i>	<i>Tel. no.</i>
Anderson, Margot	Global resource policy section	219-0405
Ribaudo, Marc O.	U.S. water quality and soil erosion	219-0444
Lewandrowski, Jan	Global climate change modelling	219-0428
Darwin, Roy F.	Global climate change modelling	219-0428
Heimlich, Ralph E.	Global GIS-systems	219-0403

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<i>Name</i>	<i>Subject</i>	<i>Tel. no.</i>
Hallahan, Charlie B.	Methodology: Sampling and software	219-0507
Somwaru, Agapi	Methodology: Modelling, software, operations research	219-0812
Gudmunds, Karl	TS-View program development	219-0507

OTHERS (NO ERS-STAFF)

<i>Name</i>	<i>Subject</i>	<i>Tel. no.</i>
Kalvelagen, Erwin	GAMS Development Corp.	342-0180
Meeraus, Alex	GAMS Development Corp.	342-0180
Bureau, J. Christophe	Productivity measurement and non-linear supply response (INRA)	
Chikhani, Christian A.	Agrostat (FAO)	