

International Agricultural Trade
Research Consortium

Report of ESCOP Subcommittee on Domestic and
International Markets and Policy

by
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The International Agricultural Trade Research Consortium is an informal association of university and government economists interested in agricultural trade. Its purpose is to foster interaction, improve research capacity and to focus on relevant trade policy issues. It is financed by USDA, ERS and FAS, Agriculture Canada and the participating institutions.

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REPORT OF SUBCOMMITTEE ON DOMESTIC AND INTERNATIONAL
MARKETS AND POLICY

to

Experiment Station Committee On Organization and Policy
(ESCOP)

I. INTRODUCTION

The committee you appointed on February 11, 1987 has met twice--on March 13 in Washington, D.C. and August 2 in East Lansing, Michigan. The committee also reviewed this report in draft (via the mail) and concurs unanimously in its recommendations. We took as our starting point the ESCOP report, Research and Agricultural Trade, and the suggested charge from ESCOP. The charge was twofold: (1) "Define researchable problems in the subject area using the 1984 white paper entitled Research and Agricultural Trade prepared for ESCOP by a committee chaired by E. Schuh; (2) Develop a strategy or plan for enhanced funding which would allow an expanded SAES effort to accomplish the research objectives."

We began with the assumption that U.S. agriculture operates as a sector of an open economy in an interdependent world market. Simply, this means that there are few parts of U.S. agriculture which are neither subject to import competition nor involved in exporting agricultural products. There are two critical implications of this. First, the nature of U.S. agriculture, if it were not involved in trade, would be vastly different than it is now. This dependence on world markets grew rapidly in the 1970's, making the internationalization of U.S. agriculture almost irreversible. The second implication is that U.S. food and agricultural policy cannot be pursued without an explicit and full understanding of world markets. Given that all countries intervene in domestic agriculture, this means that understanding what other countries do to influence their agricultural sectors is as crucial as understanding our own markets and policies.

Given these beginning premises, and the fact, well documented in the earlier ESCOP study, that resources devoted to trade research are small and scattered, we devoted most of our attention to the issues of domestic policy-international market linkages and the analysis of trade. The report is organized in five major sections:

- II. Pressing Agriculture and Trade Policy Problems in the Years Ahead
- III. Inventory of Institutions Involved in Policy and International Agricultural Trade Research
- IV. Constraints to Linking Research on Agricultural Trade
- V. Organizational Modes and Funding Strategies for Trade Research
- VI. Recommendations

II. PRESSING AGRICULTURE AND TRADE POLICY PROBLEMS IN THE YEARS AHEAD.

We begin by reviewing briefly what the earlier ESCOP report said about types of research, institutional objectives and research priorities.

ESCOP Trade Research Objectives

Before evaluating possible new organizational models for trade and policy it is important to assess what kinds of research needs to be done. What follows is a brief summary of the research objectives outlined in the 1984 ESCOP paper on Research and Agricultural Trade.

Disciplinary Research, as spelled out by Glenn Johnson in his work on research methodology,* is the further extension of theoretical knowledge and/or further methodological development within a discipline. This research and model development may be of use for solving practical problems, but practical problem solving is not an immediate objective of disciplinary

*Glenn L. Johnson, Research Methodology for Economists, MacMillan Publishing Co., New York, 1986.

research, because few if any problems lie within the domain of a single discipline. Examples of disciplinary research outlined by the ESCOP paper are assessing impact of changes in economic and technical factors, and resource endowments on import demand, export supply and comparative advantage; assessing the gains from trade and implications of policy changes; improving the conceptual framework for agricultural trade research; developing and improving empirical models for policy analysis.

Subject Matter Research develops knowledge about an area of concern, such as agricultural sector development, land tenure, and world food production and consumption. These areas cut across several disciplinary areas, such as economics and politics, economics and sociology, agricultural and international economics. Examples of subject matter research included in the ESCOP paper include assessing institutional relationships and their impact on international markets and information; understanding why governments behave as they do; analyzing the impact of economic policies on trade patterns.

Problem Focused Policy Analysis is problem specific and usually multidisciplinary. The output of problem focused analysis is an evaluation of alternatives. While the ESCOP proposal includes several problem focused policy analyses, for example, devising an optimal international commodity trade policy for the United States, there is a need for more emphasis on this area of research. Other important issues include the international impacts of decoupling farm programs from levels of production or targeting benefits, a benefit cost analysis of the Export Enhancement Program, etc. More and better focused policy relevant analysis needs to be done in university and other settings, and ESCOP could make an important contribution to the trade policy debate by making policy analysis an important part of any program of trade research.

Other Institutional Objectives

Institutional Coordination, data gathering and research and policy analysis is currently done by a variety of institutions and national governments (FAO, ERS, IBRD, FAS, IMF, GATT, etc.). Presently, these efforts are often uncoordinated, dated and difficult to access. There is a real need to coordinate and organize available data, as well as to collect other data (costs of production and domestic prices in the major producing countries) that is not currently being collected. Whatever new institutional structures are devised and research efforts made, need to be coordinated with existing agencies to prevent duplication of effort, and to enhance the efforts of both the new and the existing organizations. Research conducted by new institutions also needs to be communicated to agencies who use, but do not do, research.

Capacity Building, ESCOP notes a strong need to educate new people in the field, as well as a need to educate existing trade researchers about new areas of inquiry. There is also a need to educate the interested public. This especially applies to policy makers, although they are not mentioned explicitly in the ESCOP material.

Research Priorities - ESCOP Report

The ESCOP report, Research and Agricultural Trade (1984) outlined ten research priorities that should be included in an expanded research program in food and agricultural trade. These included:

1. Assessing the impact of changes in economic and technical factors and resource endowments on import demand, availability of export supplies, and comparative advantage in agricultural production.

2. Analyzing the impact of economic policies on trade patterns.
3. Identifying and analyzing monetary linkages among countries and assessing the implications of monetary phenomena on trade flows, and the functioning of financial, commodity, and international capital markets.
4. Tradeoffs and linkages between domestic agricultural and trade policies.
5. Devising an optimal international commodity trade policy for the United States.
6. Assessing and evaluating the gains from trade and the implications of restrictive trade policies and practices in terms of who gains, who loses, what benefits and costs will arise from policy changes, and what positive adjustment policies are warranted.
7. Understanding why governments make the kinds of policy decisions they do.
8. Assessing institutional relationships in the form of state trading, monopolistic business practices, and government involvement in international agreements and their impact on performance of international markets, information, and transaction linkages.
9. Improving the conceptual framework for international agricultural trade research.

10. Developing and using improved empirical models for policy analysis.

Approximately a year later the Trade Policy Task Force of the American Agricultural Economics Association issued a related report Agricultural Trade Research and Information Needs: Conditions and Challenges. The problems identified in that report were much the same as those cited in the ESCOP report. A recent GAO report cites the earlier ESCOP study and strongly

supports the need for more research (GAO, Agricultural Competitiveness: An Overview of the Challenge to Enhance Exports, May 1977, pp. 46-47.

We find that the priorities and needs indicated in these two reports are as significant today as when they were presented. The only difference now is that the challenges and problems that were highlighted as urgently needing research to provide solutions are now even more difficult to resolve. The potential harm from not resolving these issues is likewise heightened. The potential "trade war" between the U.S. and the European Community, and continuing frictions between these significant agricultural exporters, points to a need for resolution of these problems. Success in ongoing GATT negotiations, the forum where many of these problems arise, may well depend upon the information available to negotiators from the research community.

Critical Problem Areas

To put these research priorities into perspective, nine critical problem areas relevant to agricultural trade are presented below. These problems are then related to the more academic research needs identified above in order that these problems may be addressed.

1. The Internationalization of U.S. Agriculture

In both the ESCOP and AAEA reports, the internationalization of U.S. agriculture was illustrated and stressed. During the 1970s the dependence of U.S. agriculture upon world markets was seen as a very large advantage. Exports of farm products grew at unprecedentedly high rates. Farm prices were generally more favorable than during the previous decade. The consequences of agriculture's dependence upon the rest of the world during most of the 1980s have been very different than during the 1970s. Where once the benefits were primarily positive, in recent years most of the effects

appear to have been negative. Whether the effects are seen as positive or negative, they are inescapable. U.S. agriculture finds that the domestic market is simply too small to provide a profitable outlet for all its production. Either agriculture must shrink gradually or we must find ways in which agriculture and agricultural policy can adapt to changing world market conditions.

The internationalization of U.S. agriculture points to two pressing research needs. First, we need to understand the evolution of agriculture elsewhere in the world in order that we may predict more accurately future events in key markets. We need to know if, where, and for what commodities future growth (or declines) in agricultural imports or exports will occur. Second, if U.S. agriculture must shrink, and policy must accomplish this in an open trading environment, we must be prepared to evaluate policies using different analytical frameworks than those of the past--frameworks which admit the linkages to international trade so important to U.S. agriculture today.

2. Competitiveness of U.S. Agriculture

With the loss of U.S. share of world markets that occurred between 1981 and 1986, there are those who are concerned that U.S. agriculture has lost much of its competitiveness in world markets. During the 1970s, increases in U.S. market shares for a wide range of farm products seemed to come so easily it was assumed by some that the United States would continue to dominate world markets for grains and soybeans into the indefinite future. Such views have apparently been sharply contradicted by subsequent events. However, it is not certain that agriculture has lost its competitiveness. The losses between 1981 and 1986 have been somewhat reversed following changes in U.S. farm policy and the fall of the U.S. dollar. This suggests that the losses in

market share may have been due to a combination of our price support and supply management policies and the income, price support, and trade policies of several of our trading partners.

Unfortunately, U.S. acreage diversion programs make it difficult to appraise the competitive position of U.S. agriculture. These programs both provide large subsidies for farmers and at the same time increase their costs of production by prohibiting them from using all of their resources in an efficient manner. Other aspects of the current agricultural situation may have potentially adversely affected the ability to produce at low cost--large interest costs, negative rates of investment in machinery and equipment, for example. Recent comparisons of average total costs of production for wheat may be interpreted to mean that compared to Argentina, Canada, Australia and France, the United States may be the high cost producer. In any case, it is clear that we can no longer assume that U.S. agriculture is the world's lowest cost producer of grains, soybeans and cotton. We must seek out the measures that will assure agriculture will be competitive if there were a world with few subsidies and few restrictions on trade in farm products.

Research is needed to define more sharply the concepts of competitiveness and agricultural comparative advantage, which are necessary in the proper interpretation of cost of production data. Research also needs to explain how costs are related to changing economic conditions, such as exchange rates, income, production levels, interest rates, etc. Marketing costs also should be compared across exporters. Policies which seek to improve competitiveness, such as the export PIK program and export promotion activities of FAS, also need to be critically evaluated.

3. Quality of Products

When exports were falling in the early 1980s, there were increasing complaints that the quality of standard U.S. export products, such as corn and wheat, had fallen short of expectations. U.S. corn, for example, has been compared unfavorably to corn exported by China. During the 1970s, when supplies were short, exporters may have become sloppy in a "seller's market." Buyers were rapidly expanding imports, and could not afford to demand high quality products. As a demand has declined in the early 1980s, the United States may have failed to adjust by improving its quality standards. In an era in which world demand for farm products grows slowly, quality--along with price and service--is an important competitive tool.

It is not obvious how severe the quality problems are, what are the source of the problems that exist, and whether they are due to harvesting techniques, practices of marketing agencies, inadequacy of existing grades and standards or ineffectiveness of inspection services. Research is needed to determine just how important quality characteristics are in limiting the U.S. market share in world markets, and what policies or regulations are likely to improve the key factors determining quality and value.

4. Technology Transfer and Development Assistance

For the past four decades the United States has had an active program of providing assistance designed to improve productive capabilities of agriculture and to increase the incomes of the low income countries. Throughout this period there has been resistance to such assistance that might result in the expansion of production of farm products that we export. This resistance has been based on the assumption that any increase in productivity will be transmitted into increased competition for our exports. There is a

substantial body of evidence indicating that more rapid economic growth in developing countries results in more rather than less agricultural imports. In a number of cases, rapid economic growth has transformed an economy from being a net grain exporter to becoming a substantial net importer of grain. Yet, in spite of such evidence, there remain those who hold to the contrary view that U.S. agricultural assistance is inimical to the interests of U.S. farmers.

Research is needed to provide a better understanding of the linkages between economic development and agricultural trade, and needs to put into perspective the influence of U.S. efforts to improve productive capacity in low income countries on this process. Complementary benefits to U.S. agriculture both through trade and through increased productive efficiency need to be clearly identified.

5. Level Playing Field--Fair Trade Versus Free Trade

To an increasing degree, there is support for the position that we should not seek free trade but fair trade. It is not obvious what is meant by fair trade. One definition would be that other countries' barriers to imports of U.S. agricultural products should be no more onerous than U.S. barriers against imports. Or it may mean that subsidies and supports provided for agriculture should be held to reasonable levels or perhaps to the same level as ours. Neither of these approaches is likely to lead to liberalization of agricultural trade to a significant degree. Each trading country, including the United States, has some farm products that are heavily protected. In our case, this includes dairy products, sugar, long staple cotton, wool and peanuts. The United States also has import quotas on beef and veal.

It is unlikely that countries will abandon their support of agriculture. What is less clear is whether they can be persuaded to move towards forms of

domestic agricultural support that eliminate or minimize distortions of production and trade. Research is needed to assess the costs and benefits of varying forms and degrees of support for and protection of agriculture in terms relevant to the policy making process. We need to define what is meant by fair trade in terms of these measures. We also need to determine which policies are likely to change in other countries, and which changes in policies are the most desirable from the perspectives of the United States, and foreign agricultural sectors and for economic welfare of nations important in agricultural markets.

6. Measurement of Protection

An essential element for the success of the forthcoming trade negotiations for agricultural products is achieving agreement on appropriate methods of measuring protection or distortions. Such measurement is desired as an indicator of the starting points for negotiations to reduce the protection of agriculture and to permit determination of progress made. It is not a simple matter to measure the degree of protection due to the numerous techniques used to subsidize agriculture and to intervene in trade. Where there is a single border measure, such as a fixed tariff and there are no subsidies to domestic production, the measurement of protection is a simple matter. But where protection is achieved by import quotas or by health and sanitary requirements, measurement is not so simple. It is particularly difficult to determine the degree of protection to U.S. agriculture when some unknown part of the large subsidies now paid to farmers is compensation for loss of income due to the diversion of land. In an era of variable exchange rates, direct comparisons of domestic and adjusted border prices may give very different results from one year to the next when there are substantial changes

in exchange rates. When the value of the dollar in terms of the major European currencies reached high levels in 1983 and 1984, European Community (EC) protection levels for certain farm products were less than in the United States. But with the decline in the value of the dollar after 1985, EC protection appears to have increased significantly since 1985 even though internal policy has changed little.

Research is needed to identify better measures of protection that can be used to critically evaluate measures now in use and to determine the empirical values of alternative measures as an input to trade negotiations. This problem area also points to the exchange rate issues and to the need to understand linkages between agricultural sector and international macroeconomic adjustments.

7. Preparation for GATT Negotiations

The traditional approach to trade negotiations based upon reciprocity is not appropriate to forthcoming GATT negotiations. Reciprocity means that the value of negotiated reductions in trade barriers, as measured by anticipated changes in exports and imports, should be approximately equal for major trading partners. This approach will not work in a situation in which the primary causes of trade interventions are domestic farm programs. Barriers to imports and reductions in subsidies that expand exports will only occur as the incentives provided by domestic farm price and income programs are reduced. The most important and difficult part of the preparation for the trade negotiations will be to achieve agreement on what changes can be made in domestic farm price and income programs to permit freer trade in farm products.

Research is needed to examine both the political and economic consequences of proposed changes in domestic agricultural policy, to determine

which are viable and which achieve the objectives of compromises likely to be reached in trade negotiations. There needs to be greater political sensitivity on the part of trade researchers in the cases they choose to investigate and in the measures they emphasize in reporting results.

8. Transition to More Liberal Trade

If there is to be more liberal trade in farm products, there must be agreement on transition measures that will minimize the pain of adjustment that will result. After two decades or more of governmental intervention that have distorted the incentives provided to farmers and have created substantial excess production capacity in agriculture in each of the industrial countries, it will take considerable time to reduce the resources engaged in agriculture to levels that can be sustained by prices that reflect freer market supply and demand conditions. In some cases, adjustment might be completed in five years. In other cases a decade may well be required. It will take political statesmanship to accept the kinds of transition measures that will guide farmers toward the completion of the adjustments that must occur if freer trade is to be achieved. It will also take considerable imagination to devise the measures that can achieve the stated objective.

Research is needed to identify the paths of adjustment followed in response to proposed policy changes and to point out critical factors which policies must impact if adjustment is to be facilitated. Research has generally focused on the short or long run, but medium term impacts may be the more troublesome for policymakers.

9. Alternatives to Multilateral Trade - Bilateral Agreements and Barter

When exports decline, bilateral balancing of trade or actual barter are often considered as possible means of expanding exports. It is important that

the negative aspects of bilateral trade balancing or barter be given full consideration. An important negative effect is that in such arrangements the real costs of the imported products will be higher than if they were acquired through multilateral trade. Thus the expansion of exports is not costless. The actual costs involved in making a transaction are increased, but much more important is that the exporting entity foregoes acquiring the imported product from the lowest cost source. Bilateral balancing of trade or barter may be effective approaches for a country that has a currency that is not convertible into other currencies readily and at low cost. But for a country that has convertible currency it is most unlikely that there can be gain from either bilateral balancing or barter trade.

Research needs to weigh carefully the pros and cons of these and other innovative solutions to the constraints to agricultural trade faced in many countries. Countertrade, a more complex form of barter, also needs to be more thoroughly understood and evaluated.

The above list of pressing issues and the accompanying research needs and objectives is by no means exhaustive. However, it nevertheless represents a substantial agenda of research needs that are now inadequately addressed anywhere. It should also be noted that they are likely to persist as continuing issues in need of sustained research effort. We now turn to look at an inventory of current institutions engaged in trade research.

III. INVENTORY OF INSTITUTIONS INVOLVED IN POLICY AND INTERNATIONAL AGRICULTURAL TRADE RESEARCH

An inventory of institutions involved in international agricultural trade research serves two purposes. First, by identifying institutions currently involved and the nature and scope of their involvement, one may begin to

document the level and structure of existing trade research, and further, begin to establish whether there exists a logical institutional framework to which additional resources can be effectively added. Second, an inventory helps to identify the institutional linkages necessary if additional research resources are to have maximum effect on the rationality of agricultural trade policy.

At this time, there exists no single data base from which such an inventory can be constructed. This inventory utilized the Current Research Information System (CRIS) data to identify Land Grant and USDA involvement and held discussions with numerous individuals to help identify other institutions with trade research involvement. Trade research involvement is characterized as being of three types: (1) conduct of agricultural trade research; (2) use of research in policy formulation, implementation and education; and (3) monitoring of conditions and collection of data.

U.S. Land Grant Universities

In the aggregate the Land Grant Universities probably constitute the largest number of Science Years (SY's) focused on agricultural trade research. However, only a few universities have more than two or three faculty members with a trade focus and their efforts are usually divided among some combination of research, teaching, and extension. Thus, most agricultural economics departments have less than one full-time faculty equivalent involved in trade research. Graduate student research would probably at least double this input.

An indication of Land Grant University involvement in agricultural trade research is provided by a search of CRIS files as of May 1987. This search identified 221 research projects related to foreign trade. Of the

221 projects, 133 were being conducted by universities with 87 in departments of economics or agricultural economics while 46 were in other departments. Those being conducted in other than economics departments tended to be focused on the physical or biological characteristics of products related to quality and maintenance of quality in shipment. Most universities tended to have one or two trade projects in economics and almost none had more than four. This reinforces the observation that university trade research, while significant in the aggregate, is scattered. It would be difficult to find a university with enough resources focused on trade to constitute a critical mass.

Regional and interregional projects are one mechanism employed by Land Grant Universities to focus scattered resources and concentrate a critical mass on a particular problem. As of January 28, 1987, there were 442 such projects and committees of which only 11 appear, given available information, to deal even remotely with trade.

Other Public and Private Universities

Numerous non-land grant public and private universities have research and public education programs related to international policy, international trade and economic development. While no comprehensive data base is known, it is probable, since most such universities do not emphasize agriculture, that agricultural trade is not a major focus. There are a few well known exceptions--Stanford University, the University of Chicago, and Harvard University--where there are one or two key individuals engaged in trade research.

University-Related Centers

Several universities have formed or are associated with research centers supported by various combinations of funding, including federal and state

appropriations or grants, and contract research. Most of these centers are focused on agricultural policy issues in general and not especially on trade policy research. A partial listing includes:

- FAPRI (Food and Agricultural Policy Research Institute), Iowa State University, and the University of Missouri.
- The North America Center for the International Institute for Applied Systems Analysis (IIASA) (Iowa State University) with support and collaboration from Agriculture Canada and the Economic Research Service of the USDA.
- CARD (Center for Agricultural and Rural Development), Iowa State University.
- The Future of the North American Granary Project, University of Minnesota.
- The Agricultural Issues Center of the University of California, involving the Davis, Berkeley and Riverside campuses.
- The Committee for Agricultural Research Policy, University of Kentucky.
- University of Florida Agricultural Policy Center.
- Texas A&M Policy Center.
- International Trade Development Centers--Oklahoma State University, Iowa State University, and North Dakota State. These centers are intended to be devoted more to promotion and demonstration projects rather than research. (These centers were authorized by the Food Security Act of 1985, P.L. 99-198, Section 1419. To date, only the three have been funded. The attached "Report on the Role of International Trade Development Centers" by CSRS, February 1987, explores their actual and potential roles.)

- IMPACT Center at Washington State University.
- Meat Export Research Center - Iowa State University.

U.S. Government - Executive Branch

Economic Research Service (ERS). The ERS is the principal research agency with a strong emphasis on international agricultural trade. Prior to its most recent reorganization (July 1987) international work was concentrated largely in the International Economics Division (IED) with a total staffing level of about 175 full-time equivalents of which about 130 were economists and agricultural economists. Approximately half this staff was devoted to trade-related research with the remainder involved in staff analysis, database development, and situation and outlook (current intelligence and forecasting). Of the 221 CRIS projects in agricultural trade, 57 were in ERS.

The successor unit to IED is the Agriculture and Trade Analysis Division (ATAD). ATAD has a staff of 149 with about 120 economists and agricultural economists. Its mission is focused on agricultural and trade policies of the United States and other countries. The new division will have about as many people conducting trade research as did IED, but there has been a significant reduction in resources focused on current situation, outlook and data for foreign countries. Some of this effort has been shifted to the Commodity Economics Division (CED) but there has been a substantial reduction in foreign country specialist positions.

ERS not only conducts research on trade but supports university research through cooperative research agreements.

Agricultural Research Service (ARS). The ARS is not normally thought of as an agency that conducts trade research. However, of the 221 CRIS trade

projects, 22 were being conducted by ARS. These projects focused mainly on physical and biological characteristics of products related to trade.

Foreign Agricultural Service (FAS). The FAS does not conduct long-term trade research. With its agricultural attache/counselor service and a large staff of commodity and policy specialists, it is USDA's primary source of commodity supply, demand and trade estimates, is responsible for U.S. agricultural market development programs, and, with the U.S. Trade Representative, is responsible for agricultural trade policy negotiations. FAS is an important source of data to support trade research and in its role of policy formulation, implementation, and negotiation, an important user of trade research.

Other USDA Agencies. In the CRIS trade project listing, there were nine projects being conducted by the U.S. Forest Service (having to do with forest products trade) and the Cooperative Service (the role of cooperatives in trade).

Other U.S. Executive Departments and Agencies. A number of other departments and agencies conduct research, support research or utilize research on international trade but do not have a primary interest in agricultural trade. Some of the more important are: Department of Commerce, Department of State, U.S. AID, Department of Treasury, U.S. Trade Representative, and the Federal Reserve. All of these agencies tend to focus on broad trade and international economic policies. However, each has some agricultural trade expertise particularly during GATT negotiating rounds.

U.S. Government - Legislative Branch

There are two agencies of the Congress which conduct research (usually short-term studies which synthesize the current state of knowledge) on

agricultural trade. They are: the Congressional Budget Office and the Congressional Research Service.

Foreign National Governments

Several countries have agencies which conduct research related to agricultural trade. Two examples are: Australian Bureau of Agricultural and Resource Economics and Agriculture Canada.

International Organizations

The following international organizations conduct agricultural trade research or do research on topics directly related to agricultural trade: International Food Policy Research Institute (IFPRI), General Agreement on Tariffs and Trade (GATT), World Bank, International Monetary Fund (IMF), United Nations Conference on Trade and Development (UNCTAD), the Food and Agriculture Organization (FAO), and the Organization for Economic Cooperation and Development (OECD).

Private Nonprofit Organizations

The following organizations/institutions conduct agricultural trade research and/or sponsor informational/educational activities based on trade research: National Center for Food and Agricultural Policy (Resources for the Future), American Enterprise Institute, Agriculture Council of America, Brookings Institution, Curry Foundation, Trilateral Commission, and the Bretton Woods Committee.

Private Sector Organizations

Many businesses and market development cooperation organizations, like the U.S. Feed Grains Council, U.S. Wheat Associates, and the American Soybean

Association have offices and people in many countries attempting to facilitate or conduct trade. They know local market conditions, have access to market and price data and understand the overt and covert barriers to trade in these markets. In many cases they often have well informed judgement about the policy-making and policy influencing process in these countries.

The International Agricultural Trade Research Consortium (IATRC)

The IATRC, organized in 1980, is an informal consortium of economists actively involved in international agricultural trade research or analysis.

The objectives of the IATRC are to:

- Facilitate and stimulate improvement in the quality and relevance of international agricultural trade research and policy analysis;
- Facilitate collaborative research among members of the Consortium; and
- Facilitate interaction between researchers and analysts in several countries, in universities and in government engaged in and/or interested in trade research and to communicate research results to policy analysts and the public.

Funding of the Consortium is provided by ERS/USDA, FAS/USDA, and Agriculture Canada, and universities are expected to support participation of faculty who are members. Membership has grown from the original 13 from ERS and seven U.S. universities to more than 78 representing ERS, FAS, Department of Treasury, Congressional Research Service, Agriculture Canada, CIMMYT, OECD, 24 U.S. universities and research institutes, and institutions from seven foreign countries. The IATRC has been uniquely successful in bringing together trade research and analysis interests.

Conclusions

Our analysis leads to the conclusion that while the number of agencies potentially involved appears large, the overall effort is very small relative to the importance of trade to U.S. agriculture.

IV. CONSTRAINTS TO LINKING RESEARCH ON AGRICULTURAL TRADE

In spite of the fact that the last 10 years have seen an increased interest and emphasis on agricultural trade research in land-grant institutions and other institutions, there remain important constraints to the expansion of research in this important area. These constraints to a large degree reflect the unique features of international trade research, and many of these constraints can be partially or wholly removed if they are recognized and if sufficient priority is given to their removal. These constraints fall into several areas which will be discussed in sequence. These areas are: comprehensive and timely data, country and region specific knowledge, the high cost of trade research, and training of agricultural trade economists.

Comprehensive and Timely Data

Quantitative research in agricultural trade is highly data intensive. Both the USDA (FAS) and the Food and Agriculture Organization of the United Nations (FAO/UN) maintain extensive data on production, consumption, and trade of major traded agricultural commodities. In most cases, the USDA and FAO data series are not the same, but most discrepancies can be explained by differences in reporting, such as between calendar year and crop year. Researchers generally choose one of these data series based upon convenience or end use rather than upon one being more accurate than the other.

A major and important gap still exists in terms of data on agricultural commodity prices and policies in individual countries. This data is extremely important in determining what prices producers and consumers in an individual country face and to what extent these prices are influenced by international market price fluctuations. Some time series on prices and policies exist in data files of the FAO, the USDA, the World Bank, and University Research Centers such as FAPRI. However, there is no central repository for such data. Neither the FAO or the USDA routinely maintain consistent series of such data. The recent cut in country specialists associated with the reorganization of ERS has made it even less likely that such data will be available to researchers from the USDA data system.

Substantial efficiency gains in agricultural trade research could be realized if there were a widely accessible, comprehensive, electronic data system containing information on supply, use, price, and policy data for the major traded commodities. Such a data management system could be established in a government or land-grant institution. It could serve not only as a source of data for agricultural trade researchers but as a repository and clearing house for data that may be collected on individual countries by land-grant university and USDA researchers. The data management system needs to be funded at an adequate level so that researchers can rely on the accuracy and timeliness of the data.

Country and Region Specific Knowledge

It has often been stressed to people doing quantitative analysis of commodity markets that a thorough understanding of the industry is essential to developing good models and in applying analytical techniques. Trade studies for such commodities require additional knowledge about international

commodity markets and about the nature of the commodity and industry in numerous countries around the world. Intimate knowledge of a country's production and consumption patterns, policies, and marketing institutions is valuable in conducting trade studies. Knowledge of the language and culture of such a country could be valuable tools in understanding these institutions and their implications for agricultural trade. As in the case of the data availability, this area has suffered as a consequence of the cut-backs in the country specialists during the recent ERS organization.

Interdisciplinary collaboration among economists, political scientists, sociologists, and area studies researchers is needed. Language skills and on site experience in these countries should be encouraged.

High Cost of Trade Research

International collaboration is one way to obtain the specific country knowledge that was discussed above. Gaining this specific country knowledge through either increased in-country experience by U.S. researchers or through international collaboration is quite costly. As a consequence, travel, data collection and other costs involved in conducting international trade research is generally substantially higher than that required for many of the other research topics in which land-grant universities are involved.

Current travel guidelines may need to be revised in this context, since many experiment stations make it difficult or impossible to use state funds for out-of-state or international travel. Funding for increased agricultural trade research needs to recognize these additional costs.

Training of Agricultural Trade Economists

During the last decade there has been a significant expansion of Ph.D.'s in agricultural economics claiming agricultural trade as an area of

specialization. Unfortunately, there is probably a much wider variance of training backgrounds in the agricultural trade area than in some of the more established fields, such as production economics or marketing. Some will have a solid grounding in international economics and international finance theory, while others claiming this field may only have a couple of courses in agricultural policy, trade, or marketing. Thus, the number of agricultural economists with training in international trade theory as well as in agricultural trade and policy is probably far fewer than would be immediately apparent. The individuals with adequate training are also spread over many institutions, constraining interaction.

Increased emphasis should be placed on building programs at the land-grant institutions which can train a greater number of agricultural trade specialists. In developing curricula for this field, attention should be given to international trade theory as well as to agricultural trade, policy, and marketing. It should also be recognized, in light of previous recommendations, that training in language and area studies could also be assets to an agricultural trade specialist.

Linkages to Domestic and International Institutions

Establishing linkages to other institutions, both domestic and international, is critical to the success of any research activity examining issues in international agriculture. Collaboration is necessary to establish sufficient knowledge on policies, economic conditions and institutions in the rest of the world; to insure adequate support and access to resources to conduct the research; and to facilitate interaction of the people who focus on this area of research. Establishing formal linkages offers a potential solution to the problem of how to conduct a complete, organized program of

research when there are only a few people engaged in research on agricultural trade issues, now scattered in many locations throughout the United States.

Linkage Issues

Data limitations have been identified here as one of the severest limitations to adequate research on international agricultural trade. One way to strengthen that base is to establish linkages with people and with institutions both in the United States and in foreign countries who already have knowledge on those issues. Often the data necessary for such research is only available from foreign government agencies, foreign research projects, and the like. The problem of knowledge of the rest of the world goes beyond simply collecting data, however. In order to develop, estimate, and evaluate economic models of foreign countries, information on policies, institutions and behaviors is essential. Language and cultural barriers make research on foreign countries and policies in the international market place more difficult. Both in collecting information and in reporting research results, sensitivity to political and social issues in the countries under study is mandatory. Collaboration with foreign researchers and policy makers can offer this needed perspective.

The number of countries which need study is increasing rapidly. Prior to 1970, the European Community and Japan were the most important markets for U.S. agricultural exports. Since 1970, the importance of Eastern European markets and markets in developing countries have increased dramatically.

International problems are more expensive for a variety of reasons noted above. Direct linkages with institutions in other countries can both serve as a means of sharing the expense in carrying out this research and in reducing total expense.

Broader issues concerning the effect of technological advance on production are also of concern to agricultural trade research. Hence, there must be an interdisciplinary aspect to research in this area. This will require establishing linkages with projects addressing technical agricultural problems in other countries. There is a wealth of research funded by USAID, aid agencies in other countries, the World Bank and many other international organizations on agricultural production throughout the world. The system of 13 International Agricultural Research Centers funded by the Consultative Group on International Agricultural Research (CGIAR) offers interesting possible sources of collaboration. The knowledge gained from these activities needs to be tapped in any research effort on agricultural trade.

Institutions - Domestic and Foreign

The solution to the linkages problems rests in establishing relationships amongst the wide variety of institutions concerned with parts of the problems in question. Some institutions focus on research, while others do not consider research as a high priority. Nevertheless, they may serve as sources of information and/or support for any research activity. For example, the Foreign Agricultural Service of the USDA does not have a mandate to carry out research. On the other hand, it is a primary source of data and information on foreign countries through its worldwide network of agricultural attaches. The Department of Commerce is concerned with trade in processed food products. Customs data offers a good source of information on U.S. trade. A number of state agencies have been formed whose mission is to promote exports, including agricultural exports, but these agencies seldom conduct research. Contacts and sources of information could be tapped to broaden the information network.

Ties to foreign governments facilitate the information collection process. If the research is to have impact, ties need to be established so that both United States and foreign governments are aware of the results obtained. Establishing linkages through which research results can have impact must not be limited solely to U.S. policy or U.S. institutions.

International institutions such as the World Bank and IMF, also have profound impacts on agricultural and trade policies throughout the world. We must both be able to tap the information available at these institutions and have some input into their debates on policy issues. Individuals involved with multilateral trade forums such as GATT and OECD need to be associated with or at least aware of any agricultural trade research activity.

Foreign students in the United States offer a unique opportunity for land grant institutions to learn about the rest of the world and to gain opportunities to conduct research in foreign countries. Often, foreign students come with funding from the USAID, from their own government, or other sources. They wish to carry out research projects at U.S. institutions relevant to their home countries. Combining the interest of trade researchers and foreign students can lead to benefits to both groups, if research activities are properly identified and carried out.

The International Agricultural Trade Research Consortium (IATRC) discussed earlier demonstrates many of the advantages and problems in establishing an organization to facilitate interaction amongst international trade researchers and amongst institutions, both foreign and domestic. With its relatively informal structure and open membership policy, it includes representatives from each of the kinds of institutions discussed above. Inclusion of such people may be more difficult within a framework established under the experiment station system of land grant universities.

The Title XII CRSP programs offer another example of an institutional arrangement where research across multiple universities is funded. Those institutions are organized somewhat like interregional research projects. Formal steering committees were organized to set research priorities, distribute funds and carry out other activities of the projects. These projects have been facilitated by the large number of researchers at any given institution concerned with the questions they address. This is a luxury that those engaged in international trade research do not have.

The above discussion has highlighted the fact that international research requires that collaboration be established between many institutions, both domestic and foreign. Establishing these linkages, however, offers a solution to the problem of the high costs and great needs for information required by research activities on international agricultural trade issues.

V. ORGANIZATIONAL MODELS AND FUNDING STRATEGIES FOR TRADE RESEARCH

The Committee, having evaluated the importance of the issues, the inadequacy of current efforts and the difficulty to doing trade policy research, then explored possible ways to expand efforts. One was to evaluate possible new approaches. The second was to redirect and expand existing mechanisms. Each is discussed in turn.

Possible New Organizational Approaches

As discussed at the beginning of this paper, different research and institutional objectives may require different sorts of organizational structures. For example, disciplinary research may be best done in a university or think tank setting, but would not be well done in a policy center or by a consortium of analysts, like that assembled to carry out the

congressionally mandated Embargo/Surplus Disposal study organized through the IATRC and conducted by ERS and University scientists.

What follows is a summary of the pros and cons of various institutional arrangements that could be considered.

A Special Center Within a Land Grant or Other University: This approach would be best for conducting disciplinary research, processing data, and building models. This approach would also be useful for establishing regionally focused centers (for Africa, Pacific Rim, Caribbean, etc.). Personnel employed by the Centers tend to double as university professors, and so must divide their time between teaching and research. Appropriate examples are CARD and FAPRI, the Food Research Institute at Stanford, the Center for Research on Economic Development at Michigan State, or the new Center for Pacific Rim studies at University of California, San Diego.

Advantages of establishing a center within an existing university include building on an existing institutional structure and support; the existence of a ready made link to teaching, extension and capacity building; a repository of highly trained professionals, and, the potential to conduct multidisciplinary research.

Disadvantages include departmental rivalries that could inhibit collaborative or interdisciplinary research. Departmental rivalries could be reduced by establishing the center on a campuswide basis, but while this solution could overcome the disincentives to the conduct interdisciplinary research, it could make it difficult to link the research and teaching functions. A center that has done this successfully is the Harvard Institute for International Development. However, for the magnitude of the trade-policy task outlined in this report one such center would be insufficient.

Independent Think Tank: This formulation could serve either the disciplinary research, the subject matter research or problem solving needs, depending on the model followed. Think tanks tend to have large core staffs and require substantial overhead to produce and disseminate research results. Usually the staffs are permanent, with supplemental fellows or consultants brought in on specific research issues. One example of a think tank conducting disciplinary research is Resources for the Future (RFF). Most think tanks tend to be heavily involved in subject matter research, such as AEI, Brookings, the Hoover Institute, and RFF. In general think tanks are not structured to conduct policy analysis, however, the National Center for Food and Agricultural Policy does conduct problem focused policy analysis, within the framework of RFF.

Advantages of the independent think tank are that it allows for commitment to a special focus, can cut across disciplinary lines, can amass resources of money and people, allows for cross-fertilization of ideas and can tackle a wide range of issues. Disadvantages often include a research focus as opposed to a policy or education focus, lack of flexibility due to fixed research resources and a limit on what one institute can do to fill all needs outlined in the ESCOP proposal. Major think tanks are also expensive.

Independent Associations of Researchers: The International Agricultural Trade Research Consortium (IATRC) is an example of an independent association. One advantage of an independent association is the ability to draw on experience and expertise of others in the field that one might not have the opportunity to interact with on a regular basis. The independent association can be one of the most efficient means of developing the capacity of those currently in the field. Other advantages include flexibility and the ability

to include a revolving cast of researchers, as well as relatively low operating costs. Finally, such an association provides an identifiable, known cadre of talent associated with institutions from which research resources can be drawn on an ad hoc basis.

Disadvantages include the propensity to become self-educating as opposed to public educating. Further, the loose organization and physical distance between researchers may inhibit collaborative research. As with the two previous institutional approaches, an independent association will not serve the goal of data gathering. The loose organizational structure may also inhibit fundraising. This has been a particular problem for the IATRC.

Problem Focused Research Teams: The Embargo Study team discussed above and the EC Disharmonies Study Group (a study of trade policy options for the EC, funded by the EC Commission and conducted by an international team of economists from Europe and North America) are good examples of problem focused research teams. Other good examples are the Curry Foundation and the recent AEI and Council on Foreign Relations projects on trade. In these cases, the organization wishing to conduct the research assembles and funds a research team. A specific output, on a specific timeline is usually expected. After the study is completed, the assembled team dissolves.

The advantages of problem focused research teams include flexibility and the ability to sharply define problems. Studies can be multidisciplinary, research can be disseminated easily, and deadlines can be defined and met. Teams can draw on strengths of institutions involved and may establish ties for further research on other issues. Another advantage is these tend to be fairly low budget (i.e., the embargo study cost \$500,000) since sponsors typically pay for marginal costs and do not cover the full fixed costs of

conducting research. Fundraising would likely be easier for this structure, as it is designed to produce a specific product on a specific subject, rather than the less specific output of a think tank or university center.

Disadvantages are that there is not much institutional spillover into university teaching, dispersed research teams tend to learn less from each other or at least that learning is difficult. Ad hoc research study groups involve substantial commitment to travel and meeting times and depend critically on the quality of the chairperson. Another major drawback is the lack of institutional continuity. When the EC Disharmonies work is finished the group will dissolve and many useful projects that might have been researched are not likely to be conducted.

The Hub and Spokes Approach: This approach implies a small core staff which drawn in researchers based in universities or elsewhere to conduct specific analyses on an ad hoc basis. The National Bureau of Economic Research (NBER), the Center for European Policy Studies (CEPS) and, increasingly, the National Center for Food and Agricultural Policy (NCFAP) are examples of this approach. In the case of the NBER, a small staff identifies issues that are likely to be on the policy agenda. CEPS has a somewhat larger staff that also does analysis. The institutes then select researchers from around the United States and the EC, respectively, to conduct that analysis. In some cases that research is coordinated and in other cases it is done by an individual scholar. The National Center currently has a small core staff, a resident fellows program and a nonresident fellows program in universities. One or more universities could also play the hub role in this concept, particularly if a center or institute were created for that purpose.

Advantages to the hub and spokes approach include the ability to coordinate and direct research efforts nationally, an ability to identify the best researchers available in a given subject matter and the ability to assemble teams to do subject matter research diffusion of knowledge into the research community at large. In addition, this approach provides the ability to identify and nurture new talent.

The disadvantages of this arrangement are that it would not allow for any systematic data gathering. To some extent physical distance may inhibit collaborative research, although not to the extent this would occur in an independent team approach because the hub institution would hold the work effort together.

Government: Currently, the Economic Research Service of USDA conducts a significant portion of the agriculturally related economic research done in the United States. ERS could be characterized as a university without students, in that its hiring and reward systems are similar. Its research program is only partially determined by the demands of policy makers as it also conducts subject matter research. In addition, ERS does a substantial amount of situation and outlook work, and staff analysis on request. ERS also generates and maintains data bases.

The advantages of housing a specific trade research program within ERS include the existence of a structured and trained staff to conduct the analysis, access to data and other government information and a relatively stable staff and budget. An important advantage is the cooperative agreement mechanism that would allow research to be carried out by ERS and universities or non-profit institutions on a cost-share basis. Another advantage is the ability to identify and attract researchers. Disadvantages include

difficulties in moving to address changing policy issues, in building capacity to conduct trade research outside of government, and in keeping research unpoliticized (especially on a politically visible topic like trade). Finally, ERS is not currently set up to conduct, on a sustained basis, problem specific analysis and has few researchers outside the discipline of agricultural economics upon which to draw for subject matter research.

The Importance of Critical Mass

From the above discussion, it is obvious that there are a number of institutional models from which to draw in carrying out trade research and analysis. All individual or combinations of institutional constructs have their advantages and their disadvantages. Perhaps the most important consideration, given the pluralistic relationships and linkages of trade and its many dimensions, is that there be a critical mass of interests, experience, understanding, and subject matter knowledge centered under one institutional arrangement to carry out timely, relevant, and useful trade research and analysis. It is difficult to define exactly what a critical mass for trade research and analysis constitutes. But it can be said that a critical mass is decidedly more than one lone individual doing isolated research at one or more universities.

The demands for trade research and analysis are comprehensive and complex. Solid and sustained work is needed at the disciplinary level on extension of the theory and methodology. Subject matter work is required at the commodity level regionally on the marketing and trade institutions and on the linkage between trade and macroeconomics, international finance, development, and the interactions among sectorial trade. Finally, the system

must make the disciplinary, subject matter knowledge and research on problem-focused policy analysis relevant and useful to decision makers.

Even with ample resources this is a tall order and not likely to be accomplished in any one institutional framework or location, rather it may be more fruitful to think in terms of several "nodes of excellence" with a critical mass of personnel concentrating on different dimensions of the trade research agenda, such as disciplinary, regional, commodity, and so forth. These nodes of excellence could carry out the disciplinary and subject matter work within their specific areas of experience.

When it then came time to focus that relevant body of knowledge and experience on a policy issue or problem, individuals from the nodes of excellence institutions could be drawn together on a project basis for the analytical work required.

It should be remembered, as argued elsewhere in this report, that issues in trade research transcend national boundaries as a rule rather than as the exception. Therefore, the nodes of excellence and the project tasks forces put together to address specific policy issues should not be limited to U.S. institutions and personnel. Rather an operational network, however informal, is necessary to draw researchers, analysts, and experience from around the world as needed for specific work.

Analysis

After examining the various institutions and institutional approaches available for gathering data, conducting research, and building capacity, it appears that the problem is not the lack of available institutional structures (although some modification of existing institutions may be desirable) rather, the problem is a lack of resources directed to trade issues and a lack of a

coordinated, cohesive trade research program. The question becomes how to adapt or reform the existing institutions to better utilize them to develop and carry out a sustained trade research program.

In the current environment of budget austerity, this question becomes even more pointed. As noted above, the budget needed to establish an entirely new institution (a think tank or a center) can be quite large. It is unlikely that sufficient funds could be raised in the private sector to support core funding for such an enterprise. It is unlikely that the less expensive options (independent associations of professionals or universities) can fully execute the ESCOP trade agenda.

Redirection of Existing Mechanisms and Reallocation of Existing Sources of Funds

There are basically four existing alternative mechanisms for channeling Federal funds into agricultural trade research. These are: (1) utilization of the regular matching Hatch Fund provision; (2) the Regional Research mechanism; (3) designation of trade research as a research program under the Special Research Grant provision (PL89-106); and (4) the identification of trade as an acceptable area of work for the Competitive Research Grant category. Each is discussed in turn, in terms of possible alternatives to expand effort and funding for agricultural policy and trade research.

Regular Hatch Matching Fund

The largest proportion of Federally appropriated funding to support agricultural research is transferred to the various states under the Hatch Act. The Hatch Act requires state matching funds. At various points in history, the State Experiment Stations have been required to spend specific

percentages of Hatch funding on more specifically identified categories. These include the long standing requirement that 20 percent of Hatch funds be spent on Regional Research Projects (this is discussed separately below). In addition, there have been designations for marketing (Agricultural Marketing Act of 1946) and Rural Development (Rural Development Act of 1972) although both of these have been discontinued.

One mechanism for focusing work on trade would be to seek increases in Hatch funding and require the expenditure of say 10 percent of Hatch funds on approved trade research projects. This approach would have several advantages. First, it would provide a clear-cut rationale for increasing Hatch funding. Secondly, the designation of trade as of sufficient priority to justify earmarking would get the attention of the agricultural research establishment. Third, a 10 percent designation would be of sufficient magnitude to require real reallocation of resources as opposed to paper readjustment of reporting of on going research as appeared to be the case of the 5 percent Rural Development earmarking. Fourth, it would also redirect state funds because of the matching requirements. At 1987 levels of funding, a 10 percent earmarking would be 14.8 million dollars of Federal Funds.

The disadvantages are: (1) it disperses trade research across all stations; (2) there are limited opportunities for a coordinated program either in terms of commodity and/or geographic coverage; and (3) there is no guarantee that the fragmented research projects will be additive and/or policy relevant.

Regional Research Activities

Approaching trade research under the mechanism of Regional Research has several advantages and some disadvantages. The advantages are that regional

projects offer a mechanism for focusing research on relevant policy problems. They also provide a potential mechanism for concentrated efforts and the putting together of a critical mass of effort. Finally, the potential of creating a national project and funding it from an "off-the-top" allocation is potentially attractive. Examples are old IR-1, a major policy options analysis of the late 1950s and early 1960s and IR-4, which is ongoing interregional project on registration of chemicals for minor crops.

The disadvantages of Regional Research are that unless there is off-the-top funding, funding allocations are still made by the individual stations, which leads to dispersed and not necessarily additive research. A second disadvantage is that Regional Research projects are often "umbrella" projects where state workers do the research they were going to do anyway. Third, using the regular Regional Research mechanism would not necessarily result in any major redirection of research effort or additions to overall Hatch funding.

Special Research Grants

A third option would be to have trade research designated as a new Special Research Initiative. For example the ESCOP budget proposal for Fiscal Year 1988 recommends a new Special Grant for Water Quality and Management in the amount of \$25 million. Presumably, a similar approach could be taken for Agricultural Trade Research. The advantages would be visibility and a major quantity of funding although it is not clear how the funding would be allocated to appropriate research agencies and workers. The disadvantages are that these types of tied grants are currently in disfavor with the Administration and the National Science Establishment. Each year they are recommended for deletion with the money to be transferred to the competitive

grants program and each year Congress partially restores them. A further disadvantage is that this, like Hatch and Regional Research, is limited to the State Experiment Stations.

Competitive Research Grants

To have trade research designed as an area acceptable for competitive grant proposals would place trade research in a visible position and would presumably attract quality research proposals. These grants are not limited to the State Experiment Stations. Depending on how specifically areas of trade research are designated, it is possible that this approach also leads to a disjoint set of academically interesting projects which would not be coherent or problem relevant. Nevertheless, competitive grants allow for effective ex ante quality evaluation and allow efforts to be concentrated in the best institutions and on the best researchers.

Other Avenues

Other Federal appropriation avenues likely exist. These would include special legislation to establish trade research centers such as was acquired originally for FAPRI, the Tropical Research Station (at Hawaii) and the East-West Center (also at Hawaii). A second possibility would be to try to expand the possible activities under the Trade Development Centers authorized under the Food Security Act of 1985. It is not clear, however, whether the approach offers opportunities for sustained funding. Finally, as discussed in the preceding section, one could seek expanded Federal appropriations to a national agency (e.g., ERS or NCFAP) for disbursement to appropriate universities and research centers.

Analysis

The advantage of seeking some form of redirection of existing mechanisms and possibly expanded funds is that it would build trade research into the

permanent fabric of the agricultural research establishment. It could also mobilize relatively quickly substantial quantities of money. Total funds for the first four items discussed for FY 1987 was \$258 million dollars. Even 5 percent of that would be a significant amount of money. A second advantage would be visibility and presumably the establishment of a national priority for trade research.

There are several disadvantages which are traditionally encountered. Without an increase in overall funding, it would take funds away from other presumably worthy endeavors. Second, the agricultural research establishment has never devoted major amounts of resources to social science and/or international work. Third, and most telling, the ultimate choice of the kinds of research supported and the amount allocated under Hatch and Regional Funding rests with the individual station. Therefore, it is most difficult to develop a coherent and focused national research efforts.

Our conclusion is that a redirection of Hatch, Regional and Competitive Grants monies to trade research would be a useful component of major agricultural trade research initiative but that it would not be sufficient in itself to produce a coherent, sustained and policy issue relevant research effort.

VI. RECOMMENDATIONS

Our conclusion, not surprisingly, is that there are inadequate resources devoted to trade research and that new institutional forms and funding may be necessary in addition to redirecting current efforts and institutions. We also conclude that there is a special urgency to get moving quickly, given the prominence of agricultural trade and policy in the already initiated Uruguay Round of GATT Trade negotiations.

We make three recommendations. The first two involve using existing mechanisms. The third recommends a new initiative.

1. To get started quickly, we recommend the immediate establishment of an interregional trade policy research project with off-the-top funding of at least \$1 million. There are three reasons for this recommendation. First, even though the number of well trained workers pursuing trade research in the Land Grant System is increasing, it is still a very small number (probably less than 60). These workers are widely scattered among institutions and regions. While there are now some stations (clearly less than 10) with what we consider a minimum critical mass of two or more researchers, whose principal interest is trade research, there are many stations with one or none. Thus, to undertake the major effort necessary for research on the GATT negotiations we would need to draw on the entire nation. Second, the interregional mechanism offers the possibility of identifying and supporting a core leadership staff which could devote significant time to conceptualizing, organizing and leading a major integrated trade effort. The experience with the congressionally mandated Embargo and Surplus disposal study suggests that sustained leadership and frequent interaction among researchers is critical. Third, trade research is expensive and demanding of major inputs of data and country and regional expertise. To bring these elements together and focus it is more expensive than on site traditional domestic commodity oriented policy research. Therefore, significant resources are needed to get researchers attention and complete the first task in a timely manner. It should be remembered that the Embargo study which used a core team of 10 people to complete the study in nine months, cost in excess of \$500,000.

2. We recommend that trade and policy research be identified as an area for research under the Competitive Grants Program. Most or all of the topics

listed under section II as pressing problems could be identified as possible topics. The advantages of the inclusion of trade policy research under the Competitive Grant Program are at least three. First, it would allow for sustained and major efforts involving either teams or individual researchers who would develop long term programs and simultaneously involve graduate students to expand the now small pool of talent. Second, the program could include the best in the Land Grant system and outside. For example, there is significant capacity and activity in trade research at institutions like Stanford and the University of Chicago. Third, the identification of trade and policy as legitimate areas would clearly signal the Land Grant System's commitment to international issues and policy research in general. We believe 25 science years (SYs) is the minimum necessary with 50 as a desirable number. This would suggest a funding range of \$2.5 to \$5 million.

3. We recommend a third and more innovative approach which is to organize and fund (perhaps from special Congressional appropriations other than Special Grants) a mechanism which could continuously identify emerging research issues, identify and organize research teams and encourage the development of centers of excellence for trade research. It would be a strong advantage if the mechanism could tap not only the best talent in the United States but also abroad. Recall that detailed knowledge of other countries' agricultures and policies is a critical input into trade research. It is often more effective to utilize people who know other countries because they work there than to develop home grown experts. Further given that trade policy has an important commercial component, input from, and cooperation with, private sector entities should be a critical part of this new initiative.

Our recommendation is influenced in part by our familiarity (and participation by some of us) with an existing informal organization called the

International Agricultural Trade Research Consortium (IATRC), which was described earlier. This organization has within its membership the majority of active agricultural trade researchers in the United States and probably the world. It has demonstrated its capacity to address relevant issues over the past six years. It also was the vehicle which permitted the organization and execution of the Embargo/Surplus Disposal Study.

We recommend that special appropriations be sought which would support continuing international efforts to foster global trade research. We believe an organization such as the IATRC, being already in place could greatly facilitate such an effort. However, so as to not be in a conflict of interest situation, our recommendation is more generic: namely that an existing or new organization be funded and charged with developing a sustained mechanism of priority setting, research organization and the fostering of centers of excellence to facilitate the long term development of necessary trade and policy research capacity. We would recommend funding levels on the order of magnitude of \$5 million over a two to three year period.

Our third recommendation may seem radical but the nature of international research is very information intensive. We should make use of the best talent wherever it is. The benefits to the United States could be substantial. Research is an international public good, therefore, better research benefits all in proportion to their involvement in global activities. The United States is, after all, the world's largest exporter and importer of agricultural goods. We have much to gain by understanding other countries and world markets better.

Conclusions

It is our judgement that the task at hand is large and demanding. Further trade and trade policy issues will persist as being critical to

U.S. agriculture. For example, a recent GAO Report (Agricultural Competitiveness: An Overview of the Challenge to Enhance Exports) specifically cites the earlier ESCOP report and argues strongly that expanded understanding of international markets is crucial to the health of U.S. agriculture. We believe that small and scattered efforts will be inadequate. A major effort is needed. We hope our recommendations reflect our view of the urgency of the situation.

Respectfully submitted April 5, 1988 by:

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