

PD-AMV-993

Assessment of the
Data Collection and Analysis Project
(263-0142)
1980 - Present
and
Recommendations for
Similar Activities to Support
the Undersecretary of Agricultural
Economics and Statistics, MOA
Continuing and New Responsibilities Including
the Official Agricultural Sector Information Service (OASIS)

by

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DCA and Beyond to NASP

Brief Summary - Comments and Recommendation (for those who do not have time to read report)

1. The Data Collection and Analysis Project (DCAP), which started in 1980 and will end Aug. 31, 1987, granted \$5 million for short-term USDA (ERS-SRS) technical assistance, short and long-term training, commodities (microcomputers), local currency project operations support, and a resident Technical PASA Coordinator (for the past 2 years) to strengthen the ability of the staffs of the Undersecretary for Agricultural Economics and Statistics and the Agricultural Economics Research Institute, Agriculture Research Center, MOA, to establish a national data base and provide timely analyses for MOA policy and decision-makers. A component involving agricultural policy analysis assigned to IADS (successor, Winrock International) via host country contract terminated on October 31, 1986, upon expiration of the contract.
2. Encouraged because the GOE/MOA has initiated a broad policy program with emphasis on agricultural sector reforms aimed at bringing domestic prices more in line with world prices and returning Egypt to a free market economy where the price mechanism is permitted to operate and farmers have freedom of choice of crops to grow, the Mission has recently signed a \$120 million Agriculture Production Credit (APCP) grant agreement closely tied to continued progress in carrying out reforms and a \$130 million National Agricultural Research Project (NARP) grant to strengthen the Agricultural Research Center, MOA, to meet the expected demand of farmers for higher level technologies to increase crop yields and to grow new commercial crops.
3. Now, the USAID and GOE are planning to rewrite the NARP to add funds to support an extension outreach program to disseminate the new technology expected to be in strong demand as farmers have more freedom to grow the most economic crops and also increased funds for the Undersecretary for Agricultural Economics and Statistics to strengthen his newly established Official Agricultural Statistics Information Service (OASIS). The Undersecretariat also has been given increased responsibilities which include monitoring and evaluating the impact of GOE economic reforms described in the APCP project, as well as advising the MOA and Cabinet on the probable impacts of alternate agricultural policies and programs. The recently assigned Undersecretary is a dynamic professional economist with a proven record of accomplishment.
4. The purpose of my consultancy is to recommend to USAID and the MOA how to take optimum advantage of the past efforts under the DCAP, which activities of DCAP should be continued under the proposed National Agricultural Support Project (NASP) (the revised NARP), and what new activities should be added to enable the Undersecretary for Agricultural Economics and Statistics to develop the capability to fulfill his new and important responsibilities on a timely basis. The Agricultural Economics Research Institute

(AERI) has been physically moved to share office space with the Undersecretariat in a recently constructed building which also houses the mini-computer center financed under the DCAP. The staff of the Undersecretary and AERI staff are now co-mingled; the Director of AERI has been assigned by the Undersecretary to be head of OASIS, and several important Undersecretariat activities included in DCAP are headed by AERI economists.

5. Considering the strong capabilities of the new management team for Agricultural Economics and Statistics, the new facilities including a modern mini-computer mainframe with ample remote terminals, the organization of OASIS (the new Agriculture Information Center), the location of AERI side by side with the Office of the Undersecretary for Agricultural Economics and Statistics, the assignment of AERI staff to head up key components of OASIS, and given the new responsibilities of the Undersecretary, particularly those of agricultural policy evaluation and formulation plus the responsibility to monitor and assess the impact of on-going and planned major agriculture sector policy reforms, it is appropriate for USAID and the GOE to increase sharply the level of support for the Undersecretary of Agricultural Economics and Statistics so that he can fulfill both his on-going and his important new responsibilities on a timely basis with well-prepared, accurate analyses and recommendations concerning alternate courses of action.

6. Egypt still lacks a reliable, easily accessed national agricultural data base; establishing a reliable data base using probability sampling for NASP is of the first priority and should be accomplished on a crash basis.

7. At the same time, there is increasing pressure on the Undersecretary to provide inputs to agriculture and national decision-making in the form of analyses of the possible impacts of alternative policy reforms under consideration and other major decisions concerning imports of agricultural inputs, food imports, projection of exports, and appraisal of alternative cropping techniques and farming systems which cannot wait for a solid data base. Thus the Undersecretary needs top-level technical assistance in agricultural policy analysis, commodity analysis monitoring, and evaluation of on-going reforms and farm programs. Intensive training of agricultural economists is also imperative on a crash-course basis, so that the Undersecretary can be responsive to demands of GOE and MOA decision and policy-makers.

8. The Undersecretary requires a high level of technical and financial support under a flexible plan which will permit changes on a relatively short notice to allow him to meet unexpected demands for special studies and reports; in other words, to increase his responsiveness.

9. Increased long-term TA is recommended for NASP; long-term TA should include a senior agricultural policy advisor who is compatible with the Undersecretary and knows how to make the best use of existing data and other information to be responsive to requirements of policy and decision-makers (this position could be

filled by an Egyptian); also needed is a younger but experienced hands-on analyst with policy as well as commodity background to work closely with senior agricultural economists on special analytical problems; also needed and planned for are the services for 2-3 years of an agricultural data base manager from USDA (computer specialist); to be considered for a 2-3 year assignment is a veteran agriculture statistical data collector with experience managing a SRS state office; continuation of the PASA technical coordinator position is recommended, as is sufficient local-hire bilingual secretarial support with computer/word processing experience. All the TA positions should be physically located in the Undersecretary's office.

10. It would be helpful if the University Consortium host country contract to support the ARC could also be accessed for long-term and/or short term TA and training under the new National Agricultural Support project (NASP) to back up the PASA arrangements with USDA; and the reverse would also be helpful, that is using the USDA/PASA to support the Agricultural Research Center with short-term TA and training. This flexibility greatly assist the MOA Project Director and the USAID Project Officer.

11. The resident PASA Coordinator's terms of reference should be rewritten so that he is supervised by the Project Director, occupies space full-time in the Project Director's office, acts as a liason not only between USDA and the MOA but also with USAID and the ARC TA team leader. Regular monthly written progress reports to the Project Director with copies to USAID should be required. Responsibility for bringing any operating problems to the attention of the Project Director should be given to the PASA coordinator.

12. Assuming that USAID is interested in providing maximum support, following is the proposed budget.

Illustrative Budget for OASIS.
1987-1993
(millions of dollars)

	<u>DCA</u>	<u>M/E</u>	<u>User Service</u>	<u>OASIS</u>
A. <u>Technical Assistance</u>	4.3	2.3	3.2	9.8
B. <u>Training</u>	2.2	1.3	1.8	5.3
C. <u>Commodities</u>	0.8	1.1	1.2	3.1
D. <u>Local Currency</u>	0.7	0.3	0.8	1.8
E. <u>Total</u>	8.0	5.0	7.0	20.0

DCA = data collection and analysis

M/E = monitoring and evaluating agricultural policy reforms

US = expected new demands for policy analysis and alternatives

OASIS = total cost

13. The USDA is undoubtedly best qualified to provide the needed short-term technical assistance and training components to support OASIS.

Background

The DCAP grant agreement was signed Aug. 26, 1980. The USDA/PASA agreement was signed in June 1981. The IADS (WINROCK) host country agreement was signed in August 1981. A mid-term evaluation was completed by Pragma Corp. in September 1984. The resident PASA Coordinator was hired soon after and the PACD was extended to Aug. 31, 1987. Eight different USAID Project Officers have been responsible for the DCAP since 1980. The GOE/MOA has had essentially only one Project Director during the same period, since the most recent assumed the responsibility in November 1986. There has been a necessary 10 week freeze in project activities since the appointment of the new Project Director, Dr. Hassan A. Khedr, also the incoming Undersecretary for Agriculture Economics and Statistics. This freeze, to provide a period for reconsideration of DCAP activities, is expected to be lifted soon.

The constant stated objective of the DCAP from its inception has been to strengthen the staff capabilities of the GOE/MOA Undersecretariat for Agriculture Economics and Statistics to collect and analyze data on a timely basis for use by decision-makers to formulate sound policies and programs, and to allocate scarce resources.

It is clearly stated in the DCAP project paper that the two primary elements of the project are 1) to improve the national data base and 2) to develop GOE capabilities to analyze the data collected and to plan programs. It is pointed out in this paper that analysis based on incomplete or faulty data leads to erroneous conclusions.

Files, correspondence, and reports show that the SRS (NASS) arrived in Egypt determined to install an area sampling frame to collect the basic production data. In June 1983, after several years of continuous effort by USDA, including preparation and printing of field questionnaires and training of MOA enumerators in data collection and processing, the MOA finally made clear that they did not and would not support an area frame sample statistical survey. The MOA prefers a list frame. The USDA told the MOA and USAID that USDA/SRS support for helping MOA to build a national data base would be curtailed if the area frame survey was dropped. Apparently there was no real effort on the part of USDA or USAID to reach some compromise position with the MOA. The MOA was backed into a position of defending its existing system and list frame sampling, even though it is accepted by MOA officials that the existing methods and resulting statistics, not based on a probability sample, may not be reliable and that the data is suspect. From mid-1983, the USDA has emphasized the Pilot Study approach and the analysis of data not necessarily representative of the national situation to illustrate analytical techniques. Furthermore, each USDA activity group has continued to collect its own data separately, although much of it could have been collected in a unified master sampling scheme.

The 1984 Pragma Corp. interim evaluation's main recommendations were implemented quickly; 1) to extend the PACD until Aug. 31, 1987, 2) to employ a resident PASA coordinator (Ty Sturdevant), 3) to expand the training component, and 4) to procure appropriate ADP equipment and organize a computer center in the Undersecretariat. Activities under the USDA/PASA have been accelerated since 1984 and much effort has been expended on the pilot study data collection components of the project; efforts in data analysis have not kept pace; very limited data sets have been computerized. The Pragma Corporation report recommended shelving the area frame sample until the GOE concerns were resolved. However, lack of progress on a reliable data base was not mentioned.

Assessment of the Status of USDA Activities and Recommendations Both Short and Medium Term

Everyone directly concerned with the DCAP is satisfied with the success of the training and technical assistance provided by the USDA in pilot study data collection even though there has been no real progress toward a national data base. Also, although Phase I has brought an awareness and understanding of the use of microcomputer technology, the actual use of computers by MOA staff on real problems has been limited.

The data analysis component has been disappointing, and it is this area that will be stressed in the DCAP components to be folded into the NASP, along with elimination of the Pilot Studies and renewed efforts to establish a national data base.

It is not the purpose or intent of this report to point an accusing finger at any individuals or institutions as responsible for the relatively slow progress to date. Perhaps under the several institutional environments pertaining during the life of the DCAP, progress was as great as could be expected. However, because of recent institutional, organizational, personnel, and management changes, particularly by the MOA but also by USAID, expectations now are high that the Undersecretariat of Agricultural Economics and Statistics will soon develop into a dynamic, cohesive data collection and analysis unit (OASIS) capable of responding quickly to the needs of GOE and MOA policy and decision makers, provided USAID and USDA support this unit fully through the NASP.

However, USAID and the MOA should be fully aware that the Undersecretariat for Agricultural Economics and Statistics has yet to develop either a reliable national database using probability sampling for areas in various crops and numbers of livestock or a national objective yield survey to estimate production and make crop forecasts.

As the USDA points out, now that the initial exposure period to micro-computers is over, it is time to develop some structure and order in the use of this valuable tool so as to provide maximum benefits. Since the USDA assessment, the OASIS unit has also secured a more sophisticated mainframe NRC Mini Computer with a number of remote terminals.

Thus, in addition to providing technical assistance, training, commodities, and local currency support for the OASIS information center and for policy analysis, USAID will have to provide unplanned additional inputs to assist MOA setting up a system to collect basic national crop area, production, and yield statistics required for the data base, and other agricultural data on a national basis to provide the inputs for viable policy and program analyses.

For the USDA/PASA activities currently underway, the following recommendations are made with regard to folding them into the NASP:

1. Cost of Production (COP): The COP pilot studies AES begun in the 1982-83 crop season now include a dozen crops and cover 14 governorates; livestock pilot surveys were scheduled to begin in 1987. The accuracy of the COP pilot studies is recognized by the MOA, which adjusts the official MOA cost of production estimates (collected by districts by oral interview) if they are inconsistent with the Agricultural Economics Service / Undersecretariat of Agricultural Economics (AES) estimates. The AES COP surveys can be developed into the official data source, if a national probability-based sampling procedure is developed. This should be done as soon as possible, and livestock and poultry should be included in the base.
2. Farm Income (FI) The activity is in disarray at present. ERS is currently developing a data management system using standard software packages which would limit analyses to key variables. USDA is silent on the quality of the data collected to date for income analysis. As with COP surveys, FI surveys should aim for national coverage on a probability sampling basis and could be collected at the same time as the COP data are gathered.
3. Farm Labor (FL) This activity was started in December, 1985 and is being carried out on only 239 farms in three districts in one governorate. Considerable savings could be effected if the data collection requirements of several activities such as Farm Labor, Farm Income, and Cost of Production could be combined with the overall Master Sampling plan prepared by Dr. Charles Perry of NASS and the resident PASA Coordinator, Ty Sturdevant, in mid-1986. This is a stratified, multi-frame, multi-stage, replicated cluster probability-based sampling plan for national area crop coverage. USDA opposes combining sampling frames at this time, but their objection stems from a desire to develop the individual pilot scale models more fully without having to wait for a master data base.
4. Master Sampling - See above comments. To date, no progress has been made on securing national data using a probability sample. This should have highest priority. Also see item 5 below.
5. Objective Yield Studies - (OY) Although many MOA individuals have been trained in the science and art of crop yield estimation and crop forecasting on all important crops, no actual results have been forthcoming as yet. It is imperative to institutionalize this activity and to devise the sample so as to provide national coverage. This activity goes hand in hand with the master sampling plan.
6. Staff Analysis - (SA) This activity was intended to be primarily a crop situation and outlook reporting system, but success is lacking. Certainly, this is one of the main end-products of data collection and analysis if it is timely and accurate.

7. Marketing Channels - (MC) This effort has concentrated on selected fruit and vegetables, and particularly on the role of prices in determining levels of production and allocation among markets. A lot has been learned, but there is still no viable system in place for data collection and timely dissemination of market prices. This activity could be shelved temporarily, but eventually should be picked up again.

8. Poultry Activity - (PA) This activity has been relatively successful compared to the other efforts. However, the activity needs to be expanded to include the 8 governorates which produce 94% of the eggs, rather than the 2 governorates presently under study. Broiler production estimates also need to be expanded to obtain national estimates. But, in light of the greater need in other areas, it is recommended that this activity be temporarily shelved until an overall data collection system for livestock and poultry is in place.

9. Dairy Activity - (DA) This activity has been carried out on a limited scale and only limited progress has been made to date. This is another activity which could be shelved temporarily.

In summary, data collection and analysis activities of DCAP to be continued under NASP should be modified in favor of securing national probability statistics. In fact, none of the DCAP activities should be continued as individual Pilot Studies; any activities that cannot be expanded immediately to provide national coverage should be shelved.

Status of DCA Project on Nov. 18, 1986 (Based on a report prepared by the Resident PASA Coordinator)

A. Management Structure

The MOA organizational structure of the Project divides activities into two categories, economics and statistics, each headed by a coordinator. In addition, as staff functions, there are the positions of Training Coordinator, Publications Coordinator, Administrative Officer, and DCA Project Coordinator. Data processing, comprising a nine micro-computer processing unit, is directed by a designated administrator.

The position of Economic Coordinator has been vacant for over one year, each activity leader reporting directly to the Project Director. The three economic activities were 1) Marketing Channels and Prices, 2) Cost of Production, and 3) Staff Analysis.

Under the supervision of the Statistics Coordinator, there were eight activities, one of which had four sub-components:

- | | |
|----------------------------|------------------------|
| 1. Farm Income | 7. Obj. Yield Harvest |
| 2. Farm Labor | 8. Obj. Yield Forecast |
| 3. Agr. Census by Sampling | a. Cotton |
| 4. Dairy Survey | b. Wheat |
| 5. Poultry Survey | c. Citrus |
| 6. Regression Analysis | d. Maize |

It should be noted that the first two activities categorized under Statistics are primarily economic activities, while the Dairy and Poultry surveys were a combination of economic and statistics in subject matter. Thus one individual has been responsible for the following activities:

 Statistics Coordinator

 Farm Income

 Obj. Yield Forecasting

 Wheat Forecasting

 Cotton Forecasting

 Data Processing Administrator

This placed too much authority in one person, making the Project over-dependent on one over-extended individual.

While there are many possible ways of arranging the management structure, it would seem more desirable to divide the organization into separate areas of responsibility, each under the supervision of a separate individual. Assignments could then be by function, subject matter, or geographical area.

B. Financial Structure

The Project is funded jointly by USAID and the Government of Egypt, the former by a Grant of nearly \$5 million, with separate budget line items for commodities, training, technical assistance, and local currency project support. Government of Egypt funds are used for salaries, incentives, and other categories not eligible for USAID expenditures.

While it is not possible to project USAID fund expenditures accurately until the short-term plan-of-action is approved, it is feasible to make a projection based upon existing and expected commitments and events likely to happen before the project terminates. Surpluses (+) or deficits (-) by line item are projected as follows:

Local Currency, Project Support	+ \$81,515
Commodities	+ 511,390
Training	- (47,270)
Technical Assistance	- (288,415)
11-18-86 Current Project Net Total	+ \$257,220

The \$257,220 is not surplus to Project's needs, but merely the balance expected to be available after all commitments and planned expenditures are met.

This indicates a need for two courses of action: 1) determine priority of needs for items not already committed, and 2) authorize transfer between line items to cover commitments and planned further expenditures.

While there is a projected surplus of funds in the Local Currency line item, funds have not been available to the Project for a period of about two months. This has been because required reports, certifications, and requests to USAID had not been submitted during the prior quarter. Background information concerning this matter has been reported previously to the Minister and the matter is expected to be resolved shortly, with the cooperation of the previous Administrative Officer and the former Project Director. Since all funds appear to have been spent for proper project purposes, it is only a matter of satisfying USAID's and MOA's administrative requirements.

The GOE budget has been overspent by approximately LE 120,000 as of November 18, 1985. Besides the high level of monthly incentive payments (about LE 30,000), the situation was complicated by the assignment of former ADS economists to the DCA Project without providing additional GOE funds. Hence the need to temporarily suspend project activities during the assessment period by the new Project Director was an imperative.

C. Technical Status

There is no question that during Phase I (1980 - present) of the Project, a large amount of technology transfer took place, mostly acquired by individuals but not put together to form a cohesive unit. Field procedures and laboratory techniques have been mastered and study of the theory of crop forecasting model building was begun by members of the objective yield forecasting team. Survey methodology and some analytic techniques have been learned by members of the Cost of Production and Farm Income groups. Dairy and poultry survey teams worked jointly with their USDA counterparts to initiate pilot surveys. Market channel studies and market news surveys have been conducted in consultation with USDA experts. A cadre of persons have been training and gaining experience in the use of micro computers. To a lesser degree, the staff has learned some techniques used in economic analysis. In summary individual staff members have gained a wide array of skills, knowledge, techniques, theories, and experience during the Project, but there has been only limited progress towards institution building, and very little progress toward building a national agriculture data base.

There also are a number of specific deficiencies that should be noted. Foremost, there is no effective unit in the organization with the ability to design efficient sampling plans, or even to demonstrate an understanding of modern sampling techniques. Most of the survey samples have been drawn from incomplete and out-of-date lists, or have necessitated expensive list building process. A number of samples have been drawn for convenience, rather than being made on a probability basis. Statistical analysis has been, for the most part, largely ignored, giving users no confidence intervals to interpret the precision of estimates. This may have been partly because until 1986, almost all survey results were hand tabulated. Even with the introduction of computerization, there was a general lack of standardization or uniformity, and no data processing supervisor was designated. Available and recommended software packages were usually ignored in favor of specific programs written in elementary language, which prohibited easy extraction of data for use in other programs. There is an obvious need for discipline, training, and supervision in the data processing area. The analytical work consisted mostly of academic classroom-type exercises useful for training but of little practical value.

Survey management progress leaves much to be desired. In place of effective systems design, there is supervision only of component parts of the surveys. Early entry of individual questionnaires, use of edit checks for early resolution of errors, rapid processing, and quick reviews to produce timely and reliable outputs are all needed.

No apparent effort has been made to match data output with information needs. Most activities have commenced and expanded on an ad hoc basis and on personal whims. Very little information is released on a timely or scheduled basis. Records are maintained in manually entered ledgers which require recopying from time to time. Economic analyses have been inordinately delayed and do not demonstrate advanced methodology or in-depth comprehension. Many analytical skills and techniques must be learned and developed before the staff analysis unit will be in a position to produce timely and valuable reports.

Serious gaps appear in the agricultural information being gathered. For example, objectively determined estimates of post-harvest losses must replace the traditional rule-of-thumb measures currently used. Other examples of gaps are: lack of objectively determined cropping pattern information, unavailability of location, condition, quantities, and value of agricultural production inputs. In summary, there is an obvious need to prioritize data supply in accordance with information demands. With limited resources, there must be greater planning to maximize effectiveness and to serve the information-seeking community.

The single greatest shortcoming of the DCA to date is the failure to establish a statistical data base using a probability sample and integrate the present 100 percent oral interview enumerated census with USEA activities or to install a substitute. This failure was the result of USDA's refusal to abandon the area frame sample in the face of COE resistance until Fall 1983. When the COE failed to accept the Perry proposal as an alternative to the area frame, USDA continued the Pilot Studies, which, though excellent to train in techniques, have contributed little to building a national data base.

USDA 1986 December Issues and Recommendations

The USDA in December 1986 also prepared a set of recommendations to resolve general issues (as seen by USDA) impeding progress of the DCAP. These comments are generally to the point. One can only wonder why this self-appraisal was not made earlier in the life of the project.

(Comments in brackets are Ralston's)

1. Issue: Pilot activities (studies) limit effectiveness of results.
 Solution: Expand priority (pilot) activities to national coverage
 (This is the single most important issue and also my recommendation)

2. Issue: Inadequate integration and coordination of economics and statistics.
 Solution: Establish steering committee of all disciplines at working level.

 (This is probably no longer needed now that Undersecretariat is under new management; also, the COE DCA assessment team will continue as an advisory team to the Undersecretary; however, consideration should be given by Dr. Khedr to organizing a Computer Center users' committee reporting to him or Dr. Sharaf to ensure that users' needs and concerns are given due consideration in setting policy for computer center operations.)

3. Issue: Project has limited influence on policy.
 Solution: Strongly support location of policy analysis unit in Undersecretariat. Planning of new DCAP activities should emphasize strengthening policy analysis (and formulation).

4. Issue: Project suffers from inadequate planning and preparation of training (trainees).
 Solution: Don't allow training until preparation work is done and English is adequate.
 (MAO should not send off ill-chosen, ill-prepared participants. Terms of reference for participants should be tightened up by Undersecretary and USAID).

5. Issue: Lack of dissemination of data and research findings.
 Solution: Make products available, use word processing, seminars, and workshops.
 (This area will be strengthened in Phase II.)

6. Issue: Need for probability samples.
 Solution: Place sampling on a sound basis, test Perry proposal for expanding pilot master frame to national coverage.

(This should be the single most important goal of any DCAP activities under NASP. An effort should be made to determine if the existing MOA enumeration system can be converted in to a more reliable probability sample.)

7. Issue: Data processing and management are key to making results useful for the policy-making process.
 Solution: Standardize formats (software), enter data into computer directly from field forms, use data checks and edits, and use written instructions to operators.

(Standard software will permit combining data collection for several activities and thus reduce cost; exotic programs should be deferred.)

8. Issue: Need for quality-control awareness and process.
 Solution: Develop strong quality-control program in data collection, handling, processing, and retrieval.
 (This should be possible under the OASIS umbrella with Dr. Sharaf's leadership.)

9. Issue: Ability of USDA to participate in expanded project (new DCA under NASP) depends upon USDA participation in planning.
 Solution: Include USDA in planning, follow work plans as closely as possible, notify USDA early of changes (in work plans and schedules).

(The available remaining funds in the USDA/PASA probably would be best spent by USDA working closely with the Undersecretary and USAID to prepare new work plans and schedules aimed at obtaining national coverage data using probability sampling for those present activities that will be continued and to plan for the analytical activities to be restarted soon. Planning and scheduling TA and training for the DCA components of the new NASP should also be done during this period.)

The Jim Ryan, ERS, trip report of Nov. 2-20, 1986 on Cost of Production (COP) data processing, including the Lotus Budget Generator program, clearly highlights a principal constraint on the transfer of this and similar technology. That is, it is of the utmost importance that local staff be thoroughly trained before trying to go operational. In the instance cited, the COP staff not only were not fully familiar with general Lotus operating procedures, which are not particularly user-friendly, but certainly did not fully grasp the intricacies of modifying the general Model, with the result that the formulae embedded in the program were destroyed when data were entered in cells originally containing formulae. Templates have since been created by ERS to prevent these unfortunate occurrences from being repeated.

Lotus tutorial diskettes were provided to the COP staff in early 1985, so it is apparent that either insufficient time was made available for self-teaching or a more formal training schedule is needed. Ryan suggests that specific times and machines should be dedicated to training on the Lotus 123, d Base III, and WORDSTAR. Jim Ryan and Ty Sturdevant, together with Dr. Mansour, have developed a plan which, if followed closely, should result in a fully trained COP staff which will be responsive to the needs of MOA decision-makers.

Larry Pope, NASS, formerly SRS, who had made three trips to Egypt supporting the Citrus Pilot Study, spent 10 days in December 1986, at the request of the new DCA Project Director, assessing the data bases of several divisions in various Undersecretariats of the MOA, including the Agricultural Statistics Division of the Agricultural Economics Undersecretariat. His report follows (paraphrased by Ralston):

MOA has a vast data base available. The accuracy of the data collected is variable, and is suspected of being of lower quality than it actually may be. Although many data are collected, a large amount cannot be accessed or utilized readily, and so the major benefits are lost. In fact, the effort to gather so much detail has a negative effect on the quality of the important data and on its use, since users cannot spend the necessary time verifying its accuracy. Also, the data need to be processed and stored in computers to provide easy access to users. Data stored in ledgers by hand-listing cannot be accessed easily enough to be of general use. (Similarly, data collected in Pilot Studies has very little application to the requirements of planners, analysts, and policy makers. The main value of Pilot Studies is as an opportunity to master the analytical techniques.) Sooner or later, valid national data collection systems must be installed, either through some form of partial probability sampling or through 100 percent surveys; the former are almost universally used to balance cost with accuracy of data needed. Probability sampling can be area frame using aerial photography or some form of stratification and random selection of villages and households. All data need to be verified by field checks and, of course, objective yields must be determined by crop cutting following accepted statistical procedures.

1987 GOE/MOA Assessment of the DCAP and Recommendations
for Future Data Collection and Analysis Activities
under the Revised NARP

The final report of this assessment team will not be available until after the short-term consultant (Ralston) leaves, but interviews with key individuals have produced strong opinions on the success of DCAP to date as well as strong recommendations for future DCAP-type activities to support the newly formed Official Agricultural System for Information Services (OASIS) in the office of the MOA Undersecretary for Agricultural Economics and Statistics and also the national agricultural statistics data collection, processing and retrieval sections of the Undersecretariat.

These key individuals include the members of the Assessment Team, particularly Dr. Osman El Kholi, President of Menoufia University and long-term consultant to the Minister of Agriculture, who participated fully in the preparation of the DCA Project Paper but who had no direct role in implementing the project; and, Dr. Hanaa Kheir El Din, Professor of Economics, Cairo University, long-term consultant to the MOA and outstanding macro economist. Also, Dr. Hassan A. Khedr, formerly First Undersecretary for Cabinet Affairs to the Minister of Agriculture and now Undersecretary for Agricultural Economics and Statistics and DCA Project Director since mid-November, 1986.

GOE/MOA Assessment Team for DCAP *

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Dr. Bakir Otief	Professor Emeritus, Cairo University
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Dr. Hanaa Kheir El Din	Professor of Economics, Cairo University
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Dr. M. Fabeen Sharaf	Director, AEKI - ARC - MOA
Mr. Tyler R. Sturcevant	Project Coordinator (ex-officio)

* The Egyptian members will continue to function as an advisory group to the Undersecretary.

Following is a summary of Dr. Osman El Kholi's views regarding DCA progress:

- no coordination of DCA with existing, long-established MOA data collection system
- all DCA data from pilot surveys not representative of the national situation
- DCA under NASP needs to strengthen data base and coordinate efforts with existing data collection system in the field
- existing livestock and fishery statistics are weak and should be strengthened
- MOA crop production estimates are suspect and generally not accepted by decision makers
- OASIS data collectors and processors need to work in USA on actual field surveys to learn first-hand how to use modern techniques and tools
- Dr. Osman suggests sending 4-5 individuals from each Undersecretary for Ag Economics and Statistics section or a total of 30-40 to the USA for this basic training (Osman indicated he had recommended this action back in 1980/81 to no avail).

Dr. Hassan A. Khedr in three interviews expressed firm views which indicated his incomplete satisfaction with DCA progress to date; he volunteered that there have been serious managerial problems on both the GOE and the USG side, but he wants to concentrate on how to move forward, not to discuss the past. He would like the DCA activity to return to the original concept which was to create a sound data base for an agricultural information system responsive to user needs and responsive on a timely basis to the needs of decision and policy makers in the general area of policy analysis and formulation, as well as to monitor and assess results of the major agricultural sector reforms underway.

Dr. Khedr articulated his need for increased USAID support under NASP in the form of

- long and short term consultants to assist in data collection, handling, storage, and processing, policy analysis and formulation
- off-shore and in-country training, particularly in data collection and handling and in analytic techniques such as crop forecasting
- commodities, including computer terminals at the Governorates
- local currency project support particularly for data collection, car rental, travel, per diem, and the hiring of local expert consultants and even long term advisors
- the figure of US \$20 million over the 6 year NASP project life was mentioned

In the future, Dr. Khedr would like to draw on short-term technical assistance from universities and the private sector as well as USDA; he expressed satisfaction with the general high caliber of USDA personnel assigned to work on DCA.

We discussed the following long-term advisor positions:

1. - Senior ag. policy analyst (such as Lee Fletcher)
2. - Experienced, but more junior commodity analyst - ag. economist (such as Gary Volke)
3. - Ag. data collection specialist (such as Dan Tucker)
4. - Ag. data storage, processing, and retrieval specialist (USDA direct hire data processor)
5. - Technical Coordinator for DAC/PASA, APC support and liason between MOA/USDA.USAID (such as Ty Sturdevant)

Hi-level statistical advice would be secured on a short term basis.

Dr. Khedr emphasized the need for the decisions on TA to be made jointly with USDA based on MOA need and terms of reference including accessing by USDA, U.S. universities, and the private sector talent.

With regard to training, Dr. Khedr stated that past DCAP emphasis has been on statisticians rather than on economists. He would like to realign the training program in consultation with USDA and his long-term consultants.

Recently, the Agricultural Economics Research Institute (AERI) of the Agricultural Research Center of MOA has been transferred to the building as the Undersecretary for Agriculture, Economics, and Statistics. Dr. Hassan A. Khedr, the Undersecretary, has appointed Dr. M. Faheen Sharaf, the Director of AERI, to be a member of the DCA Assessment Team; these actions not only bring closer together the two agricultural economics organizations of MOA, but also provide additional trained staff, particularly agricultural economists, needed to fulfill Undersecretariat responsibilities of back-stopping the agriculture sectoral reform program described in the APCP.

Just prior to the change in DCAP Directorship on November 18, 1986, a total of 10 USDA people visited Egypt for 162 days in November; most arrived before November 18 even though it was known that a new Director with different ideas about managing the project would soon be appointed. This USDA group included three representatives from OICD, ERS and NASS, respectively, on a general project support visit. Naturally, Dr. Khedr could not meet with the USDA people formally prior to the confirmation of his appointment. Immediately after being appointed, he placed a temporary freeze on all operations. The freeze will be lifted soon.

Dr. Khedr did meet informally with the USDA contingent, but no decisions were made except to defer any planned USDA visits until after the freeze and until after consideration of each activity. Dr. Khedr made clear that most of the pilot scale studies would be deferred at least temporarily and that USDA efforts for the remaining period of the DCAP agreement would be directed primarily toward strengthening the national statistical data base and training Undersecretariat staff in data handling, processing, and retrieval, particularly using the new mainframe NCR, and in crop objective yield forecasting, national objective yield determinations and economic analysis.

It is also recommended (by Ralston) that the national agricultural sample survey proposal by Dr. Perry of NASS be tested for possible general use in Egypt. It is accurate, a probability sample, compatible with the existing enumeration system, economic, and should provide annual data for publication and provide the data base needed for policy formulation and verification of sectoral reforms.

As soon as possible, the DCAP support group in USDA/Washington should be invited to come to Cairo to meet with DR. Khedr and his advisors and staff to work out a schedule for both technical assistance visits and stateside training to support the programs that the Undersecretariat will be carrying out during the coming 6 months. The priorities should be to establish a national data base using probability sampling, and to develop the capability of the Undersecretariat computer staff to process the data and the capability of the economic staff to analyze the data and draw accurate conclusions.

At the same time, this group should assist Dr. Khedr and USAID to prepare a longer-term year package of TA and training under the PASA agreement to provide the long-term resident experts plus the backup short-term technical specialists needed to build the capabilities of the Undersecretariat to the level necessary to fulfill the new responsibilities assigned by the Minister of Agriculture. The in-country and off-shore long and short-term training needed to support the technical assistance program should also be considered and a plan prepared. These are the activities to be included in NASP to support OASIS and the APC project.

The short-term TA and training plans and schedules should be flexible so that they can be adjusted depending upon the progress made in attaining established goals which will be used as conditions precedent for moving on to the next and more advanced step. There should be provision for changes in emphasis and programs as circumstances change or as the Egyptian decision-makers demand answers to new questions. Also, the Undersecretary for Agricultural Economics and Statistics or his representative should participate in the selection of individuals to work in Egypt. There should be provision for OICD to hire both university professors and/or private sector consultants for both long and short-term PASA assignments. Annual reassessment of the plan and schedule should be undertaken and should reflect the progress of the Undersecretariat in learning and utilizing new skills and in meeting assigned responsibilities.

Proposed Plan and Budget for DCA-type activities considered vital to the success of the new National Agricultural Support Project with regard to improving the capabilities of the Undersecretariat for Agricultural Economics and Statistics to establish a national agriculture data base; to store, process, and retrieve the data in usable form; to analyze the data and to produce viable policy alternatives; and to monitor and assess on-going and planned agricultural sectoral policy reforms, include:

- A. Technical Assistance - long term - 5-6 years
1. One resident senior macro-economist with recognized, proven stature in agricultural policy analysis and formulation to work closely with the Undersecretary. This individual must be mature, with international experience, and personally acceptable to the Undersecretary. This is a position of trust, and the incumbent must work 100 percent for the GOE. This person will act as a sounding-board as well as an idea man vis-a-vis the Undersecretary and the Minister; could be an Egyptian.
 2. One resident economist/analyst with proven experience in both micro and macro economics and in commodity analysis; a hands-on individual fully familiar with the use of computers, a person used to working quickly to meet deadlines and who can adapt his output to the available time, responsive to the needs of management and able to anticipate these needs. Must work well with others, particularly those with lesser technical capabilities whom he will be expected to train on-the-job, must have overseas experience and be willing to work 100% for the GOE, recognizing the importance of political vs. economic decision-making. Long-term 5-6 years.
 3. A resident agricultural data collector - agricultural surveys advisor, probably someone who has been in charge of an NASS or State field data collection and processing center; a person with some statistics background but primarily a sampler; one who is willing to go to the field when necessary; someone who can look at a number and immediately know whether it is realistic or not; someone who likes people more than data, with international experience and a proven reputation for competence. Long-term 4-5 years.
 4. Data Center specialist familiar with micro and mini computers and handling national agricultural data sets, able to transfer personal knowledge and skills to others, with international experience, teaching/training experience, able to interface between potential users and the data base, familiar with all standard programs such as LOTUS 1, 2, 3, d Base, and Wordstar - long-term 2-3 years. USDA has offered to provide a very outstanding person for 2 years under the PASA.

5. Technical PASA Coordinator. Must have background in data collection and analysis; a generalist able to interface between MOA, USAID, and USDA; experience in Egypt important; familiarity with USAID, MOA, and USDA paperwork and documentation helpful.
6. Bilingual stenographic/clerical help - local hire - must be proficient on word processor and know how to access micro and mini-computer for life of project.

NOTE: All 5 long-term positions are physically located in the office of the Undersecretary for Agricultural Economics and Statistics, MOA.

B. Short-term TA

To be determined later for inclusion in the NASP Project Paper.

Proposed USDA/USAID PASA
 (If it is decided to Continue USDA Assistance)
 Component within the new
 National Agricultural Support Project
 (NASP 263-xxxx)
 for

Agricultural Data Collection, Economic Analysis,
 Data Base Management, and Monitoring Policy Reforms

Objective: Assist the Ministry of Agriculture to develop staff and institutional capacities in the fields of agricultural statistics, economic analysis, and agricultural data base management. Help the Ministry of Agriculture to implement an effective system for monitoring the progress of NASP and APCP (policy reforms).

USDA Assistance: Technical assistance and training will be provided as follows:

1. Agricultural Statistics

- Technical assistance in the development or improvement of national sample design, data collection procedures, analysis and estimation techniques, and report preparation and publication.
- Technical guidance in the development of timely and reliable forecasts of major crop production.
- Technical assistance in methodology for producing current and reliable estimates of numbers and products of cattle and poultry.
- Assistance in the development of a sound and efficient integrated system for producing estimates of cost of production, farm income, and farm labor factors involved in major crop and livestock products.

2. Agricultural Economic Research

- Assistance in the development of economic surveys and guidance in sound and comprehensive economic analysis of survey results.
- Development of a system of preparing timely situation and outlook reports for all major crops and livestock and for all major production input items.
- Development of staff capability for rapid and thorough responses to Ministerial requests for potential economic impacts of alternate government policy reform actions.

3. Data Processing

- Guidance and direction in the operation of microcomputers used for field data inputs, data editing, analysis, and summary preparation, data storage, including proper maintenance, direction, and management.
- Establishment and temporary management of a mini computer center capable of maintaining an agricultural data base for Egypt for current and historical data.

4. Monitoring

- Guidance and direction in establishing and implementing a monitoring system to provide measurement of project accomplishments compared to project benchmarks, as defined by project managers, using the skills and facilities available within the Undersecretariat for Agricultural Economics and Statistics.
- Data collection and analysis of adoption rates and yields obtained by farmers using the improved technologies.
- Guidance and direction in establishing a system to monitor and assess the impact of government reform measures.

Responsible Agencies:

On behalf of the USDA, under the coordination of the Office of International Cooperation and Development (OICD):

- National Agricultural Statistics Service (NASS)
- Economic Research Service (ERS)
- Office of Information Management (OIRM)
- University of Maryland, College Park, Office of International Relations, under Cooperative Agreement with the USDA. (UMD)

On behalf of the Ministry of Agriculture:

- Under the direction of the NASP Project Director, the Undersecretary for Agricultural Economics and Statistics

Responsible Persons:

On behalf of USDA, under the coordination of OICD, the Technical Resident Coordinator, NASS, ERS, and OIRM, as assigned.

On behalf of MOA, under the direction of the NASP Project Director: the Undersecretary for Agricultural Economics and Statistics.

Time Frame:

Beginning Sept. 1, 1987 and extending to the PACD of NASP.

Justification and Relation to Other AID/Egypt Projects:

As described in the USAID Project Paper, National Agricultural Research Project (263-1052), there is a need to strengthen the capacity of the Ministry of Agriculture for a thorough and systematic analysis of economic issues, identification of agricultural growth opportunities, and formulation of actions necessary to sustain long-run growth of the agricultural sector in Egypt. The USDA, by virtue of its professional capability and experience in the USA and abroad, possesses the unique capability to assist the Government of Egypt in meeting that need.

This proposed subcomponent of NASP is intended to continue the institution building already started under the Data Collection and Analysis Project (263-0142) to develop the MOA's crop and

livestock reporting system and its capability for economic and policy analysis. The results of these developments will be available for other components of the NARP through the development of an Agricultural Data Base Management Center, where a vast array of agricultural data will be processed, stored, analyzed, and readily available for rapid retrieval and dissemination.

Implementation:

The Data Collection and Analysis (DCA) Project is scheduled to be terminated on August 31, 1987. To provide a smooth transition to NASP, the activities should continue generally as scheduled by the Egyptian DCA Project Planning Conference held in Washington, D.C. in March 1987, as modified by the Planning Review Meeting held in Cairo in November 1986, and subject to approval of the Project Director, the Undersecretary for Agricultural Economics and Statistics of MOA, and the USAID Project Officer, taking into account the recommendations of this report.

Office of the Undersecretary for
Agricultural Economics and Statistics

OASIS

Data Collection and Statistics

- Existing data collection system
- New national probability statistics by sampling
- 10 year agriculture - 100% census
- National objective yields by probability sampling
- Sample surveys
 - cost of production
 - farm gate prices
 - labor utilization
 - farm income
 - special commodity studies
 - marketing margins
 - time series

Data Management - Computer Center

- Storage, handling
- Processing, retrieval
- Graphics
- Eventually to be tied to GOE Cabinet Computer Center
- Eventually to be tied to remote stations in governorates

Micro Economic Analysis

- National area, yield, production by size of farm - region - etc.
- Crop and livestock reporting calendar
- Crop and livestock production forecasts
- Situation and outlook reports
- Commodity analysis - price analysis
- Cost of production analysis for ARC practices, farming systems
- Food balance sheet
- Supply and utilization tables for major commodities, annually

Macro Policy Analysis

- Establish benchmarks and verify GOE sectoral reforms
- Monitor and assess impact of economic reforms
- Determine expected impact of alternate policy changes
- Prepare staff position papers for MOA decision-makers
- Follow world agricultural trade and determine GOE policies

(USAID Jargon and Format)

Official
Agricultural Sector Information Service
(OASIS)
Component of
National Agricultural Research Project

I. Background

The problems which will be addressed by this project component are threefold: (1) The lack of timely, accurate agricultural area and yield data and the absence of systematic economic analysis for agricultural policy determination within NASP; (2) the lack of reliable and timely economic information specific to GOE/MOA needs, including the monitoring of indications that Project objectives have been met; (3) the needs of organizations outside the Ministry of Agriculture, including other governmental ministries, international organizations, foreign governments, institutions of higher learning, and the private sector, particularly to monitor and assess the impact of on-going and planned agricultural and related policy reforms.

(a) Continuation of selected DCA activities. Systems need to be developed to continuously analyze changing consumption requirements and production possibilities. While there are clearly identified technological and economic potentials in field crops which can now be exploited, there are continuing needs within the Ministry of Agriculture to evaluate the economics of other production potentials within the total farming system. Marketing issues for inputs and products also need to be addressed. This implies that the data being collected should be from probability based samples with measured accuracy and precision.

(b) NASP support. The various other components of NASP require information upon which to make planning decisions. Also, to determine whether or not program objectives have been met, there needs to be a system of monitoring which will clearly show such measures as improvement of yields, changes in prices, increases in farm income, and other objectively determined parameters. Up until now, these have been hard to find, especially based on current and reliable data.

(c) External linkages. There has been no shortage of economic analysis of Egypt's agricultural problems and potentials. What has been in extremely short supply has been the reliable and timely data necessary to do analysis properly. The needs of data users outside the Ministry should be adequately met for Egypt to benefit most from their efforts. This can be done in various ways, such as distribution of previously prepared information sets, custom analysis of parts of the data base, or contracted surveys to obtain specific information. Such services could be on a cost reimbursible basis to the Agricultural Sector Information Service. Such a service would be added confidence for private investors. National and international organizations should be given the basic data needed to support GOE efforts to improve Egypt's agricultural economy.

II. Purpose and Level

The purpose of this component is to develop the MOA's system of data collection and analysis to be specifically address to the needs of the policy decision-makers in the MOA, to serve the entire NASP in supplying information and providing a monitoring service, and to monitor and assess agricultural sector policy reforms. OASIS will serve to consolidate, continue, and greatly expand the capabilities and improvements effected under the Data Collection and Analysis Project (0142) and the policy analysis component of the Agricultural Development Systems Project (0042), as well as serve the policy reform component of the Agricultural Production Credit Project (0202) and commodity analysis and verification of results of the Agricultural Research portion of the NASP project.

III. Rationale

Government interventions of the past several decades have created a mixed-market orientation for agriculture. There are the relatively free but heavily subsidized livestock and horticultural sectors coupled with a set of government administered prices and controls, partly offset by heavy government subsidies for irrigation, fertilizer, farm credit, and diesel fuel which make it more profitable to produce fodder rather than long staple cotton. In return for these subsidized inputs, the farm prices of cotton, wheat, and rice have been controlled at less than international levels. Various food prices are subsidized at the consumer level, particularly those of bread, rice, sugar, cooking oil, tea and meat. In addition to direct food subsidies, the government also maintains a large import program for poultry and cattle feed, for wheat and wheat flour, for meat, milk, and dairy products. Temperate climate fruit is also imported, as are oilseeds and sugar.

The policy of providing essentially low cost food to consumers has become an institutionalized fact of social/political life in Egypt. Rural and farm families also benefit from these programs (as they do from subsidized staples and potentially lower prices for some items such as milk, meat and poultry products which receive a degree of protection through restriction on imports).

In the case of any country with large and growing food and balance of payments deficits, there is an impetus to provide sector-wide analysis for both the agricultural production and consumption sectors. For example, Egypt has historically had a comparative advantage in production of long staple cotton. Whether this crop - with its very long growing season - should be increased at the expense of clover, which would require added red meat import is a classical example of the need for analysis to back up the obvious conclusion that Egypt should grow more cotton and less clover. Economic analysis of this question using reliable data should also provide measurements of the impact of such a policy change on other segments of the economy, particularly consumers.

The point to all of the above is that there is more than the usual demand in Egypt for agricultural economists and crop and livestock experts to provide sectoral and farm management information to producers on the one hand, and timely, accurate data and analysis to decision makers on the other. A very large set of direct market interventions exists; as well as regulatory decrees which affect resource allocations in one way or another. These also need to be analyzed, as they affect productivity, national income, farm income, consumer prices, and the balance of trade.

In recognition of the important role of economic analysis, the Ministry of Agriculture (MOA) has had two primary units which address the problem. These units are the Agricultural Economics Research Institute (AERI), a part of the Agricultural Research Center, and the second is the Office of the Undersecretary for Agricultural Economics and Statistics, a part of the central MOA structure.

AERI is primarily responsible for micro agricultural economic research, and the MOA unit is primarily responsible for data collection, the agricultural census, foreign market studies, and macroanalysis. The relationship between the two has been somewhat analogous to that between the Economic Research Service (ERS) and the National Agricultural Statistics Service (NASS) and the Foreign Agricultural Service (FAS) of the USDA. ERS performs policy analysis, NASS collects the data for such analysis, and FAS handles Foreign Trade data collection and analysis.

Recently, the AERI was transferred to the same building as that of the Undersecretary for Agricultural Economics and Statistics, and the head of AERI has been named the Director of OASIS, the Undersecretary's new information service unit. Other AERI staff economists have been designated coordinators of activities under the Undersecretary's direction.

Combined, these two organizations have the capabilities and resources necessary to do more than supply the Ministry of Agriculture's needs for data. Trained enumerators are in place in each governorate, sample and survey design capability and data processing facilities exist in the Undersecretariat, and analytical capabilities in both AERI and the Undersecretariat. What is needed are the added USAID resources and direction to use these capabilities to fill the previously described needs of the NASP, the ARC, the APCP, and the MOA in general. This means that by using facilities and staff already in place, the entire agricultural sector data and analysis needs can be met. The major benefactor will be Egypt, through justified international assistance, data supported privatization efforts, agricultural policy decisions based upon sound data, and accurate verification and assessment of the GOE economic reforms package.

IV. Program Description

This component is designed to take advantage of the activities previously undertaken under the DCA project to improve the data collection and analysis capability of the Ministry of Agriculture. Principal activities under the proposed NASP program will be:

1. Agricultural Data Management

This component will improve the system of collection, processing, storage, retrieval, and dissemination of needed agricultural and food consumption data as follows:

- (a) Continue to refine crop area and yield estimates and publish general production statistics based on a probability sample;
- (b) Develop reliable, efficient sampling frames for both routine and special studies on items such as farm input use, food consumption, income, farm labor, dairy production, poultry production, marketing surveys, and for agricultural census type surveys;
- (c) Refine national agricultural income estimates (particularly livestock and poultry production and feed accounts);
- (d) Refine short-term policy analysis, and provide periodic situation and outlook reports for specific commodities;
- (e) Establish a computer center and database for rapid processing, storage, retrieval and dissemination of agricultural information for users;
- (f) Based upon designated program objective indicators, design, test, conduct, analyze, and present objective indications of the degree of achievement of the various components of NASP, ADCP, ARC and broad economic reforms;
- (g) On a cost-reimbursement basis, as resources and time permit, design, test, conduct, analyze, and present results from special surveys requested by members of the agricultural sector outside the Ministry of Agriculture and;
- (h) Monitor and assess impact of agriculture sector reforms.

2. Agricultural and Food Issues Policy Analysis

This component will support the economic and farm management requirements of NASP, the analysis of alternative economic requirements of NASP, the analysis of alternative economic policies and supporting information necessary to meet the objectives of the Agricultural Development Plan and the policy reforms tied to the ADCP. Based upon data collected in the improved crop reporting system described above, the component will produce the following and other analyses:

- (a) Costs of production of various crops and livestock;
- (b) Sector modeling - in addition to cropping pattern formulation;
- (c) Estimates of food consumption requirements;
- (d) Investigations of effectiveness of existing or potential regulations and government decrees as they promote or inhibit agricultural growth;
- (e) Alternatives to the existing mix of public sector / private sector roles in the agricultural and food areas; and
- (f) Synthesize and up-date, where necessary, policy studies produced under the Agricultural Development Systems Project (0042).
- (g) Provide alternatives to GOE agricultural and related policy reforms.
- (h) Verify GOE policy changes.

V. Project Inputs for Agricultural Sector Information Sector Component

The location of this component will be the office of the Undersecretary for Agricultural Economics and Statistics.

For planning purposes, NASP project inputs will be allocated separately to the four subcomponents: (a) data collection, (b) data analysis, (c) APCP reform monitoring and evaluation, and (d) macro policy studies.

1. Technical Assistance

It is planned that U.S. technical assistance will be provided through a series of contractual arrangements drawing on experience gained under the existing data collection and analysis project. These are:

A USDA/PASA or other arrangement with the private sector or university consortium for assistance in Agricultural Sector Information Service and related subcomponents with the Undersecretariat

-Long term technical assistance (xx) person years and a considerable amount of short-term technical assistance (xxx person months) will be provided under a previously arranged USDA/PASA for two years in data collection, processing, analysis and dissemination. Assistance will also be provided in processing trainees for the overall component and bringing in specialists (not otherwise provided for) in economic analysis.

There are certain short-term personnel assignments, equipment procurements, and technical implementation assignments that correspond to strong capabilities in the private sector. These aspects of the project will be advertised and contracted for USDA with the most highly qualified persons, firms, or universities.

2. Commodities

Most project commodities will be procured by the MOA utilizing AID procurement procedures established in Handbook 11. Specialized commodities will be procured by the contractor(s). Prior AID approval will be required for all procurements and awards in excess of \$50,000 or the Egyptian pound equivalent. Contracting procedures will also be approved by AID for those host country procurements of either goods or services in excess of \$10,000.

3. Training

Arrangements for offshore training will be the responsibility of both contractors in collaboration with USAID. The training activities would be carried out by universities, USDA, or the private sector as appropriate and decided upon by the component managers. In-country training will be coordinated by the MOA through appropriate existing training facilities, e.g. CAMD, AMRI, and NRI in collaboration with the technical assistance contractors. Disbursement will also be the subject of a condition precedent in the grant Agreement, to assure development of effective training plans. Funds for in-country training will be released directly to the MOA on the basis of agreed-upon training plans.

4. Local Currency Program Support

Several types of other costs will also be funded by AID. The participation by Egyptian non-GOE personnel (local consultants) in analytic and planning activities at total cost of \$XXX,XXX is budgeted over the six year period. For the conduct of special surveys, the amount of \$XXX,XXX is included. A total of \$XXX,XXX is provided for an administrative person to assist with necessary planning and scheduling of short-term technical assistance personnel and with overall project operations, as well as local hire secretarial support for U.S. consultants. A total of \$XXX,XXX is provided for miscellaneous items, such as rental of vehicles, reproduction, purchase of publications, survey equipment and supplies, local travel, communication, computer terminals at Governorates tied to OASIS computer center, etc. A total for this category for the entire period amounts to \$1,800,000.

5. GOE Inputs

The major GOE contribution to the project will be a total of approximately XXXXX person-months of professional staff time at an estimated cost of \$XXX,XXX excluding inflation and contingency. An equal level of support staff is projected at \$XXX,XXX. All salaries and incentives for GOE personnel will be paid by the Government of Egypt. In addition, the GOE will provide office-space for consultants, salaries for trainees, support in-country training, computer use, operating costs and miscellaneous support valued at \$X,XXX,XXX.

VI. Responsibilities

1. Specific AID Responsibilities

The USAID/Cairo Associate Director for Agriculture, or his designee, will have AID management responsibility. Day-to-day monitoring will be performed by an appointed USAID Project Officer. Projected budgets and implementation plans, and annually updated operating plans and budgets, prepared by MOA, and consultant staff will facilitate management and monitoring. Technical backstopping will be provided by the USAID, the Project Officer and other USAID offices as required.

2. GOE Responsibilities

The MOA will be responsible for necessary internal organizational adjustments under the component to allow the data collection assistance and economic advisory assistance to be carried out effectively and to set up the channels for their effective communication and use. This will include arranging for cooperative efforts with individuals or groups outside the MOA, and particularly with the Agricultural Research Center.

The MOA will carry out its role through the efforts of the Undersecretary for Agricultural Economics and Statistics, and the Agricultural Economics Research Institute (AERI), which is now located in the same space as the Undersecretary's office. The office of the undersecretary will have the direct responsibility for data management and economic analysis, recommendation of policy alternatives, and monitoring and assessing broad policy reforms. Specifically, OASIS will (a) develop implementation plans for the project components; (b) fully implement the data collection activities and economic analyses and policy/planning work; (c) maintain necessary records; (d) arrange for the procurement of certain commodities; (e) identify training participants, and (f) monitor and assist in evaluating their own and GOE agricultural policy reforms. In addition, channels of communication with USAID/Cairo will be maintained.

3. USDA Responsibilities

Details to be worked out later.

VII. Project Outputs

1. Expanded Data Processing Capability in MOA. Starting from a base of both mini and micro-computers, the MOA will develop a computer center which will have the capacity to process, store, and retrieve the data from all national agricultural surveys, handle the requirements for all major economic studies, maintain project monitoring and management information, and respond to other user data processing needs as appropriate.

2. Agricultural Data Bank. A capacity will be developed to computerize all data for the MOA. This system will be integrated into the other MOA organizations to allow ready access to current agricultural data.

3. Improved Short and Long-term Agricultural Policy Analysis

Analysis will be carried out by the Undersecretariat using the USDA "Staff Analysis" approach and other methods.

4. A Regularly Scheduled Program for Gathering Current Agricultural Statistics

National crop and livestock probability surveys will be regularly scheduled. Annual surveys provide the basic crop area estimates including objective measurement of harvest yields. Surveys are also made of agricultural inputs, farm labor, cost of production, farm income, marketing channels, dairy production, poultry production, beef production, and crop forecasting is carried out regularly.

5. Efficient Sampling Methodology

Sampling frames and sampling methodology will be developed for the efficient conducting of annual surveys of basic crop information, objective yield surveys, milk production, poultry production, beef production, marketing channels, farm labor, cost of production, and farm income. The last three economic surveys will be integrated into a single more efficient survey. A mid-decade sample survey is planned to provide census-type data.

6. Implementation of Crop Yield Modeling.

Objective yield surveys provide crop yield information for estimates (at harvest) or forecasts (prior to maturity) based directly on counts, measurements, and weights of the crop made from small, randomly selected plots in a probability selection of random fields. The system to be improved under this project will vastly increase the reliability of yield estimates and forecasts of total production.

7. Models for Analyzing Agricultural Data.

Several models will be developed to analyze specific agricultural phenomena or problems. These will be drawn from the studies mandated under the Five-Year Plan or from others as required by the government. In most cases, these models will be developed to permit regular (annual, semi-annual, or more frequent) situation reports to be produced.

8. Adapted Project Monitoring and Evaluation Systems Employed on Agricultural Policy Reforms.

The systems designed should permit current status reports on the impact of GOE sectoral reforms. On a cost reimbursement basis, specially designed surveys can also be conducted to provide monitoring information for projects outside NASP.

9. Data Users Services System.

A data users service system will be developed so that a user can relate data needs to a service person who will supply off-shelf data, if available, arrange for especially extracted or modified tables from the data base if that is appropriate, or contract for a special survey or analysis where this is feasible and within the scheduling framework of OASIS. In other words, the Service will be able to respond to reasonable requests from all data users at a price.

VIII. Flow of Funds

With respect to flow of funds, the economic units will receive their regular budgets in the normal manner. Incremental funds under this project, either of U.S. or Egyptian government origin, will flow to the operating units based upon approved plans of work, budget requests, and protocols agreeing to the budget and level of effort.

Justification for PASA (A-76 Determination) (IF USAID/GOE Decide to Continue PASA)

Under Project 0142, there is currently a Participating Agency Service Agreement (PASA) relationship with the Economic Research Service and the Statistical Research Service (now the National Agricultural Statistical Service) of the USDA, coordinated by the Office of International Cooperation and Development. It is recommended that this relationship be continued under the proposed NASP.

The United States Government has one of the best systems of crop reporting in the world. The needs and functions of a national government crop reporting system - data collection and short-term policy analysis - can be met fully neither by the private sector nor the U.S. university system. Private companies can provide technical assistance for limited areas of expertise, e.g. sampling national production and data processing procedures. However, none possesses the experience, depth, breadth, or human resource capability of the USDA. Hence, they do not have the ability to respond to requests for technical expertise in a variety of subject areas in relative short response times as is currently done under Project 0142. It is appropriate that the data collection and analysis component be essentially a government-to-government program. Professional relationships between the USDA and GOE counterpart agencies have grown over the six years of DCA Project 0142 and should continue uninterrupted through the new NASP.

Administrative and technical support for USDA personnel is unparalleled. The USDA can respond quickly to USAID requests with high-caliber specialized personnel in any agricultural discipline and in large numbers. This responsiveness results from USDA's history of having to respond immediately to urgent requests for analysis of problems by U.S. government decision makers. The USDA supports its personnel with the largest agricultural library and research facilities in the world, through scientific and technical exchanges with scores of bilateral and multilateral agricultural and rural development organizations, and through access to the resources of land-grant universities and state cooperative extension services and experiment stations. USDA provides its staff, and agencies with whom it deals, with comprehensive world-wide and up-to-the-minute coverage of agricultural technologies and development.

Additionally, USDA has successfully implemented data collection and analysis projects in many countries throughout the world, including current activities in Egypt, Pakistan, Morocco, and Honduras. This depth and breadth of experience has allowed USDA to adapt and improve its methodologies to be particularly appropriate for circumstances in developing countries.

For the reasons cited above, it has been determined that the facilities and resources of the USDA are particularly and uniquely suitable for the technical assistance requirements of this activity, and not competitive with private enterprise. This is in accordance with HB 12, Section I. B. 2. and controlling OMB circular A-76.

Illustrative Budget

(million dollars)

Budget Line Item	DCA	M/E	Service	Total
1. Technical Assistance	4.3	2.3	3.2	9.8
2. Training	2.2	1.3	1.8	5.3
3. Commodities	0.8	1.1	1.2	3.1
4. Program Support	0.7	0.3	0.8	1.8
Total	<u>8.0</u>	<u>5.0</u>	<u>7.0</u>	<u>20.0</u>

Summary AID Costs for
Data Collection and Analysis Component
(000 dollars)

Description	87/88	88/89	89/90	90/91	91/92	92/93	Total
Tech. Assist.	840	840	690	690	690	525	4275
Training	424	432	378	366	366	173	2139
Commodities	270	175	130	75	75	30	755
Other Costs	100	100	100	100	100	100	600
Total	1634	1547	1298	1231	1231	828	7769

Excludes inflation and contingencies.

AID Costs for Technical Assistance
Data Collection and Analysis Component
(000 dollars)

Description	87/88	88/89	89/90	90/91	91/92	92/93	Total
<u>Long Term</u>							
Tech. Advisor	150	150	150	150	150	75	825
Data Proc. Adv.	150	150	0	0	0	0	300
<u>Short Term</u>							
Aggr. Data Hgt.	360	360	360	360	360	300	2100
Policy Analysis	180	180	180	180	180	150	1050
Total	840	840	690	690	690	525	4275

Excludes inflation and contingencies.

Technical Assistance Requirements for
Data Collection and Analysis Component
(person-months)

Description	87/88	88/89	89/90	90/91	91/92	92/93	Total
<u>Long Term</u>							
Tech. Advisor	12	12	12	12	12	6	66
Data Proc. Adv.	12	12	0	0	0	0	24
<u>Short Term</u>							
Agr. Data Mgt.*	24	24	24	24	24	20	140
Policy Analysis**	12	12	12	12	12	10	70

* Two person months per year for each of the following activity areas: data processing, census sampling, staff analysis, labor statistics, marketing channels, cost of production, farm income, crop forecasting, modeling, dairy production, poultry production, and other.

** Twelve persons per year for one month each in activity areas of sector modelling, food consumption, and macro-studies.

AID Cost of Training Requirements for
Data Collection and Analysis Component
(000 dollars)

Description	87/88	88/89	89/90	90/91	91/92	92/93	Total
<u>Analysis</u>							
<u>Staff Anal. (S/T)</u>							
U.S.	18	18	18	18	18	9	99
In-country	45	45	45	45	45	30	255
Post Doctoral	0	20	20	20	20	0	80
<u>Cost of Production</u>							
(Horticulture)	18	18	18	18	18	5	95
<u>Statistics</u>							
<u>U.S. Academic</u>							
(cont.)	88	66	22	0	0	0	176
Obj. Yield Forecast	10	10	10	10	10	5	55
Farm Income	18	18	18	18	18	5	95
Other	72	72	72	72	72	45	405
In-country	36	36	36	36	36	18	198
<u>Data Processing</u>							
<u>In-country (Acad)</u>							
U.S. Academic	3	3	3	3	3	1	16
Short Course	61	61	61	61	61	31	336
<u>Non-Academic</u>							
Short Term	54	54	54	54	54	23	293
Conferences	0	10	0	10	10	0	30
Publication Prizes	1	1	1	1	1	1	6
Total	424	432	378	366	366	173	2139

Assumed monthly costs are as follows:

PhD training = \$1,833/month Short courses = \$3,400/month
 Observational hands-on training = \$4,500/month
 In-country = \$3,000/month In-country academic = \$500/month

Training Requirements for
Data Collection and Analysis Component
(person-months)

<u>Description</u>	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>92/93</u>	<u>Total</u>
<u>Analysis</u>							
Staff Anal. (S/T)							
U.S.	4	4	4	4	4	2	22
In-country	15	15	15	15	15	10	85
Post Doctoral	0	12	12	12	12	0	48
Cost of Production (Horticulture)	4	4	4	4	4	1	21
<u>Statistics</u>							
U.S. Academic (cont.)	48	36	12	0	0	0	96
Obj. Yield Forecast	6	6	6	6	6	3	33
Farm Income	4	4	4	4	4	1	21
Other	16	16	16	16	16	10	90
In-country	12	12	12	12	12	6	66
<u>Data Processing</u>							
In-country (Acad)	6	6	6	6	6	2	32
U.S. Academic							
Short Course	18	18	18	18	18	9	99
Non-Academic							
Short Term	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>5</u>	<u>65</u>
Total	145	145	121	109	109	158	787

* Two person-months in U.S. each for census sampling, labor statistics, marketing, crop forecasting, dairy production, poultry production, and other.

AID Costs for Commodities Under the
Data Collection and Analysis Component
(000 dollars)

<u>Description</u>	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>92/93</u>	<u>Total</u>
ADP Equipment	50	50	0	0	0	0	100
Software	100	20	20	20	20	0	180
Maintenance	50	50	50	50	50	25	275
Operating Supplies	10	5	5	5	5	5	35
Texts, course mat'ls, pamphlets, etc.	50	50	50	0	0	0	150
Copying machines	<u>10</u>	<u>0</u>	<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15</u>
Total	270	175	130	75	75	30	755

Excludes inflation and contingencies.

MOA
Undersecretary for Agricultural Economics and Statistics
Database Requirements
(OASIS)

1. Area Estimates
 - major field crops
 - minor field crops
2. Yield Estimates
 - pre-harvest forecasts
 - final harvest estimates
3. Livestock Inventory and Production Estimates
 - dairy, beef, sheep, goats, rabbits
4. Poultry Inventory and Production Estimates
 - meat production - broilers, turkey, duck, geese, pigeon
 - egg production
5. Horticultural Crops Production
 - citrus, grape, banana, dates, figs, others
6. Vegetable Crops
 - tomato, potato, squash, onion, garlic, green beans, others
7. Economic Indicator Data
 - prices paid and received by farmers
 - cost of production
 - gross and net farm income
 - off farm income
 - marketing channels - movement and pricing of products from farmgate to consumer - marginal price analysis
 - domestic consumption or use estimates
 - annual balance sheets for important commodities
 - food balance sheet for Egypt
8. Common Data Needs
 - income or household expenditure (price) elasticities of demand
 - price elasticities of supply
 - import/export statistics and prices

Agriculture Sectoral Reforms
Monitoring and Evaluation

The following are examples of the types of questions which will be raised by policy makers for analysts' response:

1. Have agreed-upon policy reforms been implemented at all levels down to the farmer and private sector merchants?
2. What impacts have implemented Ag policy reforms had on crop and livestock production, farm and consumer prices, farm income, consumer prices, and public sector participation?

To be successful, agricultural policy analysis and planning units must be responsive to demands on their services by high level policy makers and decision makers for. As a result of the GOE's and the Minister of Agriculture's strong commitment to major Ag sector and other reforms, the demand is strongly established for timely, accurate, well-analyzed data, special economic analyses and studies, as well as the requirement to monitor and evaluate on-going reform packages. The present MOA Undersecretary for Agricultural Economics and Statistics is a dynamic, professional economist who, with full MOA and USAID support in terms of adequate facilities and sufficient professional and technical staff (MOA) as well as high-caliber technical assistance, training, commodities, and local currency support (USAID), and given the assigned responsibilities by the MOA Minister, will soon develop operational systems for verification, monitoring, and evaluation of Ag sector reforms as well as provide the required staff work for new policies.

Baseline or benchmark surveys to establish the "before" situation to be compared with subsequent "after" surveys to assess effectiveness of ag sector reforms will be a necessary function of OASIS. The responsibility for establishing and remeasuring these "benchmarks" is that of Undersecretary for Agricultural Economics and Statistics.

The output of the Undersecretariat for Agricultural Economics and Statistics generated through OASIS as well as the Macro Policy Analysis and Formulation unit of the Undersecretariat will not only provide indicators used to verify effectiveness of on-going sectoral policy reforms, but will also serve as primary resources to be used in the high-level, continuing dialogue with the GOE and USAID concerning the implementation and effects of reforms, as well as the identification of problems and constraints related to the effectiveness of the reforms and their possible solutions.

Once the "benchmark" data are in place, periodic rapid assessment sample surveys can effectively and efficiently verify the actual implementation of reforms at local level and their impact on farmers, consumers, and the private sector.

Requirements of the Agriculture Production Credit Project
to Verify Agricultural Sectoral Reforms

To provide the information and analysis needed to verify the APCP agriculture sectoral reforms the following are required:

- (1) timely analytical reports showing the continuing short-run impacts of the reform package on farmers, private sector, consumers, and national accounts, and
- (2) maintenance of pertinent time series data to evaluate and report on the long-term sectoral impacts, including recommendations for policy modifications and/or new policies.

Time Series Data
Eventually to be Required
by OASIS
to Meet Analytical Needs of ADCP
Policy Reforms Monitoring and Evaluation

Monitored Prices of all Commodities Touched by Reforms or Untouched:

1. Farmgate
2. Wholesale
3. Retail
4. Export
5. Import

Income

Farmer - by size of holding and commodities produced
 Consumer

Elasticities

Household expenditure elasticity of demand
 Price elasticity of demand
 Price elasticity of farm supply
 (These parameters are required to assist decision-makers to better estimate the expected impacts of policy changes.)

Impact on Balance of Payments

Food and feed grains (imports)
 Cotton (exports)
 Cash crops (exports)
 Beef (imports)

Budgetary Impact (subsidies and taxes)

Consumer
 Farmer
 Private sector inputs
 Agricultural credit

Aggregate Farm Output by Crop - Livestock

Area, yield, production, livestock numbers, slaughter

Value and Volume of Imports and Exports - Selected Commodities

Farm Land Values

Size of Farm Ownership and Tenure

Agricultural Credit

Annual volume
 Number of borrowers
 Rate of interest