

PD-ABS-247
90378

ASSP

AGRICULTURAL SECTOR SUPPORT PROJECT

PRIVATE SECTOR AGRIBUSINESS

WORK PLAN

JUNE 90 - JULY 91

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WORK PLAN
June 1990 - July 1991

PREPARED BY
DEVELOPMENT ALTERNATIVES, INC.
FOR THE
OFFICE OF THE USAID REPRESENTATIVE TO AFGHANISTAN

PESHAWAR, PAKISTAN

OCTOBER 1990

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EXECUTIVE SUMMARY

This Work Plan and Budget articulates the strategy, activities, projects and expenses of the Private Sector Agribusiness (PSA) Component of USAID's Afghanistan Agricultural Sector Support Project (ASSP). The planning period is the twelve months beginning July, 1990.

ASSP/PSA consists of three major components,¹ each of which utilizes program funds.² Component Directors and Advisors have established realistic and highly specific plans for the next twelve months. Thus, the actions, timing and funding requirements of the project are open to review, challenge and modification. The Work Plan is the basis for project change and improvement; it will be revised to incorporate adjustments to the Afghan context, USAID policy and project experience at least every six months.

Project goals addressed by the plan call for ASSP/PSA to:

- o Revitalize private sector agribusiness trade linkages between Pakistan and Afghanistan;
- o Facilitate the provision of critically required agricultural inputs for sale to Afghan farmers;
- o Demonstrate improved agricultural technology and the use of high yielding inputs;
- o Transfer technology through training programs for critical agricultural sector workers; and
- o Provide information necessary for long-range planning of the development of rural Afghanistan.

These tasks will be implemented by the following project components:

- o Agricultural Demonstration and Training (ADT),
- o Program Planning and Analysis (PPA), and
- o Private Sector Agribusiness (PSA).

Senior staff movement into Afghanistan is restricted, making direct supervision of project activities by project management problematic. Civil and military disturbances in Afghanistan

¹. Commonly, the term "component" is used to describe both the Private Sector Agribusiness (ASSP/PSA) portion of the larger ASSP as well as the constituent operational units of ASSP/PSA.

². Program funds are administered by Development Alternatives, Inc. separately from the Technical Assistance Contract. The budget provided here addresses program funding exclusively, TA expenditures being the subject of different agreements and reporting requirements.

compound communications problems. Implementation under these unique challenges requires a clear and simple project strategy.

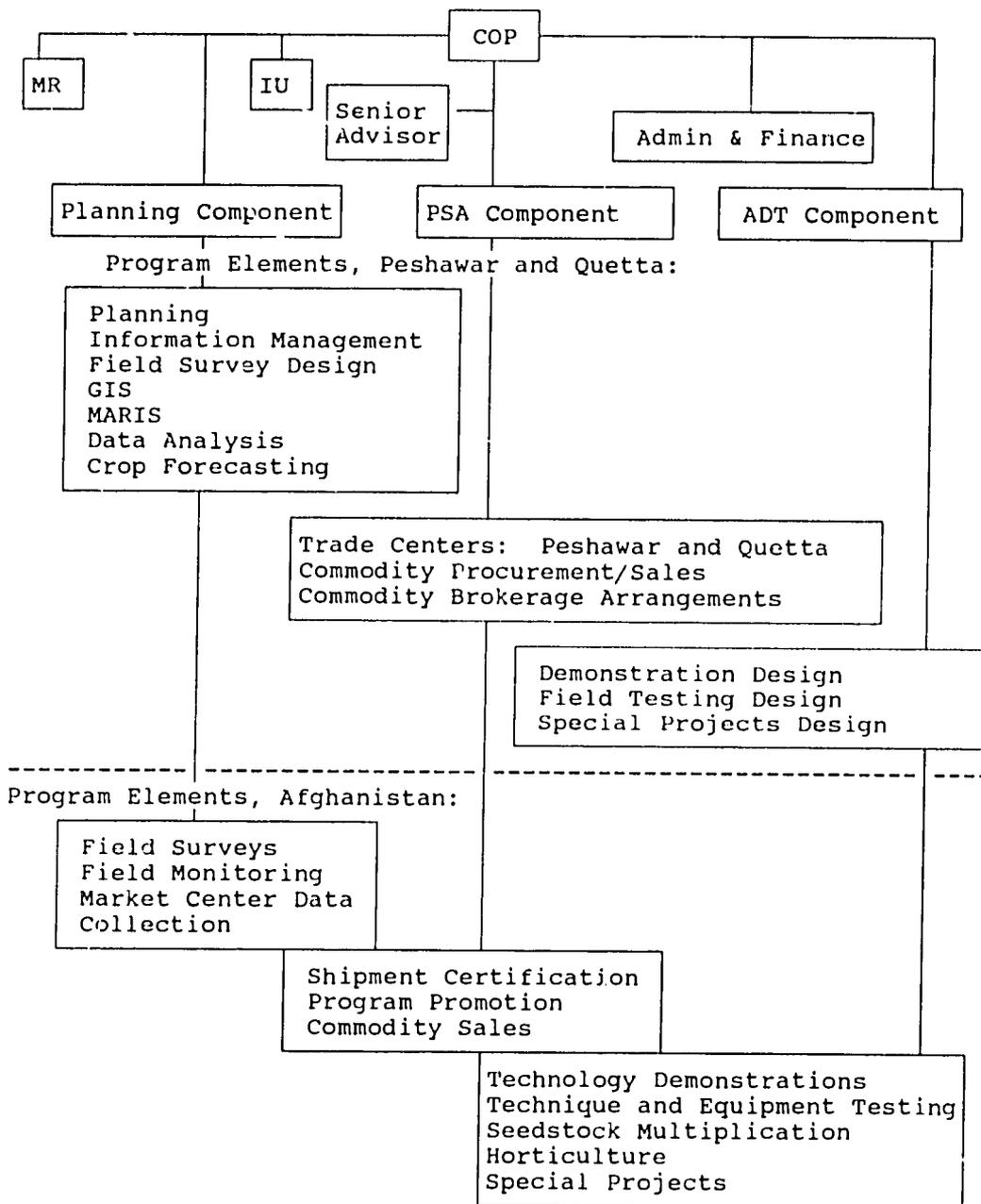
In the first year of operation, ASSP/PSA has sought to facilitate trade and the movement of agricultural inputs by operating under the bilateral accords between the governments of Pakistan and the United States. Taking a direct and active role in the initial stage of implementation, DAI has established contacts, promoted diffuse trade and helped facilitate the establishment of trade networks.

In the second year, DAI is moving into a more managerial role, supporting a private sector trading system and encouraging traders to independently take up opportunities in supplying the technologies demonstrated and tested by the ADT component. Increasingly, traders, businessmen and agriculturalists will be contracted to move inputs into and export agricultural commodities from Afghanistan in a logically symbiotic relationship between demonstration, extension and training activities (ADT) and trade promotion (PSA)³. DAI will be assisting through financial mechanisms, reduction of war-induced high transportation costs, documentation, and the introduction of technologies. To the extent proven feasible and consistent with the need to increase food production in a reconstructing Afghanistan, the project will avoid overt interference with private sector response to market forces. By the end of the third year, the project will operate under broad institutional and market conditions to facilitate imports to and exports from Afghanistan.

The work plan and budget detail the direction and thinking of all three components within the framework of the overall project strategy. The overall ASSP/PSA organizational chart follows, illustrating the basic framework for using the project's human resources.

³ Farmers and traders are under no obligation to collaborate with either or both field components of the project; the project does attempt to place PSA and ADT field activities close together for maximum impact.

ASSP/PSA ORGANIGRAM



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October 10, 1990
Project Program Budget

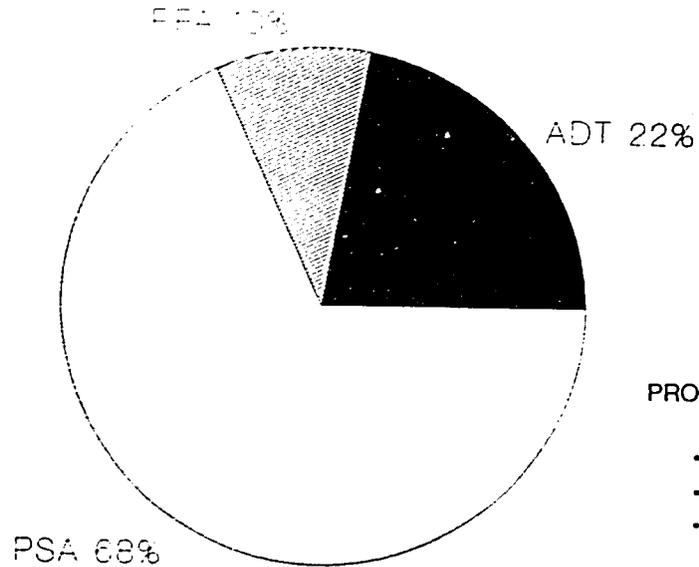
PRIVATE SECTOR AGRIBUSINESS COMPONENT OF ASSP
A DEVELOPMENT ALTERNATIVES INC. CONTRACT WITH
THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

	3rd Q '90 \$ 000 Projected	4th Q '90 \$ 000 Projected	1st Q '91 \$ 000 Projected	2nd Q '91 \$ 000 Projected	12 Month Forecast
(i) Agricultural Demonstration and Training	729	1,153	530	861	3,273
(a) Operation	392	894	255	363	1,904
(b) Cereal Crops	202	199	28	50	479
(c) Machinery	74	16	96	226	412
(d) National Information Program	1	1	12	39	53
(e) Poultry	0	29	0	45	74
(f) Locust Control	60	9	9	8	86
(g) Curcubit Rootfuel	0	5	5	5	15
(h) Horticulture	0	0	125	125	250
(ii) Program, Planning and Analysis	439	338	308	332	1417
(a) Operations	236	157	147	160	700
(b) Monitoring & Surveying	12	18	6	18	54
(c) MARIS	17	23	14	14	68
(d) Crop Casting	48	48	48	48	192
(e) GIS	40	39	40	39	158
(f) Special Studies	86	53	53	53	245
(iii) Private Sector Agribusiness	3,710	662	969	4,757	1,0098
(a) Operations	129	317	237	87	770
(b) Trade Facilitation	0	23	23	33	79
(c) Trade Incentives	3,339	55	0	3,660	7,054
(d) Market Development	242	192	118	762	1,314
(e) Horticulture Commercialization	0	75	491	215	781
(f) Policy Constraint Studies	0	0	100	0	100
	4,878	2,153	1,807	5,950	14,788

12 MONTH FORECAST \$000
14,788

ASSP/PSA PROGRAM BUDGET

July 1990 - June 1991



PROGRAM EXPENDITURES

- ADT -- \$3,273 thousand
- PPA -- \$1,417 thousand
- PSA -- \$10,098 thousand

THE AGRICULTURAL DEVELOPMENT AND TRAINING COMPONENT

OVERVIEW

The Agricultural Development and Training Component (ADT) was incorporated into the DAI ASSP/PSA structure on April 1, 1990. ADT will help restore agricultural productivity in large areas of eastern and southern Afghanistan. ADT seeks to help move Afghan agriculture from a war-torn, devastated and relatively unproductive condition barely providing food for subsistence, into an increasingly productive commercial system responding to the demands of a market economy. Consequently, ADT works closely with PPA, examining the agricultural potential and comparative advantages of principal crops in each area of PSA activity. To execute this strategy ADT:

- o Serves as the demonstration, testing and extension arm of the PSA agricultural distribution system;
- o Provides local and international training programs for staff, and field training programs for farmers, aimed at upgrading subsistence agricultural skills to meet the demands of market oriented agribusinesses; and
- o Conducts applied agricultural research activities to increase food and cash crop production in Afghanistan, coordinating this activity with other agencies similarly involved in Afghan agricultural development.

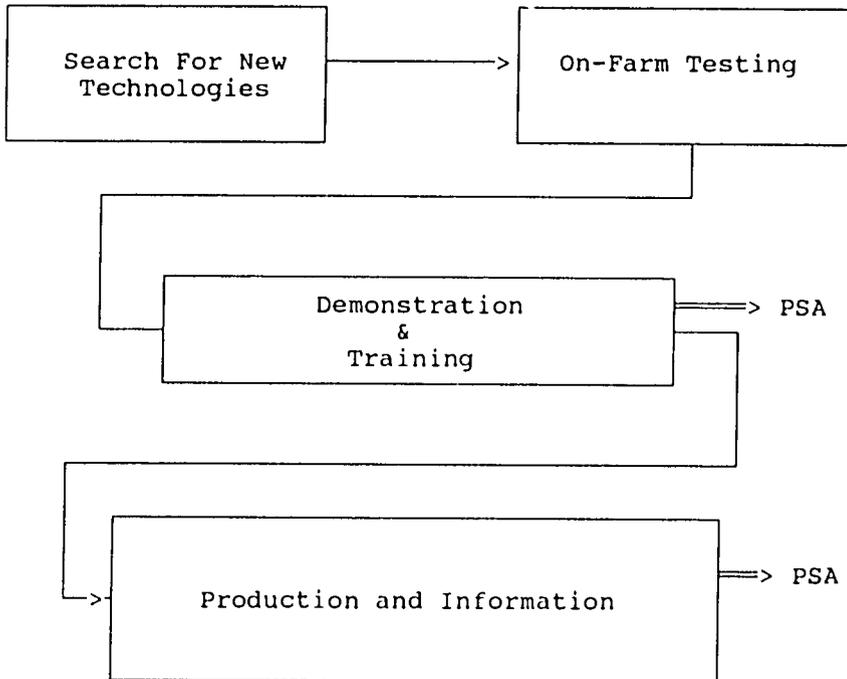
To create commercial farming operations among Afghanistan's rural population requires that crop surpluses find buyers on an open market. Of the two sides to this equation, crop surpluses and open markets, ADT primarily focuses on increasing crop production while PSA concentrates on strengthening the battered but recovering market economy. In order to increase agricultural yields, ADT has developed an implementation plan illustrated graphically on the following page.

The first step towards creating a viable commercial farming structure involves scientific research. This research generally occurs in developed countries or in countries which have already experienced a green revolution such as Pakistan. ADT will not carry out specific scientific research activities, but its staff is closely aware of trends and findings in the academic agricultural world.

Once proven and established, research information and knowledge is transferred from the laboratory to the farmer's field. This is accomplished through applied research, which calls for an assessment of new technology prior to its dissemination through extension efforts. This kind of research is often conducted on demonstration sites or in farmers' fields, and serves as the basis for field day training programs which provide

training and information about new varieties in an area near farmers' homes. One important role of ADT in applied research is assessing the viability of new wheat varieties developed in Pakistan and by CIMMYT.

ADT COMMERCIAL AGRICULTURE IMPLEMENTATION MODEL



Through applied research, ADT will identify specific inputs and technologies that promote agricultural rehabilitation and commercialization. ADT will then organize training for selected extension agents employed by the project to instruct them in the new technologies and inputs. These agents, located in various districts in Afghanistan, will demonstrate to local farmers the use of improved inputs and technologies. Finally, ADT will develop an information and production program using local and international advertising and media sources to inform the general population of these improved inputs, techniques and technologies. This agricultural production model will focus on 16 provinces in eastern and southern Afghanistan.

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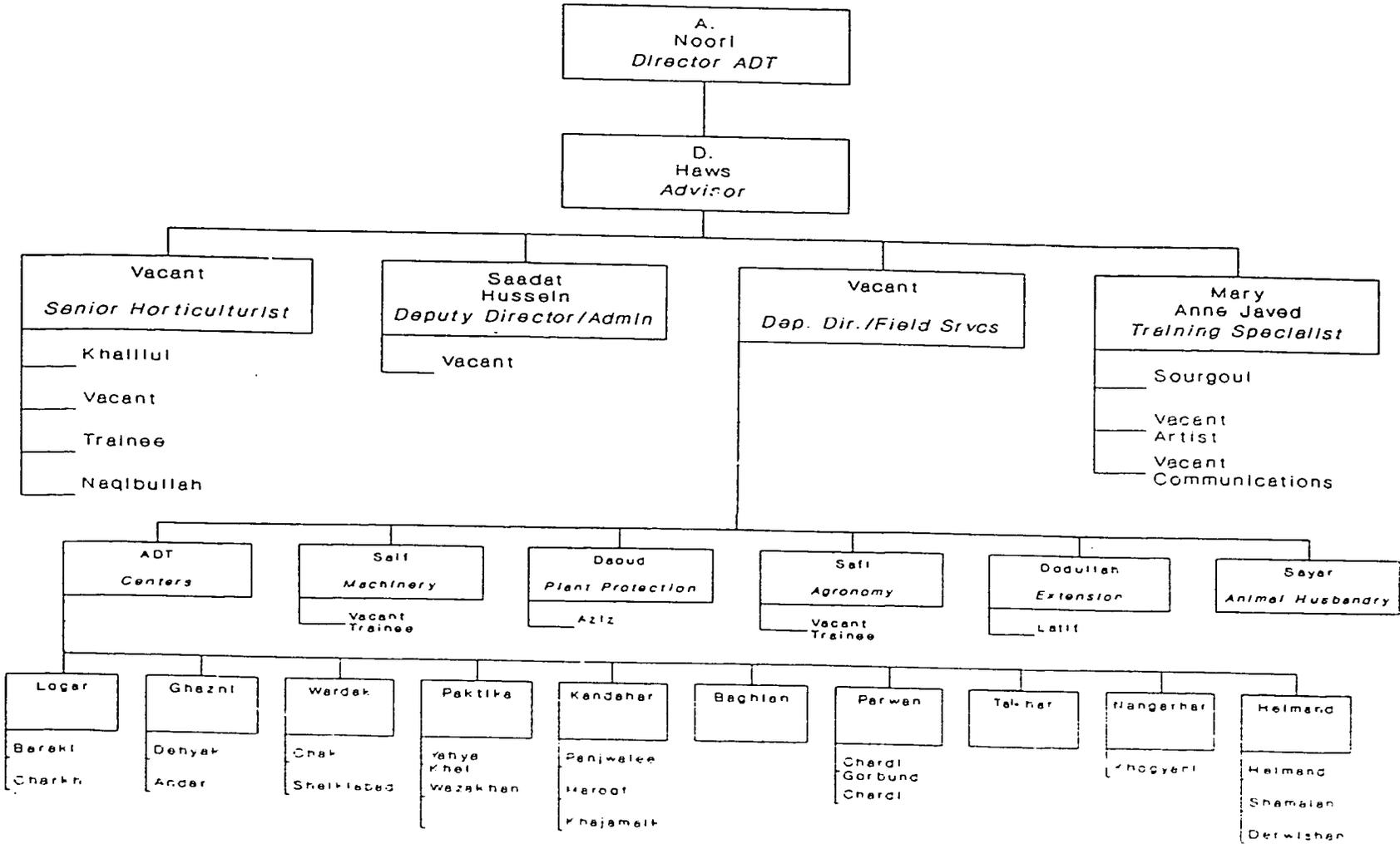
To clarify this process, ADT has structured its work plan and budget along programmatic activity lines. The following table provides a general outline of the work plan over the next twelve months, the budget at the end of this section follows the same organization.

ADT WORK PLAN OUTLINE	
I.	Operations
	a. Human Resources
	b. Capital Expenditures
	c. Recurring Costs
II.	Cereal Crops
	a. Seed Multiplication
	b. On-Farm Testing
	c. Demonstration
	d. Training
III.	Machinery
	a. On-Farm Testing
	b. Training
	c. Demonstration
IV.	Information and Production Program
	a. Market Days
	b. National information Program
V.	Poultry
VI.	Locust Control
VII.	Cucurbit Root fuel
VIII.	Agroforestry

The ADT organizational chart below illustrates the way in which operations are to be conducted in order to reach the ten provinces with which ADT is currently operating.

AGRICULTURAL DEVELOPMENT AND TRAINING ORGANIZATION CHART

6



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AGRICULTURAL DEVELOPMENT AND TRAINING

ADT

10

Fy or calendar?

?

I. OPERATIONS

Operations include all human resource expenses, capital expenditures and recurring operational costs. Most of the expenses necessary for daily operation of ADT offices in Afghanistan are located under recurring costs. ADT will place procurement orders for the remaining items necessary for its life of project activities in the third quarter of 1990. Operational costs extend through December 31, 1992. As a demonstration, extension and training arm, most of ADT's expenditures are in staff, equipment for demonstration and testing and recurrent costs for operations dispersed throughout eastern Afghanistan. Altogether, seventy-four percent of total ADT costs fall in these categories with the bulk of those expenditures in equipment required throughout the life of the project.

II. CEREAL CROPS

A. SEED MULTIPLICATION: STRATEGY-SOUTH AND SOUTHEAST

BACKGROUND

The FAO, UNHCR, USAID, and many non-governmental organizations (NGOs) have been delivering wheat seed of new and improved varieties since the 1987-1988 production year in Afghanistan. Choice of variety is coordinated by the Swedish Committee of Afghanistan (SCA) of the Agriculture Survey of Afghanistan (ASA). The accepted short-term strategy for all current donor efforts is to replace old warm area (autumn and spring sown) wheat varieties, which have broken down due to rust disease mutation and lack of varietal maintenance, with newer varieties of higher productivity and greater disease resistance. Pak 81 and Pirsabak 85 seed are being sent to Afghanistan in areas where the older variety Mexipak was adapted. In the higher elevation areas above 1800 meters, research has not yet released a variety which can consistently outperform local varieties and produce a flour with acceptable color and flavor.

FAO and UNHCR have been providing seed to NGOs who have, in turn, distributed it free of charge to Afghan farmers. The ASA has encouraged a shift to sale of seed to attempt to put seed multiplication on a more sustainable footing. This year the Agency Coordinating Body for Afghan Relief (ACBAR) has requested NGOs to ask for reimbursement of seed from farmers at the rate of two seers for every jerib planted. USAID, through VITA, distributed wheat seed on contract in 1989-1990, accompanied by fertilizer, requiring farmers to pay back 70 kg of seed per jerib planted. When ASSP/PSA took over VITA's agricultural activities

UN may be out of business !!

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in 1980, it inherited this seed recovery and redistribution activity.

When ADT activities for the 1990-1991 production year were planned, a program to sell 300 MT of certified seed in the South and South-East zones was prepared. In addition, redistribution was programmed for about 50 MT of the Bezostaya variety to be collected from farmers who received the new Bezostaya seed in 1989-1990 from the emergency shipment facilitated by the U.S. Ambassador to Pakistan. Preliminary trial results of the ASA suggest that there are Spanish, Turkish, and US varieties which should outperform Bezostaya in the cold growing areas.

FAO and UNHCR have stocked 2,600 MT of Pak 81 and Pirsabak 85 in Quetta and 1,500 MT of these two varieties in Peshawar. If prior year practices are followed, NGOs will make application to acquire and distribute this seed, agreeing to distribute it in new areas. Most NGOs still distribute this seed free of charge. ASSP/PSA consultant Eugene Saari of CIMMYT/Turkey, has calculated that the amount of seed stockpiled by FAO and UNHCR will meet the needs of warm area provinces in which ASSP/PSA worked last year, assuming that a 1 percent replacement strategy is followed. The ADT 1990-1991 strategy is to work in areas in which NGOs are not working and to sell seed to a different population of farmers -- medium scale and larger farmers who could provide the nucleus for a commercialized seed supply in Afghanistan.

ADT STRATEGY FOR PAK-81 IN THE WARM AREAS.

The ADT will recover 350 MT of seed from 1989-1990 multiplication plots and import an additional 300 MT of Pak 81 certified seed from Pakistan. The recovered seed will be classified as commercial, untreated seed. The major change in distribution strategy for the 1990-1991 production year is that seed will be sold for cash.⁴

1. SEED RECOVERY FROM 1989-1990 PRODUCTION-- In Nangarhar, Helmand, and Kandahar provinces, ADT center staff will sell seed recovered from farmers at up to 105% of the local market price for wheat on the market. Participating farmers will give ADT 70 kg of wheat per jerib planted. ADT staff will collect the seed, clean it (winnowing), bag it, and sell it as commercial seed at the bazaars, through PSA representatives if feasible. An equivalent of 250-300 tons of wheat seed should be collected in cash or kind this year. Two weeks before the last practical planting date, ADT staff will be advised to auction any remaining seed stocks.

*do we
ADT need
to do this
(take possession
of the seed?)
how do we
first assist-
ing the seed
farmer in
selling his
crop?!!*

⁴ MCI has received 200 MT of Pak 81 seed. It is DAI's understanding that MCI will follow ADT policy in distributing its seed. USAID has the responsibility for enforcing this policy.

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Average prices⁵ for collected, cleaned, and redistributed seed are estimated as follows:

PROVINCE	GRAIN PRICE	SEED PRICE	
		Rupees	Afghanistan
KANDAHAR	3.45 R/KG	3.62/KG	(83.31/kg) (583/seer)
HELMAND	2.3 R/KG	2.42/KG	(55.66/kg) (404/seer)
NANGARHAR	3.11 R/KG	3.27/KG	(75.11/kg) (526/seer)

This seed will be sold in districts outside of those in which the NGOs will make their distribution. NGO target districts have been obtained from ACBAR and are being used to direct extension agent efforts.

2. SALE OF PAKISTAN GROWN CERTIFIED SEED-OPERATIONAL STEPS

Seed purchased in Pakistan and delivered to DAI warehouses will be distributed for the fall planting season. The operation consists of the following steps to be conducted by ADT staff:

a. Verify with NGOs where they will distribute seed this year and direct ADT staff to sell seed primarily outside those districts in Helmand, Kandahar, and Nangahar. The exceptions to this approach will be with larger growers who may wish to specialize in seed production⁶. Under current NGO policy, these growers would not be able to receive seed.

b. Sell certified seed for cash to medium and larger-scale growers. ADT staff would work with these growers to ensure good seed production and post-harvest handling of seed. The intent is to gradually reduce the need for continued importation of seed from Pakistan. If cash sales encounter substantial difficulty, there are two major options. The first is to work through the Shuras to provide a group guarantee of seasonal seed credit extended by the project to be paid after the 1991 harvest. The second is to enter into a performance contract with the concerned growers to produce and deliver a fixed quantity of seed to ADT or

⁵. There will be some monthly fluctuation in price as well as variation among Bazaars.

⁶. Larger growers are much more likely candidates for seed production since they do not grow solely for home consumption and are normally more familiar with market based commercialization of agricultural commodities.

PSA staff for the 1991/1992 production year. Afghan contract growers would deliver to ADT centers or PSA bazaars for sale to traders for 1991-1992 or to sale to NGOs working under FAO/UNHCR auspices. ASSP/PSA would deliver seed to these growers and supervise seed production. Forward contracting, assisted by PSA staff, would be encouraged.

c. Increase the amount of Pak-81 seed destined for Farah province, a new area, from 30 MT to 50 MT. Bagwah has pump irrigation and could become a potential source of supply of warm season wheat for both Farah and Herat Provinces. If direct ADT cash sales prove to be a problem, then there are two options. The first is to enter into a performance contract with the concerned Bagwah grower to grow and deliver a negotiated quantity to Farah or Herat traders for the 1991-1992 production year. The second is to use PSA procedures to sell the Farah destined seed to a trader.

Average seed prices will be fixed at 10% higher than the grain price, reflecting the higher quality of the certified seed.

ADT COLLECTION AND REDISTRIBUTION OF COLD AREA WHEAT SEED

Bezostaya stocks are being renewed by the [?]ASA and UNDP/FAO from seed bought in Turkey. Agencies operating in agriculture have determined that Afghans resist this variety because of its color, taste, and rust susceptibility. Another variety needs to be discovered or developed. not so (AID/PAE/PSA)

However, ADT calculations show there will be a shortfall in the supply of improved varieties of wheat seed to the cold winter wheat areas. ASSP/PSA recovery of 50 MT and FAO/UNHCR existing stocks of 40 MT fall short of the 295 tons of seed estimated as needed to meet the 1 percent replacement strategy. Given the high cost and difficulty of obtaining Bezostaya seed from Turkey, ADT strategy in the cold growing areas will need to be different from that in the warm areas. The following section presents operation options for the 1990-1991 production year.

The shortfall of total seed does not reflect demand for Bezostaya seed. ADT center staff suggest that there should be no major problem in the ASSP/PSA strategy to sell this seed. NGO distribution is not of a magnitude to impair sales. Promising replacement varieties appear to be in the adaptive testing pipeline, but are not yet available. If truly superior varieties are available, then ADT and other efforts will probably turn to replacement of Bezostaya over time.

ADT staff will collect wheat seed from participating farmers, taking 70Kg per jerib, hire labor to clean and bag the seed, and sell the seed at bazaars after giving

extension/promotional talks on the wheat seed. This activity will occupy essentially all of the ADT center staff time until late October and require substantial use of the available tractors and wagons.

ADT SEED STRATEGY FOR 1990-1991 HARVEST AND 1991-1992 DISTRIBUTION

ADT's seed strategy for the 1990-1991 harvest seeks to shift its field personnel from a concentration on seed delivery to farmers to one of promoting the multiplication of good seed within Afghanistan. The main points of this strategy are:

- o Supply of 6 seed cleaners to improve the quality of seed redistributed;
- o Training of ADT staff in seed production and post-harvest cleaning, quality control, and seed treatment;
- o Exploration of the potential and problems in introducing seed treatment with fungicide in Afghanistan;
- o Promotion of links between seed producers and traders who can transport and sell seed for the 1991-1992 year, in cooperation with PSA;
- o Inventory of areas in which seed has already been distributed by ASSP/PSA and other organizations, and identification of areas for introduction of new seed;
- o ADT staff work in testing and demonstration of new cereal crop varieties (wheat, rice, corn);
- o Diversification of varietal supply to include Pirsabak-85 for the 1991/92 production year;
- o Introduction of new rice varieties north of the Hindu Kush.

*looks good
- any changes
for con or rice?*

B. ON-FARM TESTING

1. FERTILIZER

a. WHEAT -- Two kinds of fertilizer trials will be evaluated. First, ADT units in Afghanistan will perform research on urea and DAP applications at the recommended two-to-one ratio

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for spring planted wheat in Ghazni, Logar, Wardak, Nangarhar, Kandahar and Paktika Provinces. Secondly, ADT will assess DAP-only applications to dryland wheat in Ghazni, Wardak, Logar, and Paktika Provinces.

b. MAIZE -- Fertilizer response is greatest when fertilizers are used in combination with improved high yield seed. Thus, fertilizer treatments will be investigated by ADT with the best available maize varieties. Split application of nitrogen will also be investigated in Helmand, Kandahar, Nangarhar, Wardak, and Logar Provinces.

*will the
into*

c. RICE -- Deep placement of fertilizer (in one dose) will be assessed by ADT field staff for the best rice varieties currently available for Afghan conditions. Fertilizer application and panicle initiation will also be evaluated in Baghlan and Nangarhar Provinces. Dapog seedlings will be used to shorten the interval between seeding and transplanting rice. Finally, the optimal age of seedlings for transplanting will be determined.

2. VARIETIES

WHEAT, MAIZE, RICE -- The most promising varieties of wheat, maize and rice will be evaluated using the recommended package of practices.

3. MANAGEMENT PRACTICES

a. WHEAT -- Experiments using "zero-tillage" will be investigated in the irrigated rice-wheat and maize-wheat cropping systems. Zero-tillage overcomes the chronic problem of late sowing which can reduce yields by as much as 25%. Additionally, weeds are a worsening problem in Afghanistan's irrigated wheat fields. ADT will evaluate chemical weed control practices in order to increase production.

*how much
is on irrigated
land - will
this and*

problematical

b. MAIZE, RICE -- ADT proposes to investigate several topics of agricultural interest: row planting versus broadcast seeding; seed rates; "topping" of the maize plant for animal feed; and fertilizer placement.

coordinates with your good

C. DEMONSTRATIONS (WHEAT, MAIZE and RICE)

Using the best seed and management practices, 38 demonstration areas will be established by ADT in 16 project approved provinces in Afghanistan. ADT will demonstrate potential production yields through the use of new technology.

D. TRAINING

1. TRAINING BY INTERNATIONAL INSTITUTES -- ADT senior staff have contacted IRRI and CIMMYT concerning cooperative training programs. Both institutions have indicated a willingness and interest in training Afghan students from the ADT field staff. Unfortunately, it is extremely difficult to obtain travel papers for Afghan students who have no universally accepted passports. For this reason, ADT is re-evaluating training requiring international travel. A possible alternative is for IRRI and CIMMYT to send lecturers to NWFP to assist in ADT training programs here. This would have the added benefit of approximating the agricultural ecosystems with which trainees will work and maximizing the size of the training groups. For specialized courses, international training is still optimal. However, the scope for both, and the greater ease of in-Pakistan training, dictates a two pronged approach which secures a broad and high level of training.

The anticipated kinds of training include:

1. Rice Production, February, six months, IRRI
2. Visual Aids, Concepts and Design, three months, IRRI
3. Wheat Improvement, January, six months, CIMMYT
4. Maize Crop Management, March, five months, CIMMYT
5. Cereal Technology, May, three months, CIMMYT

2. IN-SERVICE TRAINING -- Two major, in-service training programs for ADT staff in Afghanistan are scheduled each year to be taught by Peshawar based senior extensionists and crop experts. These training periods are designed to report on the work accomplished in Afghanistan and to plan for the following six months. During these training programs, ADT personnel will attend lectures and demonstrations covering new management practices and technology. These in-service training periods will also facilitate communication between Peshawar operations and the field.

3. FARMER TRAINING -- A major ADT goal is the preparation of local Afghan farmers, especially the younger ones who may have missed opportunities to gain information about advanced technologies. Several programs are currently underway or envisioned for the near future.

a. EXTENSION, FARM MACHINERY -- For the foreseeable life of the project thresher and farm machinery operators will be trained in Peshawar during the relatively early harvest period in the surrounding area and then return to Afghanistan where they will instruct farmers on the use of threshing machines and other farm equipment during the relatively late Afghan harvest.

b. EXTENSION -- Extension personnel trained in Peshawar will train several hundred farmers in Afghanistan on the use of various machines including tractors, threshers and reapers.

c. MOBILE TRAINING UNITS -- ADT recently began a review of the feasibility of supporting machinery-specific and agronomy-specific mobile training units for Afghanistan. The benefits appear quite high and initial testing of the method could begin in border provinces shortly after acquisition of the needed trucks and machinery. Training staff able to run such a program are being identified and a procurement request prepared to initiate this program in the late 1990 - spring 1991 period. O/AID/Rep may also wish to fund this activity through support to a PVO.

III. MACHINERY

A. ON-FARM TESTING -- Equipment used in Pakistan or other countries must be assessed in terms of actual farm conditions in Afghanistan where hilly topography, lack of spare parts, and small farm sizes create unique conditions.

1. THRESHERS -- ADT has acquired five types of threshers currently available on the Pakistan market. These have been sent to ADT units within Afghanistan and, after comparing capacity, efficiency and suitability for Afghan conditions, ADT will recommend a thresher for use by the extension agents as well as Afghan farmers. A recent consultant's report also provides detailed recommendations regarding machinery quality. In 1990-91 21 Batala Threshers will be sent to ADT extension personnel for demonstration purposes.

2. REAPERS -- Because of the labor shortage in Afghanistan the need for labor saving machines is acute. Farmers have been very pleased with the performance of the walk-behind and tractor mounted reapers. In 1990-91 forty-two (42) walk behind reapers will be sent to 42 ADT extension agents in Afghanistan. An additional 5 will be used for training and demonstration purposes in Peshawar and 5 will be used in new areas. Walk behind and tractor reapers will be evaluated on the basis of capacity and effectiveness of cut, speed, height of stubble, harvested area and occurrence of mechanical problems. Additionally, ADT will undertake a cost/benefit analysis of mechanical versus animal wheat harvesting capacity.

3. TRACTORS/PLOWS -- ADT will evaluate the Massey Ferguson 240 tractor for suitability in Afghanistan. Additionally, research on seed bed preparation using deep tillage shows that this technique can significantly reduce the risk of crop failure and yields may be increased up to 36 percent. As mentioned

previously, zero tillage and the efficiency of deep plowing are also viable methods of land preparation. An economic comparison will be made between mechanical and animal power for land preparation. Sixteen (16) tractors have been ordered for the 1991-92 season to replace tractors sent into Afghanistan in 1989-90.

4. SEED CLEANERS-- Six (6) seed cleaners will be sent into Afghanistan to increase the quality of wheat seed produced in the ADT seed multiplication fields.

5. POWER TILLERS-- Power Tillers will be evaluated as a means of primary tillage in small areas of wheat, vegetables and fruit orchards. Twelve (12) units have been ordered for selected provinces.

6. FORD DIESEL TRUCKS-- Mobile Training units have been used successfully in Pakistan in the last few years. This method of reaching farmers in Afghanistan will be evaluated for training farmers in tractor maintenance and in wheat and horticulture subjects. Two (2) units will be purchased in 1990-91.

B. DEMONSTRATION

1. THRESHERS/REAPERS -- Demonstrations by ADT staff will involve actually harvesting a field of wheat, most probably one used for seed multiplication. Farmers will be able to observe the harvesting procedures and ask questions concerning its operation.

2. TRACTORS/PLOWS -- The plow utilized by ADT units is a fully mounted, three bottom 14 inch plow on a Massey Ferguson 240, 45 horsepower tractor that will plow six to seven inches deep. Farmers will see a comparison between a bullock drawn plow and a tractor drawn plow. Farmers will be told about "dead furrows" and that as a right-hand implement it cannot be drawn across the field in a random fashion as is possible with a tine tiller or a local plow. The tractor is as important as the plow and must be properly ballasted.

IV. INFORMATION AND PRODUCTION PROGRAM

An Information and Production Program is an integral part of the ADT program. After new technologies have been found and demonstrated, there must be an initiative to disseminate the information and technologies to a much larger national audience. At this level, ADT seeks to expand information and knowledge by two methods.

A. MARKET DAYS

The first method is a simple concept known as "market days". Most farmers attend market days in their villages to buy needed items and to sell excess crops or other produce. ADT will establish information booths and mobile units to introduce, train and perhaps sell improved cereal crop seed to farmers outside of the scope of extension activity. ADT first proposes to evaluate this method of technology transfer in two rural locations and then extend the program dramatically to increase knowledge and information about new technologies in rural Afghanistan. This low cost program is very much based on the realities facing small commercial and/or subsistence farmers.

B. INFORMATION PROGRAM

This expanded program is designed to take advantage of all of the technologies and expertise developed over the life of the project. Information will be disseminated to a wider audience through radio, hand-bills and posters, "billboards" or roadside advertising boards, political parties, and extensive use of field days. ADT may, for instance, hold taped talk shows with Dr. Wakil, the former Minister of Agriculture, about the value of using improved wheat seed. Other ideas include coverage by the British Broadcasting Corporation (BBC) or Voice of America (VOA) on new scientific and agricultural methods now available in Afghanistan. These and similar programs expand the notion of extension, demonstration and training to a much wider audience beyond the areas specifically defined for project activities.

V. POULTRY

Information provided by PPA and ADT staff indicate a high demand for poultry in Afghanistan. Village poultry flocks, made up of varieties recently introduced to Pakistan will serve as a good food source for refugees returning to Afghanistan. Over a three year period, 36,000 eight week old chicks of the Fayoumi breed available in Pakistan will be transported into Afghanistan. ADT field staff have made arrangements with farmers to receive and distribute the chicks to farmers who have agreed to care for them under the ADT applied research program. Depending on the success of these chickens in Afghanistan, ADT will cooperate with PSA to begin support of expanded poultry commercialization.

VI. LOCUST CONTROL

ADT will provide the support mechanism for a pilot locust control activity in Badghis Province. All material are in Pakistan and will be moved to Afghanistan toward the end of September. Through staff training and the work of an expert

consultant, ADT will help evaluate and implement methods to lessen the effect of locust damage to cereal crop production.

A. BACKGROUND

There is a severe food shortage in northern Afghan Provinces caused by infestations of Locust and Senn Pest. Reports indicated wheat yield reductions of 50 to 80% in large areas. Reports from UNOCA and the Swedish Committee agreed on heavy losses due to insect infestations.

The North West area of Afghanistan is traditionally a surplus wheat producing area, but is currently in a situation of wide spread and acute food shortage as a result of continuing Moroccan, Italian Locust and Senn Pest infestations. Recommendations were prepared by consultants to O/AID/Rep in March 1990 for Pilot Pest Control activity in S.W. Badghis Province of Afghanistan for the Spring 1991 Locust and Senn Pest Control Period.

B. PROJECT IMPLEMENTATION

Twenty-two Locust and Senn Pest Control agents from Badghis Province of Afghanistan have been recruited and trained in Peshawar. The agents will be in Badghis for the winter, with their equipment, prepared for the very early spring emergence of insect pests.

VII. Cucurbit ROOTFUEL

Cucurbits are gourd-like plants, the roots of which can produce up to 11 tons of root fuel per hectare. ADT will cooperate with the Pakistan Forest Institute and Winrock International to plant seeds in several locations and examine the productivity of these plants in Afghanistan.

In looking for an alternative source of fuel, consideration is being given to the root of the cucurbit, Citrullus colocynthis which occurs naturally in parts of Pakistan and Afghanistan. O/AID/Rep has requested Winrock International to assess the feasibility of a project to develop this rootfuel in suitable sites in Afghanistan (possibly Nangarhar, Helmand and Kandahar).

VIII. AGROFORESTRY

Agroforestry activities are designed to meet several serious needs in Afghanistan. In all the areas where ASSP/PSA has it work, there are shortages of wood for fuel and for construction. The primary focus is on helping farmers grow poles to be used in

rebuilding houses destroyed in the war. Second to that will be assistance in growing firewood. A third serious problem is the accelerated erosion of hillsides caused by deforestation and overgrazing, but help with this may have to wait for more settled times.

There are already seven functioning nurseries in the project which are producing orchard trees. The nurseries will produce plants for living hedges of the orchards and are to be expanded to produce other tree species. Also, in Helmand, smaller nurseries are being started expressly to produce trees for poles and firewood.

The tree most commonly grown by farmers for building-poles during times of peace has been poplar. Poplars are subject to attack by borers, ADT will look to supplying resistant species like eucalyptus and black locust.

The technical aspects of tree-growing are easier than finding suitable ways to involve the community in jointly solving their problems of protecting individual trees, plantations and over-grazed range (or forests). Emphasis will be given to help the field staff, with special training, to be able to offer constructive help to communities in this wider problem.

A consultant in agroforestry will be recommending a viable program to ADT early in the fourth quarter of 1990.

ADT CONCLUSION

ADT's mission, as the extension component of ASSP/PSA, is to demonstrate improved agricultural technology and train Afghan farmers. ADT will upgrade cereal crop and horticultural production, introduce new farming technology into the rural target areas, and promote related agricultural programs such as root fuel production and national agricultural campaigns. To achieve these goals, ADT will demonstrate applicable technology, conduct applied research to improve agricultural production, and provide training to selected Afghans both overseas and in Pakistan.

*need a clear distinction
between ADT extension activities
and PSA commercial sales.*

**AGRICULTURE DEMONSTRATION AND TRAINING
 SUMMARY PAGE**

Forecast	3rd q '90 \$ 000	4th q '90 \$ 000	1st q '91 \$ 000	2nd q '91 \$ 000	12 Month
(i) Operations	392	894	255	363	1,904
(a) Human Resources	88	107	107	116	418
(b) Capital Expenditures	293	771	121	220	1,405
(c) Recurring Operational Costs	11	16	27	27	81
(ii) Cereal Crops	202	199	28	50	479
(a) Seed Multiplication	171	185	3	32	391
(b) On Farm Testing	0	3	0	13	16
(c) Demonstration	0	2	0	5	7
(d) Training	31	9	25	0	65
(iii) Machinery	74	16	96	226	412
(a) On Farm Testing	0	3	0	13	16
(b) Demonstration	0	2	0	5	7
(c) Training	0	16	96	62	174
(iv) National Information Program	1	1	12	39	53
(a) Market Days	1	1	0	1	3
(b) National Dissemination Program	0	0	12	38	50
(v) Poultry	0	29	0	45	74
(vi) Locust Control	60	9	9	8	86
(vii) Cucurbit Rootfuel	0	5	5	5	15
(viii) Horticulture	0	0	125	125	250
	729	1,153	530	861	3,273

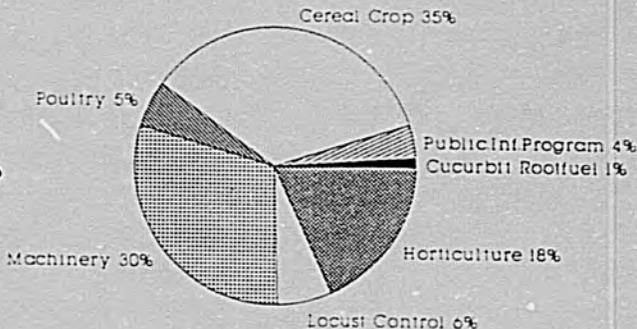
ADT 12 MONTH FORECAST \$000
 3,273

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ADT PROGRAM BUDGET

ACTIVITIES

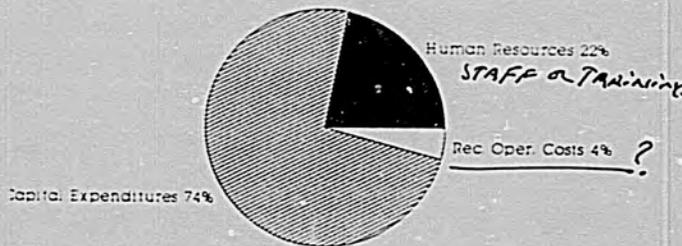
Training?



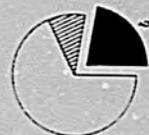
OPERATIONS

ADT EXPENDITURES

- Operations — \$1904 thousand
- Cereal Crops — \$479 thousand
- Machinery — \$412 thousand
- Public Info. Program — \$53 thousand
- Poultry — \$74 thousand
- Locust Control — \$86 thousand
- Cucurbit Rootfuel — \$15 thousand
- Horticulture — \$250 thousand



ASSP/PSA PROGRAM BUDGET July 1990 - June 1991



(i) Operations

*look
lighter
need more
staff*

(a) Human Resources	Units	Ra/Month	\$\$/Month	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST \$ 000
1. Headquarters								
- Director	1		3,250.00	10	10	10	11	41
- Sr. Ags.	9	6,000.00	273.97	7	7	7	8	29
- Jr. Ags.	7	4,000.00	182.65	4	4	4	4	16
- Sr. Agronomist	1		3,125.00	9	9	9	10	37
- Ag. Trainees	8	3,000.00	136.99	0	3	3	4	10
- Secretaries	2	5,000.00	228.31	0	1	1	2	4
- File Clerks	2	3,000.00	136.99	0	1	1	1	3

.....
SUBTOTAL 30 35 35 40 140

2. ADT Primary Field Offices

- Sr. Ags.	6	5,500.00	251.14	5	5	5	5	20
- Jr. Ags.	12	4,000.00	182.65	7	7	7	7	28
- Trainee Technician	21	3,000.00	136.99	9	9	9	9	36
- Guards	24	2,000.00	91.32	0	7	7	7	21

.....
SUBTOTAL 21 28 28 28 105

3. ADT Secondary Field Offices

- Sr. Ags.	8	5,000.00	228.31	5	5	5	6	21
- Jr. Ags.	16	4,000.00	182.65	9	9	9	10	37
- Trainee Technician	18	3,000.00	136.99	7	7	7	8	29
- Guards	24	2,000.00	91.32	0	7	7	7	21

.....
SUBTOTAL 21 28 28 31 108

18% of program

4. ADT Nursery Staff

- Foreman	2	2,500.00	114.16	1	1	1	1	4
- Nurserymen	5	1,600.00	73.06	1	1	1	1	4

.....
SUBTOTAL 2 2 2 2 8

*need staffed
offices like this
for seeds or crop
crops 35% making 20%
others (guard)*

5. Misc.	Units	Bs/Month	\$\$/Month	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Tractor Operators	16	2,700.00	123.29	6	6	6	7	25
- Thresher Operators	16	2,600.00	118.72	6	6	6	6	24
- Mechanics	2	2,700.00	123.29	1	1	1	1	4
- Guards	3	2,000.00	91.32	1	1	1	1	4
- Locust Control	22	6,000	274	18	18	18	20	74
.....								
SUBTOTAL				14	14	14	15	57
Total Human Resources				98	107	107	116	418
(c) Capital Expenditures								
- Computers	6	85,000.00	3,881.28	23				23
- Printers	3	20,000.00	913.24	3				3
- Plastic Buildings	9		30,000.00		90			90
- Office Furniture	2	100,000.00	4,566.21	9				9
- Air Conditioners	5	10,000.00	456.62	2				2
- Heaters	5	2,000.00	91.32	0				0
- Land Cruisers	2		20,000.00	0	40			40
- D/Cab Pickup	12		15,000.00	0	180			180
- Sedan Stationwagon	1		12,000.00	0	12			12
- Ford Diesel Truck/Tr	4		62,500.00	0	250			250
- Seed Cleaner	6		4,000.00	24				24
- Tractors	48	170,000.00	7,762.56	124	124		124	372
- threshers	52	37,000.00	1,689.50	17		71		88
- Reapers (walk behind)	52		2,000.00		8		96	104
- Seed drills	10	16,000.00	730.59	2	5			7
- Plows	48	8,000.00	365.30	6	6			12
- Rotatillers (PTO)	2		5,000.00		10			10
- 9 tine field cultivator	16	7,000.00	319.63	5				5
- Grain Drill	16	11,000.00	502.28	8				8
- Farm Trailer	16	36,000.00	1,735.16	28				28
- Tarpaulin	50	1,500.00	159.82	8				8
- Hand-Held Powered Tr	12		3,000.00			36		36
- Disc Plows	16	19,000.00	867.58			14		14
- Shovels	50		16.00	1				1
- Pruning Shears	30		15.00	0				0
- Sprayers	28		100.00	3				3
- 125 cc Motorcycles	60		1,000.00	30	30			60
- VCR	1		350.00			11		11
- TV	1		500.00			1		1
- Sound System	1		350.00			0		0
- Beds, etc	20		100.00			2		2
- Projector	2		300.00			1		1
- Screen	2		250.00			1		1
.....								
SUBTOTAL				293	771	121	220	1,405

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(c) Recurring Operational CUnits	Rs/Month	\$/Month	\$ 000	\$ 000	\$ 000	\$ 000	FORECAST	
- Afghan Office Lease	8	1,000.00	45.66	0	1	1	1	3
- Utilities	8	500.00	22.83	0	1	1	1	3
- Office Supplies	8	3,000.00	136.99	0	3	3	3	9
- Fuel/Petrol	8	10,000.00	456.62	0	0	11	11	22
- Int'l Off Shore Hire	4		4,000.00	4	4	4	4	16
- Per Diem	3	12,000.00	547.95	5	5	5	5	20
- Insurance	2		220.00	1	1	1	1	4
- Maintenance	8	1,000.00	45.66	1	1	1	1	4
							
			SUBTOTAL	11	16	27	27	81
Total Operations				392	894	255	363	1,904

(ii) Cereal Crops

(a) Seed Multiplication

(1) Wheat

- Transportation	1,200	2,500.00	114.16	30	30			60
- Seed	1,200		460.00	138	138			276
- Urea	2,400	0.00	0.00	0	0			0
- DAP	1,200	0.00	0.00	0	0			0
- Loading/unloading	1,200	20.00	0.91	3	3			6
- Supplies	1,200	1,000.00	45.66		14			14
							
			SUBTOTAL	171	185	0	0	356

(2) Maize

- Transportation	42	3,000.00	136.99			0	3	3
- Seed	42	9,000.00	1,250.00			3	25	28
- Urea	84	0.00	0.00				0	0
- DAP	42	0.00	0.00				0	0
- Loading/unloading	42	20.00	0.91				0	0
- Supplies	42	1,000.00	45.66				1	1
							
			SUBTOTAL	0	0	3	29	32

11-Oct-90

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(3) Rice	Units	Rs/Unit	\$/Unit	3rd Q '90	4th Q '90	1st Q '91	2nd Q '91	12 MONTH
					\$ 000	\$ 000	\$ 000	FORECAST
- Transportation	20	3,000.00	136.99				1	1
- Seed	20		460.00				2	2
- Urea	40	0.00	0.00				0	0
- DAP	20	0.00	0.00				0	0
- Hired Labor	20	1,500.00	68.49				0	0
- Facilities	20	1,000.00	45.66				0	0
.....								
SUBTOTAL				0	0	0	3	3
Total Seed Multiplication				171	185	3	32	391
(b) On Farm Testing								
(1) Fertilizer								
- Wheat	28	1,400.00	63.93		1			1
- Rice	25	3,600.00	164.38				4	4
- Maze	25	1,200.00	54.79		0		1	1
.....								
SUBTOTAL				0	1	0	5	6
(2) Varieties								
- Wheat	32	1,400.00	63.93		1			1
- Rice	25	3,600.00	164.38				4	4
- Maze	25	1,200.00	54.79		0		1	1
.....								
SUBTOTAL				0	1	0	5	6
(3) Mgt. Practices								
- Wheat	10	1,400.00	63.93		1			1
- Rice	15	3,600.00	164.38				2	2
- Maze	15	1,200.00	54.79		0		1	1
.....								
SUBTOTAL				0	1	0	3	4
Total On Farm Testing				0	3	0	13	16

11-Oct-90

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(c) Demonstration

(1) Wheat	Units	Ra/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	57	500.00	22.83		0			0
- Seed	57	0.00	0.00		0			0
- Fertilizer	57	0.00	0.00		0			0
- Land Preparation	57	2,400.00	109.59		2			2
- Facilities	0	0.00	0.00		0			0

.....
SUBTOTAL 0 2 0 0 2

(2) Maize

- Transportation	42	500.00	22.83				0	0
- Seed	42	0.00	0.00				0	0
- Fertilizer	42	0.00	0.00				0	0
- Land Preparation	42	1,000.00	45.66				1	1
- Facilities	42	0.00	0.00				0	0

.....
SUBTOTAL 0 0 0 1 1

(3) Rice

- Transportation	44	500.00	22.83				1	1
- Seed	44	0.00	0.00				0	0
- Fertilizer	44	0.00	0.00				0	0
- Land Preparation	44	3,000.00	136.99				3	3
- Facilities	44	0.00	0.00				0	0

.....
SUBTOTAL 0 0 0 4 4

Total Demonstration 0 2 0 5 7

(d) Training

(1) Int'l -- IBRI

- Transportation	6	1,500.00		3				3
- Tuition	6	1,000.00		2				2
- Per Diem	6	2,000.00		4				4

.....
SUBTOTAL 9 0 0 9

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(2) Int'l -- CIMMYT	Units	Ra/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	6		4,000.00	8				8
- Tuition	6		1,000.00	2				2
- Per Diem	6		2,000.00	4				4
.....								
SUBTOTAL				14	0	0	0	14

(3) In-Service Train'g

- Transportation	225	1,500.00	68.49	2		3		5
- Materials/Resources	225	1,000.00	45.66	1		2		3
- Per Diem	225	4,000.00	182.65	5		9		14
- Lecturer, et al	60	1,500.00	68.49	1		3		4
- Translation Services	1		50,000.00	8		8		16
.....								
SUBTOTAL				17	0	25	0	42

Total Training

31 9 25 0 65

Total Cereal Crop

202 199 28 50 479

=====
=====
iiii) Machinery

(a) On Farm Testing

(1) Threshers

- Transportation	52	5,000.00	228.31				10	10
- Spares/Maintenance	42	5,000.00	228.31				10	10
- Hired Labor	42	1,500.00	68.49				3	3
.....								
SUBTOTAL				0	0	0	23	23

(2) Reapers

- Transportation	52	5,000.00	228.31	10			2	12
- Spares/Maintenance	52	5,000.00	228.31	10			2	12
- Hired Labor	52	1,500.00	68.49	3			1	4
.....								
SUBTOTAL				23	0	0	5	28

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(3) Tractor/Plows	Units	R\$/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST	
- Transportation	48	5,000.00	228.31	7			4	11	
- Materials/Resources	48	5,000.00	228.31	7			4	11	
- Per Diem	48	1,500.00	68.49	2			1	3	
.....				SUBTOTAL	16	0	0	9	25
Total On Farm Testing					39	0	0	37	76
(b) Demonstration									
(1) Trashers/Reapers									
- Transportation	42	40,000.00	1,826.48				77	77	
- Materials/Resources	84	5,000.00	228.31				10	10	
- Hired Labor	84	1,500.00	68.49				3	3	
- Facilities	84	1,000.00	45.66				2	2	
.....				SUBTOTAL	0	0	0	92	92
(2) Tractors/Plows									
- Transportation	32	40,000.00	1,826.48	29			29	58	
- Materials/Resources	48	5,000.00	228.31	4			4	8	
- Hired Labor	48	1,500.00	68.49	1			1	2	
- Facilities	48	1,000.00	45.66	1			1	2	
.....				SUBTOTAL	35	0	0	35	70
Total Demonstration					35	0	0	127	162
(c) Training									
(1) Extension-- Farm Machinery									
- Transportation	175	1,500.00	68.49		2	2	2	6	
- Materials/Resources	175	1,000.00	45.66		1	1	1	3	
- Per Diem	175	4,000.00	182.65		5	5	5	15	
.....				SUBTOTAL	0	8	8	8	24

(2) Extension--Misc.	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	175	1,500.00	68.49			2	2	6
- Materials/Resources	175	1,000.00	45.66			1	1	3
- Per Diem	175	4,000.00	182.65			5	5	15
- International Travel	15		3,000				15	45

.....
 SUBTOTAL 0 8 8 53 69

(3) Mobile Unit

- Truck/Trailer	1		65,000				65	65
- Audio/Visual	1		13,500				14	14
- Hired Staff	5	5,000	228			1	1	2

.....
 SUBTOTAL 0 0 80 1 81

Total Training

0 16 96 62 174

Total Machinery

74 16 96 226 412

(iv) Public Information Program

(a) Market Days

- Transportation	65	2,000.00	91.32	1	1		1	3
- Materials/Resources	65	500.00	22.83	0	0		0	0
- Hired labor	0	0.00	0.00	0	0		0	0

.....
 SUBTOTAL 1 1 0 1 3

(b) Public Dissemination Program

- Radio	1		50,000.00				8	8
- Advertising	1		100,000.00				17	17
- Field Days	1	22,000.00	1,004.57				0	0
- Incentive Awards	1		25,000			12	13	25

.....
 SUBTOTAL 0 0 12 38 50

Total Public Information Program

1 1 12 39 53

-Oct-90

ADT.BGT

I) Poultry

	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Poultry	16,000	110.00	5.02			20	30	50
- Transportation	72	20,000.00	913.24			5	8	13
- Food (chicken)	16,000	100.00	4.57			1	2	3
- Hired Labor	72	1,500.00	68.49			2	4	6
- Facilities	11	2,000.00	91.32			1	1	2

total Poultry SUBTOTAL 0 29 0 45 74

II) Locust Control

- Transportation	4	50,000.00	2,283.11	40	6	6	5	57
- Materials/Resources	4	50,000.00	2,283.11	15	2	2	2	21
- Hired labor	4	20,000.00	913.24	5	1	1	1	8

total Locust Control SUBTOTAL 60 9 9 8 86

III) Cucurbit Rootfuel

- Transportation	4	50,000.00	2,283.11		2	2	2	6
- Materials/Resources	4	50,000.00	2,283.11		2	2	2	6
- Hired labor	4	20,000.00	913.24		1	1	1	3

total Cucurbit Rootfuel SUBTOTAL 0 5 5 5 15

IV) Horticulture

- Apple Seedlings	100,000		5.00			25	25	50
- Packaging	100,000		1.00			50	50	100
- Transport	100,000		1.00			50	50	100

total Horticulture SUBTOTAL 0 0 125 125 250

total ADT 729 1.153 530 861 3,273

ADT ACTIVITY TIMESHEET

Activity	3rd Quarter 90	4th Quarter 90	1st Quarter 91	2nd Quarter 91
I. OPERATIONS				
a. Human Resources				
b. Recurring Costs				
c. Capital Investment				
II. CEREAL CROPS				
WHEAT MULTIPLICATION				
a. Planning				
b. Order Seed				
c. Planting Seed				
d. Fertilizing				
e. Rouging				
f. Harvesting				
g. Distribution				
MAIZE MULTIPLICATION				
a. Planning				
b. Ordering Seed				
c. Planting Seed				
d. Pest Control				
e. Harvesting				
RICE MULTIPLICATION				
a. Planning				
b. Ordering Seed				
c. Planting Seed				
d. Pest Control				
e. Fertilizing				
f. Harvesting				
ON-FARM TRIALS				
a. FERTILIZER				
Wheat				
Maize				
Rice				
b. MANAGEMENT PRACTICE				
Wheat				
Maize & Rice				

ACTIVITY	3rd Quarter 90	4th Quarter 90	1st Quarter 91	2nd Quarter 91
c. DEMONSTRATION				
Wheat				
Maize				
Rice				
d. TRAINING				
International				
In-Service				
III. MACHINERY				
a. ON-FARM TRIALS				
Threshers				
Reapers				
Tractors/Plovs				
b. DEMONSTRATION				
Threshers/Reapers				
Tractor/Plovs				
c. TRAINING				
Extension Farm				
Machinery				
Extension, Farmer				
Training				
IV. FARMERS PRODUCTION PROGRAM				
a. Market Days				
b. Information Program				
V. POULTRY INTRODUCTION INTO AFGHANISTAN				
a. Procure Chicks				
b. Transport Chicks				

ACTIVITY	3rd Quarter 90	4th Quarter 90	1st Quarter 91	2nd Quarter 91
VI. LOCUST CONTROL				
a. Hire Staff	_____	_____	_____	_____
b. Order Equipment	_____	_____	_____	_____
c. Train Staff	_____	_____	_____	_____
d. Travel to survey the area	_____	_____	_____	_____
e. Train Farmers to use sprayers	_____	_____	_____	_____
f. Start Control program	_____	_____	_____	_____
g. Report Progress	_____	---	---	---
h. Hire Staff for next season	_____	_____	_____	_____
VII. CUCRUBIT ROOTFUEL				
a. Review Literatures & Survey Potential Areas to grow plant	_____	_____	_____	_____
b. Plant New Seeds	_____	_____	_____	_____
VIII. AGROFORESTRY				
a. Survey tree sites in Afghanistan	_____	_____	_____	_____
b. Survey NGOs in Peshawar	_____	_____	_____	_____
c. Describe Vegetation zones in Afghanistan	_____	_____	_____	_____
d. Study Poplar Border	_____	_____	_____	_____
e. Send Seeds to start nursery	_____	_____	_____	_____
f. Order cutting of Poplar	_____	_____	_____	_____
g. Train Nursery men	_____	_____	_____	_____
h. Gather Russian Olive Seed	_____	_____	_____	_____
i. Local Campaigns for Public Information	_____	_____	_____	_____
j. Direct Plant Poplar Cuttings	_____	_____	_____	_____
k. Distribute tree seed to farmers	_____	_____	_____	_____

PROGRAMMING, PLANNING ANALYSIS

PPA

THE PROGRAMMING, PLANNING AND ANALYSIS COMPONENT

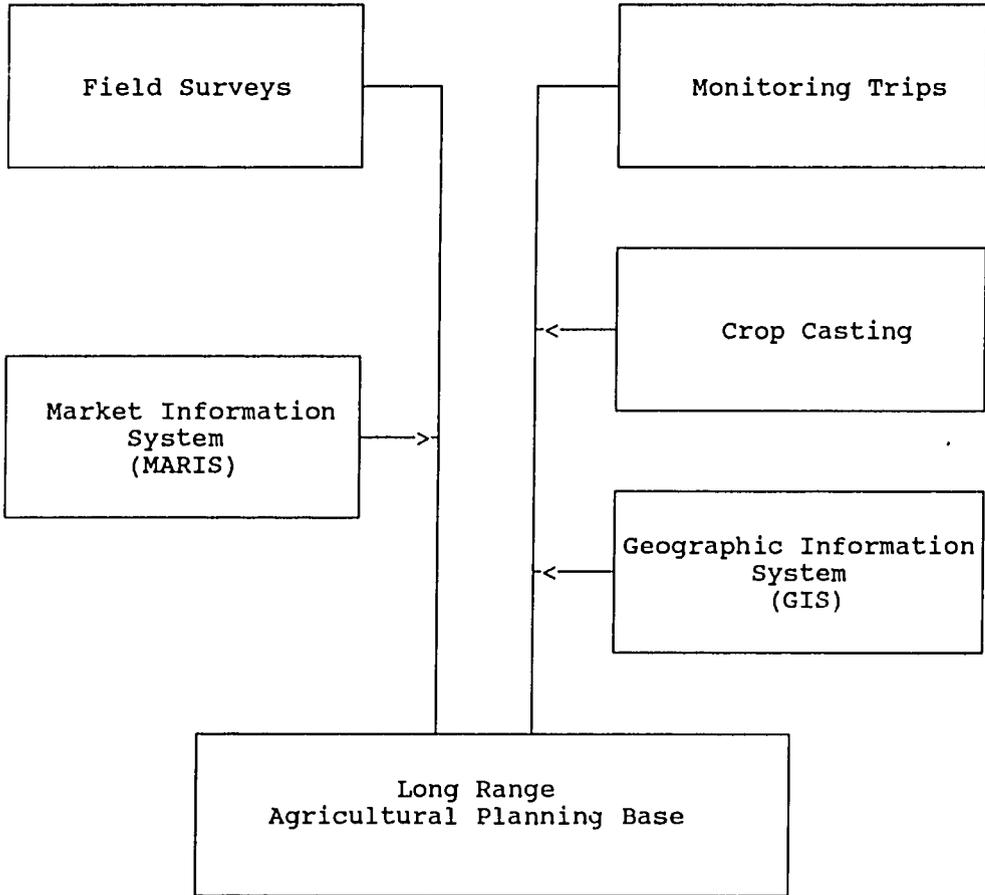
OVERVIEW

The Programming Planning and Analysis Component (PPA) is designed to gather economic, political, social, geographical and agricultural data to support overall ASSP/PSA objectives. PPA will:

- o Establish a capacity to provide accurate and time'y information on Afghan agriculture to the Private Sector Agribusiness (PSA) and Agricultural Demonstration and Training (ADT) Components;
- o Develop resource inventories and maps of the project area for field use;
- o Create a base for long range planning of Afghanistan's development through the establishment of a geographic information systems (GIS); and
- o Establish integrated planning for the development of target areas selected by the project.

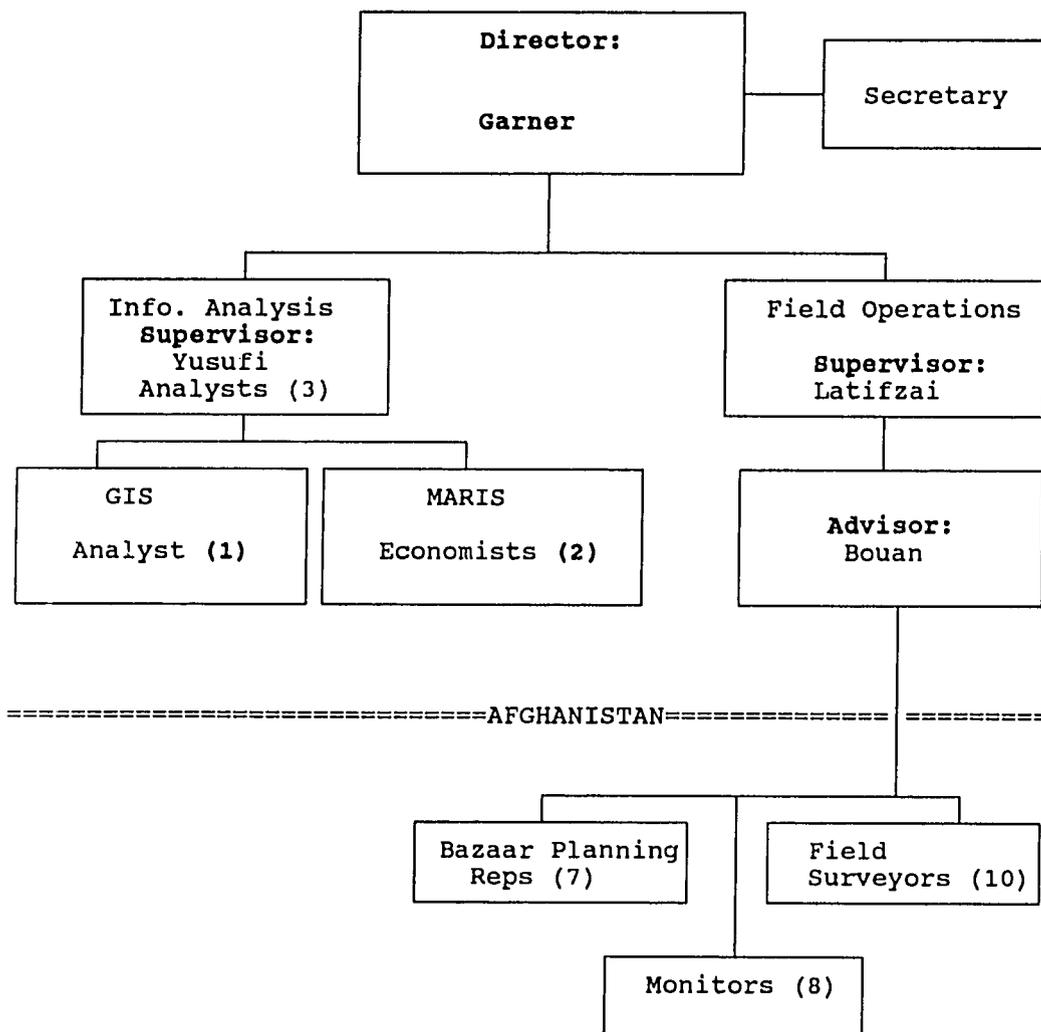
These PPA goals are the basis of support to assist the other components to operate. To gather accurate data, PPA will utilize both high technology such as satellite readouts, and low technology such as field survey teams. These technologies will increase knowledge of the conditions and dynamics of agriculture in Afghanistan. The diagram on the following page provides a graphic overview of the PPA implementation model. The chart which follows illustrates PPA's organization. Following that is an outline of PPA's activities, which is detailed in the following text and in the budget at the end of this section.

PPA LONG RANGE INFORMATION AND PLANNING BASE



4/2

PROGRAMMING, PLANNING AND ANALYSIS COMPONENT



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PPA WORK PLAN OUTLINE

- I. Operations
 - a. Human Resources
 - b. Capital Investments
 - c. Recurring Costs
- II. Surveying and Monitoring
 - a. Surveys
 - b. Monitoring Trips
- III. MARIS
 - a. Economic Data Collection
 - b. Commodity Reports
 - c. Marketing Studies
- IV. GIS
 - a. Crop Casting
 - b. Ground Truthing
 - c. GIS Analysis/Reports
 - d. GIS Remote Sensing (Phase II)
- V. Special Studies
 - a. High Value Horticulture
 - b. Miscellaneous Studies

I. OPERATIONS

PPA operations include all human resource expenses, capital expenditures including procurement, and recurring operational costs such as estimates for utilities and office supplies. Operational costs have been calculated through June 1992.

II. MONITORING AND SURVEYING

A. SURVEYS

A primary focus of PPA has been the cross border surveys which help to shape PSA and ADT strategic planning. For instance, the first four surveys have helped identify primary, secondary and tertiary bazaars for PSA activity in the targeted provinces, as well as analyzing the trade networks and crossing points along the Pakistan/Afghanistan border. Additional surveys will collect information on the levels of economic activity in the various bazaars, the populations served, and the changing political and military climate. The information gathered by these surveys will be used to augment the work of GIS and the Market Information System (MARIS), and to answer planning questions raised by PSA and ADT. Surveys are scheduled every other month for the duration of the project. Surveys evolve according to the needs and requirements of the ASSP. Currently they confine themselves to Zone I, or the primary impact area for ASSP. There are functionally four Afghan survey crews that carry out surveys within the 12 - 16 provinces where ASSP is working. These 16 provinces in turn are roughly subdivided into four geographical sections. Expatriate monitor/surveyors accompany these survey teams from time to time, depending on the issue being surveyed.

B. MONITORING TRIPS

PPA staff conducts regular monitoring trips to targeted provinces. Various monitoring trips using expatriate and Afghan monitors have been carried out among the targeted 16 provinces. Monitors, are also utilized for courier services, and to confirm shipment and delivery of certain types of project inputs. Expatriate monitors help to provide an additional level of administrative supervision and technical support for field activities. These administrative and communications links are important organizationally, helping to integrate the geographically widespread project components, offices, and operations. Expatriate monitors are proving to be particularly essential in coordinating information and communication to field workers and extension agents, and assessing programmatic activities and their impact on Afghanistan's agriculture and private sector trade. As with the surveys described above,

monitoring trips are conducted as needed, according to the requirements of the project. They depend on agricultural seasons, and other topical considerations. Monitoring trips help to assess project impact, as well as helping to evaluate the way project field staff are carrying out their responsibilities.

III. MARKET INFORMATION SYSTEM (MARIS)

A. ECONOMIC DATA COLLECTION

The Market Information System (MARIS) builds on the initial work of the cross border survey teams. MARIS's main objective is to collect marketing information on selected products to improve marketing decisions for the project's various private sector initiatives. The system provides data on price trends as well as spot price checks which assist PSA both in its commodity marketing and brokerage services. Major factors that determine product prices, such as transportation and currency exchange rates, are also surveyed and reported monthly. Additionally, MARIS draws upon the agricultural reports produced by the Swedish Committee for Afghanistan, various related reports collected and disseminated by ACBAR, and the cross border trade data and macro economic database designed and developed by Nathan Associates. Initial work has been completed in designing a system to facilitate the storage and processing of this information. This is now being revised to take into account the expanded strategy and focus proposed for PSA.

B. COMMODITY REPORTS/MARKETING STUDIES

Activities under MARIS include monthly commodity reports and occasional marketing studies. Also in connection with MARIS, DAI has entered into a subcontract agreement with the Pakistan based economic consulting firm of Development Resource Management Services (DRMS). MARIS, with its monthly outputs, will assist PSA in understanding market conditions in rural Afghanistan.

IV. GEOGRAPHIC INFORMATION SYSTEM (GIS)

Based on advanced satellite technology, PPA and EarthSat (one of the project's subcontractors) are creating a geographic information system (GIS) which will include remotely sensed data available from commercial satellites. This system will create and maintain an extensive, geographically referenced data base for rural Afghanistan. Data collected from these sources will be supplemented by ground truthing exercises conducted by survey teams in Afghanistan. Information available from this advanced technology will allow PPA to update various statistical findings, data, and maps. GIS information on topics as varied as land use, extent of irrigated cultivation, village and town locations, and

roads and related infrastructure will also help senior staff management determine project needs and priorities.

A. CROP CASTING

EarthSAT also undertakes a crop forecasting activity, ("crop casting") under a DAI sub-contract. Crop casting is the forecasting of crop production based on information received from satellite imagery complemented by ground truthing. This aspect of GIS will be valuable in predicting potential crop surpluses and shortages, and areas in which crop export is likely. Specific outputs according to EarthSAT's contract include:

- o monthly wheat yield and area assessments for each growing district in Afghanistan;
- o monthly region by region assessments of wheat quality;
- o monthly best estimates of end-of-year wheat yield;
- o monthly reports of rainfall, soil moisture, crop health and production estimates for specific areas requested by DAI.

B. GROUND TRUTHING

Ground truthing will be conducted regularly to expand upon and verify the findings and data from satellite imagery. This requires project field staff to travel to and to survey selected parts of Afghanistan and to interpret and confirm or correlate various landmarks and cropping conditions obtained from satellite photographs. Ground truthing will be carried out both for the GIS component, as well as for 'Cropcasting.'

C. GIS ANALYSIS AND REPORTS

GIS will regularly analyze and report its findings from both satellite imagery and ground truthing. These reports will help interpret agricultural production trends. These reports will also help in planning ADT and PSA activities to ensure maximum impact from program resources. Specific outputs over the next twelve months include the following:

Phase I, (six months)

- o provide technical advice and the specifications for the procurement of hardware and software for GIS;
- o create the GIS database from existing 1:100,000 maps;

- o train DAI's GIS staff in the operation of the software modules and supervise the initial data entry;
- o design ground truthing activities; and
- o provide other IGS outputs for use in planning including land-use maps, and enhanced satellite imagery of project areas.

Phase II, (six months)

During Phase II, the sub-contractor will:

- o develop mathematical and logical modeling capacity;
- o carry out spatial modeling and analysis; and
- o provide advanced training in all GIS operations including analytical techniques and representation of the data.

D. EARTHSAT, REMOTE SENSING/CROP CASTING (PHASE II)

PPA has provisionally allocated money for an additional EarthSat contract as an extension of its crop casting activities. This contract is budgeted for 1991/1992. ASSP/PSA will decide on this follow-up activity after review with O/AID/Rep of appropriate information and initial crop casting reports.

V. SPECIAL STUDIES

Special Studies represents the final program area under PPA's work plan and budget. ASSP/PSA occasionally requires information or technical information not easily available from project staff. Studies on commodity pricing, labor, spare parts, fuel availability, and exchange rate variations are some illustrative possibilities.

A. HIGH VALUE CASH CROPS

An initial study of high value cash crops is currently nearing completion. This study is designed to assess and evaluate the potential for expanding cash crop, high value horticultural programs in Afghanistan. The study is examining likely export crops such as apricots and raisins and identifying plausible world markets.

B. MISCELLANEOUS STUDIES

PPA has budgeted a miscellaneous studies category which will allow for independent studies over the life of the project. These studies will be further outlined when appropriate.

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PPA CONCLUSION

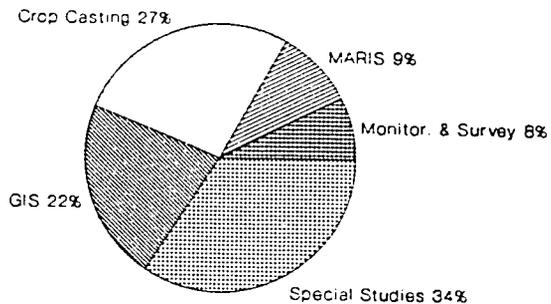
PPA's mission is to provide the information necessary to plan ASSP/PSA activities. Cross border surveys, MARIS, GIS, crop casting and Special Studies are the means by which PPA will acquire this informational base. It is relatively simple to outline the broad components of PPA's activities over the life of the project. Cross border surveys are scheduled roughly every sixty days with each survey generally lasting six weeks. Thus, there will be approximately six cross border surveys per year. GIS, under EarthSat, extends for the life of the project. MARIS will produce regular commodity and tracking reports which also extends for the duration of the contract. Finally, special studies will be commissioned as required by project priorities. With these assumptions, PPA's work plan and budget can be forecast with a reasonable level of accuracy over the next twelve months.

**PROGRAM POLICY AND ANALYSIS
 SUMMARY PAGE**

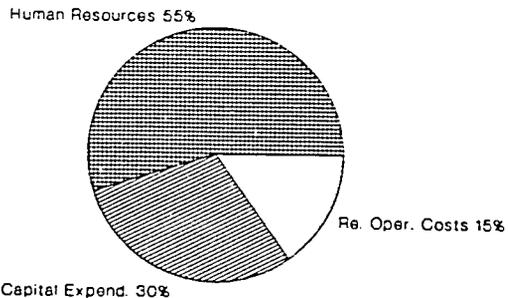
	3rd q '90 \$ 000	4th q '90 \$ 000	1st q '91 \$ 000	2nd q '91 \$ 000	12 Month Forecast
(i) Operations	236	157	147	160	700
(a) Human Resources	93	93	93	106	384
(b) Capital Expenditures	120	40	25	25	210
(c) Recurring Operational Costs	24	24	29	29	106
(ii) Monitoring & Surveying	12	18	6	18	54
(iii) MARIS	17	23	14	14	68
(iv) Crop Casting	48	48	48	48	192
(v) GIS	40	39	40	39	158
(a) Ground Truthing	6	6	6	6	24
(b) GIS Analysis and Reports	34	33	34	33	134
(vi) Special Studies	86	53	53	53	245
(a) High Value Horticulture	86	0	0	0	86
(b) Misc Special Studies	0	53	53	53	159
	439	338	308	332	1,417

PPA 12 MONTH FORECAST \$000
 1,417

PPA PROGRAM BUDGET ACTIVITIES



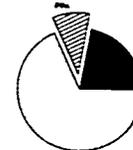
OPERATIONS



PPA EXPENDITURES

- Operations:
 - Human Resources — \$364 thousand
 - Capital Expenditure — \$230 thousand
 - Recurring Operational Costs — \$104 thousand
- Monitoring & Survey — \$54 thousand
- MARIS — \$48 thousand
- Crop Casting — \$192 thousand
- GIS — \$158 thousand
- Special Studies — \$245 thousand

ASSP/PSA PROGRAM BUDGET July 1990 - June 1991



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(i) Operations

(a) Human Resources	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST	
- IMU Supervisor	1	16,000.00	730.59	2	2	2	2	8	
- GIS Consultant	1		3,125.00	9	9	9	10	37	
- Operations Superviso	1	10,000.00	456.62	1	1	1	2	5	
- Operations Advisor	1		3,125.00	9	9	9	10	37	
- Marketing Specialist	1		3,125.00	9	9	9	10	37	
- Monitoring Specialis	3		3,125.00	28	28	28	31	115	
- Agriculturalist	1	10,000.00	456.62		1	1	2	4	
- Data Analysts	2	4,000.00	182.65	1	1	1	1	4	
- Data Management Supe	1	10,000.00	456.62	1	1	1	2	5	
- Economist	1		3,125.00	9	9	9	10	37	
- Monitors	8	5,000.00	228.31	5	5	5	6	21	
- Surveyors	10	5,000.00	228.31	7	7	7	8	29	
- Secretary	1		2,000.00	6	6	6	7	25	
- Bazaar Reps	7	5,000.00	228.31	5	5	5	5	20	
Total Human Resources				SUBTOTAL	92	93	93	106	384
(b) Capital Expenditures									
- 4WD Landcruiser	2		20,000.00		40			40	
- 125 cc Motorcycles	10		1,000.00	10				10	
- GIS Hardware/Satelit	1		100,000.00	100				100	
- LAN Network/Hardware	1		100,000.00			25	25	50	
- Video Camera and Equ	4		2,500.00	10				10	
Total Capital Expenditures				SUBTOTAL	120	40	25	25	210
(c) Recurring Operational									
- Utilities	1	1,000.00	45.66	0	0	0	0	0	
- Office Supplies	7	5,000.00	228.31	5	5	5	5	20	
- Fuel/Petrol	7	5,000.00	228.31			5	5	10	
- Inter'l Travel	4		4,000.00	4	4	4	4	16	
- Per Diem	4	12,000.00	547.95	7	7	7	7	28	
- Insurance	1		2,450.00	7	7	7	7	28	
- Maintenance	7	1,000.00	45.66	1	1	1	1	4	
Total Recurring Operational Costs				SUBTOTAL	24	24	29	29	106
Total Operations					236	157	147	160	700

=====
 (ii) Monitoring & Surveying

(a) Survey I	Units	Rs/Unit	\$\$/Unit	3rd Q '90	4th Q '90	1st Q '91	2nd Q '91	12 MONTH
				\$ 000	\$ 000	\$ 000	\$ 000	FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

 SUBTOTAL 0 0 0 0 0

(b) Survey II

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

 SUBTOTAL 0 0 0 0 0

(c) Survey III

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

 SUBTOTAL 0 0 0 0 0

(d) Survey IV

- Transportation	4	20,000.00	913.24	4				4
- Materials/Resources	4	5,500.00	251.14	1				1
- Per Diem	4	6,000.00	273.97	1				1

 SUBTOTAL 6 0 0 0 6

(e) Survey V

- Transportation	4	20,000.00	913.24		4			4
- Materials/Resources	4	5,500.00	251.14		1			1
- Per Diem	4	6,000.00	273.97		1			1

 SUBTOTAL 0 6 0 0 6

16-Sep-90

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(f) Survey VI	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24		4			4
- Materials/Resources	4	5,500.00	251.14		1			1
- Per Diem	4	6,000.00	273.97		1			1

.....
SUBTOTAL 0 6 0 0 6

(g) Survey VII

- Transportation	4	20,000.00	913.24			4		4
- Materials/Resources	4	5,500.00	251.14			1		1
- Per Diem	4	6,000.00	273.97			1		1

.....
SUBTOTAL 0 0 6 0 6

(h) Survey VIII

- Transportation	4	20,000.00	913.24				4	4
- Materials/Resources	4	5,500.00	251.14				1	1
- Per Diem	4	6,000.00	273.97				1	1

.....
SUBTOTAL 0 0 0 6 6

(i) Survey IX

- Transportation	4	20,000.00	913.24				4	4
- Materials/Resources	4	5,500.00	251.14				1	1
- Per Diem	4	6,000.00	273.97				1	1

.....
SUBTOTAL 0 0 0 6 6

(j) Survey X

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

09

(k) Survey XI	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Die	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(l) Survey XII

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Die	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(m) Survey XIII

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Die	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(n) Survey XIV

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Die	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(o) Survey XV

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Die	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

16-Sep-90

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(p) Survey XVI	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(q) Survey XVII

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(r) Survey XVIII

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(s) Monitoring Trip I

- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0

.....
SUBTOTAL 0 0 0 0 0

(t) Monitoring Trip II

- Transportation	4	20,000.00	913.24	4				4
- Materials/Resources	4	5,500.00	251.14	1				1
- Per Diem	4	6,000.00	273.97	1				1

.....
SUBTOTAL 6 0 0 0 6

(u) Monitoring Trip III	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24			4		4
- Materials/Resources	4	5,500.00	251.14			1		1
- Per Diem	4	6,000.00	273.97			1		1
.....				SUBTOTAL				
				0	6	0	0	6

(v) Monitoring Trip IV	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24				4	4
- Materials/Resources	4	5,500.00	251.14				1	1
- Per Diem	4	6,000.00	273.97				1	1
.....				SUBTOTAL				
				0	0	0	6	6

(w) Monitoring Trip V	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....				SUBTOTAL				
				0	0	0	0	0

(x) Monitoring Trip VI	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....				SUBTOTAL				
				0	0	0	0	0

(y) Monitoring Trip VII	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....				SUBTOTAL				
				0	0	0	0	0

16-Sep-90

PPA.BGT

(z) Monitoring Trip VIII	Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....								
SUBTOTAL				0	0	0	0	0
 (aa) Monitoring Trip IX								
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....								
SUBTOTAL				0	0	0	0	0
 (ab) Monitoring Trip X								
- Transportation	4	20,000.00	913.24					0
- Materials/Resources	4	5,500.00	251.14					0
- Per Diem	4	6,000.00	273.97					0
.....								
SUBTOTAL				0	0	0	0	0
Total Monitoring & Surveying				12	18	6	18	54
=====								
(ii) MARIS -- NB: GIC contract under TA budget								
- Pilot Test	2	65,000.00	2,968.04	3	3			6
- Comm. Price & Analys	30	50,000.00	2,283.11	14	14	14	14	56
- Marketing Studies	9	50,000.00	2,283.11	0	6	0	0	6
.....								
Total MARIS				17	23	14	14	68

=====
 (iv) Crop Casting
 =====

	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST
- Ground Truthing	30	20,000.00	913.24	3	3	3	3	12
- Sub-contract I	1		239,000.00	45	45	45		135
- Sub-contract II	1		315,000.00				45	45

Total Crop Casting							
				SUBTOTAL				
				48	48	48	48	192

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(v) GIS

(a) Ground Truthing

- Transportation	10	80,000.00	3,652.97	4	4	4	4	16
- Materials/Resources	10	22,000.00	1,004.57	1	1	1	1	4
- Per Diem	10	24,000.00	1,095.89	1	1	1	1	4

							
				SUBTOTAL				
				6	6	6	6	24

(b) GIS Analysis & Report

- Transportation	30	10,000.00	456.62	2	1	2	1	6
- Materials/Resources	30	20,000.00	913.24	3	3	3	3	12
- Consultants - Earths	1		264,999.00	29	29	29	29	116

							
				SUBTOTAL				
				34	33	34	33	134

Total GIS				40	39	40	39	158
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 (vi) Special Studies

(a) Hi Value Horticulture Units	Rs/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 MONTH FORECAST	
- Transportation	2	2,000.00	4				4	
- Materials/Resources	2	20,000.00	2				2	
- Consultants - HYH, I	1	80,000.00	80				80	

			SUBTOTAL	86	0	0	0	86
(b) Studies								
- Transportation	9	2,000.00		2	2	2	6	
- Materials/Resources	9	20,000.00		1	1	1	3	
- Consultants	9	50,000.00		50	50	50	150	

			SUBTOTAL	0	53	53	53	159
Total Special Studies			86	53	53	53	245	

Total PPA			439	338	308	332	1,417	

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PPA ACTIVITY TIMESHEET

	MONITORING & SURVEYS	3rd Quarter 90	4th Quarter 90	1st Quarter 91	2nd Quarter 91
1	SURVEY I				
2	SURVEY II				
3	SURVEY III				
4	SURVEY IV	>--]			
5	SURVEY V		>--]		
6	SURVEY VI		>--]		
7	SURVEY VII			>--]	
8	SURVEY VIII				>--]
9	SURVEY IX				>--]
10	MONITORING TRIP I	>--]			
11	MONITORING TRIP II		>--]		
12	MONITORING TRIP III			>--]	
13	MONITORING TRIP IV				>--]
14	MARIS (Monthly)	X X X	X X X	X X X	X X X
15	CROP CASTING (Monthly)	X X X	X X X	X X X	X X X
16	GIS Set-up		XXXXXXXXXXXXX		
17	GIS Planning Model Map			X	
18	HUH REPORT		X		

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PSA

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THE PRIVATE SECTOR AGRIBUSINESS COMPONENT

OVERVIEW

The Private Sector Agribusiness (PSA) Component seeks to obtain a measurable increase in Afghan agricultural production and exports through assistance to private sector traders both in Afghanistan and Pakistan. PSA objectives are based on the underlying premise that, especially with the lack of governmental services in Afghanistan, the private sector has an important role to play in the market-based growth and development of Afghan agriculture. The project will assist the Pakistan and Afghan business community to:

- o Provide a significant part of Afghanistan with a range of inputs essential to the rehabilitation and agricultural production of rural communities;
- o Supply this range of commodities at prices that will promote a substantial production increase in wheat, livestock and exportable cash crops; and
- o Broaden the economic base of Afghanistan by expanding commercial trade links with Pakistan and other open market countries.

Import Market Restoration. The private sector is now constrained from exporting inputs to Afghanistan mainly by high transport costs, complex regulatory procedures in Pakistan, and the low purchasing power of Afghan farmers. The project will address these constraints by rebating certain transport costs, assisting with Pakistani formalities, and increasing the availability (and perhaps lowering the cost) of working capital by providing financial guarantees. The objective is to reduce the trading costs and risks associated with exporting to Afghanistan.

New Market Development. Encouraging the private sector to develop new markets for agricultural inputs will be achieved by: 1) providing incentives to traders for a short period (one or two years) in order to establish markets and networks; 2) reimbursing some of the costs of promoting new products thus far not well known among farmers and for which the market is unclear. The objective is to shift the responsibility for development of markets for new inputs from public sector extension services to the private sector. This will help ensure that new inputs are introduced in response to market forces, rather than agronomic research, and will therefore be more sustainable at the farm level.

Export Crop Promotion. The final element in the PSA strategy is to use project initiatives to increase agricultural exports from Afghanistan through attention to training, processing, transport, documentation and financial arrangements needed by the private sector. Businesses with knowledge and experience in products that Afghanistan can export will receive project support in extending to farmers new technologies that increase production and improve the quality of export crops. These same businesses will receive project support in developing export markets abroad. The project will build on the motivation of agribusinesses to expand their access to products from which they stand to directly benefit.

The private sector, through PSA, will have introduced new technologies to Afghan farmers in collaboration with the ADT component. As new or underutilized types of agricultural equipment, chemicals and seeds are tested and demonstrated by ADT in Afghanistan, customer demand will grow. PSA will work with traders to help meet the demand.

PSA activities are divided into three categories related to the three basic objectives of this component:

- o activities to facilitate the import of inputs for which a market already exists in Afghanistan;
- o market development activities to introduce new inputs that have not previously been provided to Afghan farmers through commercial channels; and
- o support for integrated initiatives by agribusinesses to increase the production of export crops and expand export markets.

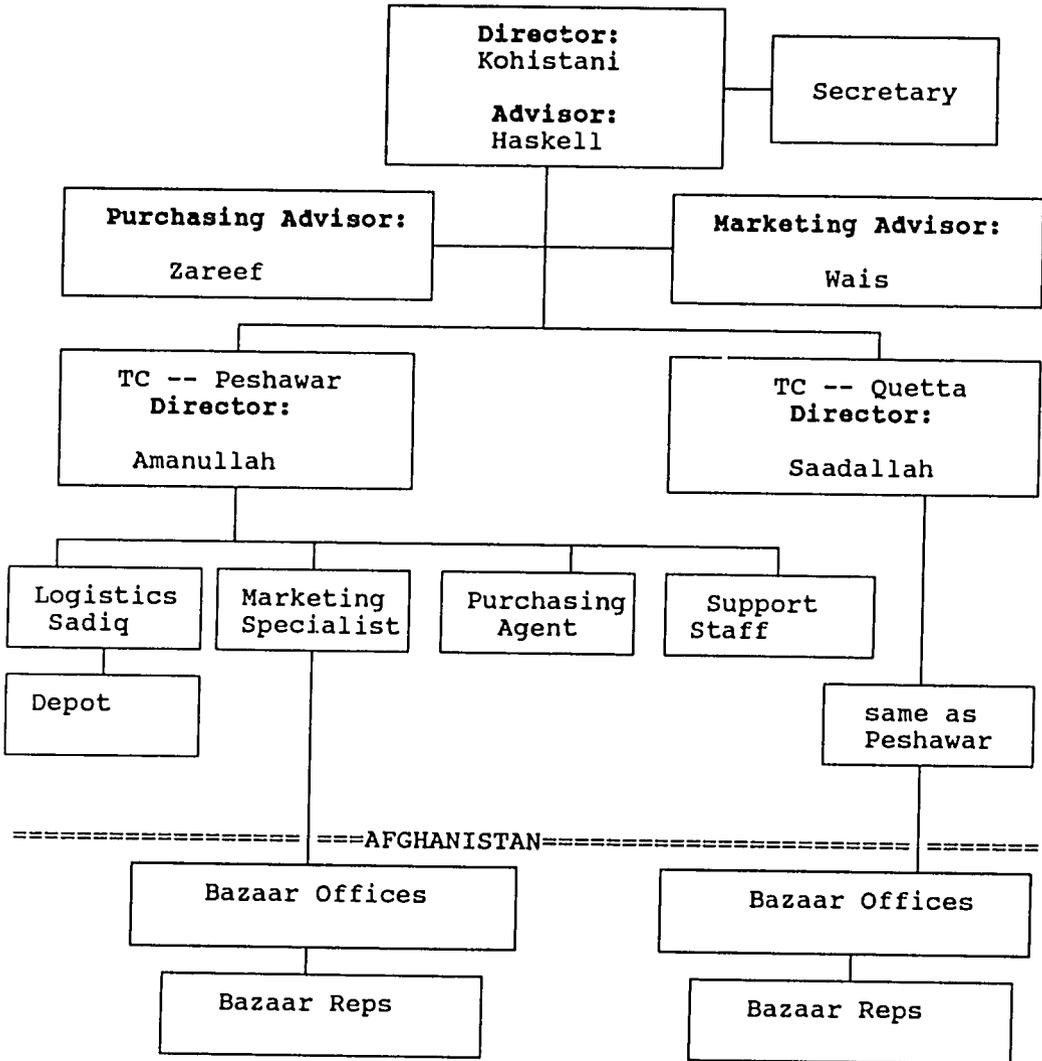
The chart on the next page introduces the structure of PSA activities during the life of the project.

PSA WORK PLAN OUTLINE

- I. Operations
 - a. Human Resources
 - b. Capital Expenditures
 - c. Recurring Costs
- II. Trade Facilitation
 - a. Brokerage and Trade Promotion
 - b. Trade Incentives
- III. Market Development
 - a. Seed and Seedlings
 - b. Farm Machinery
 - c. Agricultural Chemicals
- IV. Commercialization
 - a. Nursery Development
 - b. Apricot Marketing
 - c. Horticulture Processing
 - d. Apple Trees
 - e. Vegetables
 - f. Incentive Awards
 - g. Travel
- V. Policy Constraint Studies

The PSA organization chart follows.

PRIVATE SECTOR AGRIBUSINESS COMPONENT



I. OPERATIONS

Operations expenses include all human resources, capital expenditures and recurring operational costs. Included under recurring costs are the expenditures associated with trade centers, depots and PSA offices in Afghanistan.

The Peshawar and Quetta trade centers, with their attached depots and offices in Afghan bazaars, will form the base of operations for all PSA activities. The trade centers will include offices and showrooms and their staff will be responsible for implementing PSA trade facilitation and market development activities as described below. The staff at bazaar offices (initially two per office in five major bazaars) will provide market information to the trade centers, publicize PSA services available to merchants in the bazaars, implement PSA programs in Afghanistan and coordinate field activities with ADT staff in adjacent areas. PSA will establish offices in additional bazaars (between 2 and 4) in 1991 and plans to increase the number of representatives per bazaar.

II. TRADE FACILITATION ACTIVITIES

A. BROKERAGE AND TRADE PROMOTION

The objective of the brokerage activities is to provide Afghan traders increased access to agricultural inputs in Pakistan. The project will work to bring together Afghan buyers and Pakistani sellers and will help to break the various regulatory bottlenecks obstructing the flow of goods from Pakistan to Afghanistan. Actions to accomplish this will include:

1. **BROKERAGE** -- An ongoing function of the Trade Centers will be providing reliable information to Afghan traders on products available for export to Afghanistan. This will include sources, technical information and brand recommendations. PSA will work closely with ADT in this area, passing on to traders the results of ADT's field tests and evaluations of various products, as well as passing on to traders details of demand growing out of ADT demonstrations. Trade Center Purchasing Agents will maintain files on suppliers of agricultural machinery and equipment, chemicals and other products who are interested in trading with Afghanistan. In addition, Trade Center staff will work with traders in establishing relationships with these Pakistani companies and will provide clerical and telecommunications support when requested. Trade Center Marketing personnel will assist Afghan and Pakistani traders in developing sales in Afghanistan. In the course of this activity, they will compile profiles of traders and descriptions of their inquiries.

2. BORDER DEPOTS -- PSA will establish Border Depots along the Afghan border. This activity will begin in late 1990 with a pilot Depot in Chaman. During 1991, the project will set up additional facilities, probably in Wana and Parachinar. Pakistani vendors will warehouse inventory there, allowing Afghan traders to pick up merchandise. PSA staff will handle sales and accounting, and remit funds to vendors on a regular basis. The border locations will be a convenience to the traders who can thereby avoid numerous Pakistani excise posts along the highways. The first Depot in Chaman will become operational in October/November 1990. The second Depot will likely be located in Parachinar.

3. TRADE FAIRS -- One aspect of PSA trade promotion activities will consist of annual or semi-annual trade fairs. Initially, the fairs will provide publicity for agricultural inputs available in Pakistan and explain their benefits to Afghan farmers. Later fairs might concentrate on promoting Afghan agricultural exports. PSA will hold the first fairs in October and November 1990.

4. TRADE ASSOCIATION -- PSA will work toward the establishment of an Afghan - Pakistan Agricultural Trade Association. The purpose of the trade association will be to continue PSA trade facilitation activities after the end of the project, including operation of the two PSA trade centers. The first step will be to determine whether there is sufficient interest in forming such an association. If there is, the next step will identify and resolve the various legal and bureaucratic issues involved, and determine the level and type of PSA support needed to start the trade association.

5. LIAISON WITH GOVERNMENT OF PAKISTAN -- The Government of Pakistan requires various permits for goods exiting the country through the Tribal Areas and border regions. PSA is currently obtaining these permits for traders under the aegis of the accord between the U.S. Government and the GOP. While Trade Center staff will continue to work with traders in obtaining permits, the project will explore means to turn this function over to the Trade Association once it is established.

B. TRADE INCENTIVES FOR INPUTS WITH EXISTING MARKETS

The purpose of these incentives is to help compensate for the high trade cost in exporting agricultural inputs into Afghanistan. These high costs are due primarily to war conditions in Afghanistan, especially deteriorated roads, security problems and the need to carry out trading activities mostly through unofficial channels. Costs are also increased by the various taxes and regulatory procedures imposed by the GOP, local authorities in Pakistan and the local authorities inside Afghanistan. The project will provide two types of incentives to

alleviate these constraints: transportation rebates and credit guarantees.

1. TRANSPORTATION REBATES -- Rebates are currently the project's primary financial incentive for traders to export agricultural inputs into Afghanistan. These rebates have two purposes: 1) to overcome the high transport costs and risks caused by the war; and 2) to encourage the movement of goods to bazaars located in areas identified by the project as having high agricultural potential. During spring and summer 1990, PSA provided transport rebates for 13,000 MT of fertilizers, 142 threshers, 50 water pumps, 500 tons of improved seed, and approximately 100 tractors. These are the only products currently being exported into Afghanistan with PSA support. As new inputs are introduced under the market development activity described below, some will become eligible for rebates.

The size of the rebate will be set by PSA to reflect the added trading costs attributable to the effects of the war and the additional incentives needed to induce traders to deliver the inputs to PSA designated bazaars. In 1990, the rebate for fertilizer and threshers was set at 100 percent of transport costs from Peshawar or Quetta to designated bazaars. These rebate amounts were based on quotations from three different trucking companies and cross checked with information provided by the United Nations and a major non-governmental organization. PSA bazaar representatives monitor the sales price of rebate-supported products and adjust rebate schedules periodically to reflect actual market conditions. As conditions stabilize and transport costs in certain areas decline, PSA staff adjust rebates accordingly. However rebates to other areas may be maintained at a high level in order to encourage trade and agricultural development there. Overall, PSA will phase out its rebate program prior to year three of the project.

2. FINANCIAL GUARANTEES -- In 1990/1991 PSA will launch a financial guarantee program. Project experience and recent studies have shown that virtually all Pakistan-Afghan commercial trade is either self-financed or financed through the informal sector. Traders, in fact, have consistently indicated that lack of access to formal sector credit is not a constraint to the increased export of agricultural inputs.

There are indications, however, that as traders move into new products and greatly increase the volume of products already being traded (largely in response to PSA initiatives), credit will become a constraint. This is because of the quantities involved and the long procurement lead times for many products, especially imports from abroad. Products that were initially purchased directly by the project will later be supported with the help of financial guarantees. Fertilizer is the prime

example, but certain types of agricultural equipment could also require large amounts of working capital as markets develop. Eventually, formal sector credit institutions should become a routine and important source of working capital for Pakistan-Afghan trade in both directions.

The financial guarantee program will require the following actions over the next few months.

- o PSA will work with one or more commercial banks to set up workable credit mechanisms, e.g. letters of credit.
- o PSA will determine the level of funding required from the project, fees to be charged for the guarantees, conditions to be met by the traders, responsibilities of the project and the banks, and legal procedures involved in utilizing the guarantee facility.
- o PSA will carry out a detailed study of how existing trade is being financed and identify possible obstacles to traders moving from informal to formal sources of credit.

These preparatory steps will begin as soon as possible and the guarantee facility is expected to be in place and operational by late autumn 1990.

Product lines to be supported through PSA's trade facilitation activities during 1990-1991 are:

a. FERTILIZER -- This year PSA procured and then resold approximately 10,000 MT of DAP. Fertilizer was cleared through Karachi port by diplomatic measures, transported at program cost from Karachi to Quetta or Peshawar, and then sold to Afghan traders who moved it to Afghanistan for resale. The project paid rebates to cover traders' costs. This initial effort was quite labor intensive.

Next year PSA will again import DAP fertilizer. However, the project will minimize its direct involvement by turning over to the private sector as much of the process as is practical. Project staff will identify a Pakistani or Afghan trading company that will import the DAP. If necessary, project funds will be committed to guarantee a letter of credit. At the same time, PSA staff will assist the trading company in identifying Afghan merchants to purchase the product and arrange for its transport from Karachi to Afghanistan. PSA will consider offering transport rebates from Peshawar or Quetta to targeted bazaars at modified and reduced levels. PSA will continue to assist the traders in obtaining permits from the Government of Pakistan.

b. THRESHERS -- Unlike fertilizer, PSA has not and will not directly procure threshers. The component does, however, assist traders by offering transport rebates from Peshawar or Quetta to the targeted bazaars. PSA will likely expand upon this thresher rebate program in the future, but at greatly reduced rebate rates.

c. TRACTORS AND OTHER FARM EQUIPMENT -- PSA will also assist Afghan traders by offering transport rebates on tractors and other farm equipment. Transport rebates will be revised throughout the life of the project to reflect changing market conditions; they will ultimately be phased out entirely.

III. MARKET DEVELOPMENT

The objective of this set of PSA activities is to introduce new agricultural inputs to Afghan farmers through private sector market development as well as to increase market penetration of under-utilized technologies. This will be achieved primarily by providing incentives to private traders to test new products in the Afghan market. The testing will be done on a pilot basis and will entail some risk. This risk will be shared by both the project and the traders. By the end of the three year project period, new types of equipment, agricultural chemicals and miscellaneous items such as veterinary medicines will be moving commercially into Afghanistan without any other incentives. Perhaps more importantly, the project will have demonstrated that the private sector can be utilized to disseminate certain new technologies as effectively as agricultural extension services and with more sustainability because the innovations will be marketed on the basis of farm-level profitability rather than extended solely on the basis of agronomic considerations.

In addition to the transport rebates and credit guarantees mentioned above, specific incentives provided by the project for market development include the following:

- o Product promotion -- For some products, the trader will have to hire staff to promote it in bazaars and at the farm level. The project and the Pakistani supplier will train these individuals and provide them with marketing materials. The project will also pay part of their expenses, with the share paid by the project declining over time.
- o Assistance with after sales service -- Experience in Pakistan has shown that after sales service is crucial in encouraging the spread of new technologies. PSA will work with dealers to establish service and spare parts facilities for agricultural equipment and machinery. This will involve underwriting training programs for mechanics and operators in Pakistan.

- o Direct Procurement -- The purpose of PSA direct procurement is to expedite the supply of agricultural inputs to traders exporting them to Afghanistan. Most of these products have not been exported from Pakistan to Afghanistan by the private sector in recent years. Consequently, traders have been reluctant to initiate the procurement process with their own funds, especially for products that have long lead times from initial purchase to final sale. In many instances, direct purchases by the project are a critical first step to increasing trade in those agricultural inputs not presently being exported to Afghanistan by the private sector.

Under direct procurement, PSA locates the suppliers, negotiates the purchase and makes whatever advance payment is required at the time that the order is placed. Once the goods are ready for delivery to traders, either in Karachi or at the Pakistani factory, they are sold to Afghan traders either through a bidding process or at a negotiated price. In most cases the only outlay by the project is the initial advance to the supplier. Traders repay the advance and pay the balance when they purchase the goods or the forward contract from PSA. As part of each direct purchasing activity PSA will identify and carry out the actions required to transfer this function to the private sector. PSA will use direct procurement to encourage trade in such diverse products as walk-behind reapers, improved pruning shears, sulfur and potash.

The steps to be followed for each market development initiative are the following:

1. Product Selection The selection of products to be supported by the project. This will be a joint PPA/ADT/PSA effort. ADT will identify products likely to be economically feasible at the farm level, based on information obtained from the ADT demonstration centers. PPA will collect and analyze data covering prices and demand. PSA will obtain market information through the bazaar representatives and will also obtain technical information from sources in Pakistan.
2. Determination of Trader Interest Once the products have been selected PSA will contact traders to identify possible constraints to their being exported commercially, and to determine the incentive package that will be necessary.
3. Trade Agreements PSA will then negotiate agreements with interested traders. These agreements will cover: the degree of incentive, credit guarantees, transport rebates,

assistance with promotion costs, training, and trader responsibilities in exchange for these incentives.

4. Monitoring PSA, with the assistance and collaboration of PPA will monitor implementation of these pilot efforts to assess trader performance and identify necessary revisions, including possible termination of the effort.
5. Termination of Market Development Activities The final step will be to discontinue the market development incentives for successful efforts and move the products into the category of goods with established markets. At this point, PSA will determine the need for further incentives on a product by product basis.

PSA will undertake three market development initiatives during the 1991 agricultural season.

A. SEED AND SEEDLINGS

PSA has purchased 500 MT of wheat seed for commercial distribution in 1990, and will purchase a similar amount for 1991, as well as rice seed. The sale of these seeds to traders is scheduled to start in September 1990. These relatively small pilot efforts will provide the project with concrete information regarding the market for improved seed in Afghanistan.

B. FARM MACHINERY

There is a known demand for tractors, threshers, and certain types of plows in Afghanistan. However, trade in these items is now occurring at a very low level. PSA and ADT will identify equipment needed in Afghanistan and for which there is likely to be a demand once they are demonstrated. Since much of this equipment is expensive for traders as well as farmers, credit or credit guarantees are likely to be an important part of the incentive package. An important element of this program will be to ensure that the traders involved have the capacity to set up dealerships and provide spare parts and post-sale maintenance and repair services. It is expected that arrangements for this initiative will be completed in late 1990.

C. AGRICULTURAL CHEMICALS

Agricultural experts agree that chemicals (pesticides, herbicides, sulphur, etc.) are among the most needed and profitable inputs that can be provided to Afghan farmers. These are not now moving into Afghanistan in large quantities. ADT will identify the most urgently needed chemicals, and PSA will locate suppliers and qualified traders to export these products and arrange for training and other incentives as necessary. The project will ensure that the chemicals selected are on USAID's

approved list. PSA will work closely with ADT in arranging safety training for traders and dealers.

IV. COMMERCIALIZATION

This set of PSA initiatives aims at increasing Afghanistan's agricultural exports by supporting agribusinesses interested in introducing new production technologies for export crops and developing new or expanded export markets. Much of the impetus for export commercialization is based on horticultural products. Horticulture is now formally under PSA's commercialization initiatives. As such, there are seven specific activities comprising the horticulture strategy. These include the following activities, described in greater detail below:

- o Commercial Nursery Development
- o Commercial Apricot Marketing and Extension
- o Mechanizing Horticultural Processing
- o Forward Contracting for Apple Trees
- o Market Development for Afghan Vegetables
- o Incentive Awards
- o Invitational Travel

A. COMMERCIAL NURSERY DEVELOPMENT

ASSP/PSA presently has eight small commercial nurseries located in four provinces. These nurseries were initially established in 1989. For the cropping year 1990/91, PSA proposes to continue with small business development in seven of the eight nurseries⁷, which are located in the primary ASSP/PSA project area.

Each of these seven nurseries is situated on leased land, and each is approximately five acres in size. Currently there is a staff of three men working on contract with each nursery. One of these is the senior nurseryman, who is being trained to take over commercial management of the nursery in 1992/93. He, in turn, has two laborer assistants.

Small business development costs for these nurseries will continue to be paid by the project until the nurseries reach a point where they will be spun off as independent private sector ventures. When in full production, each nursery will have approximately 100,000 trees.

Nursery men are initially growing trees on contract for the project. The project is keeping track of the costs associated

⁷. The eighth nursery is located in the province of Baghlan, north of the Hindu Kush; communications with this province are so difficult that activity there is not now viable.

with the start-up of these nurseries. ASSP/PSA will take the equivalent of these costs out in trees, which it will debit at prevailing market prices. ASSP/PSA will deduct its development costs from the eventual sale of horticultural products. The balance over and above the project's development costs will be 'profit' to the nursery owners. The expectation is that these growers will then continue after the project is over to work full time as commercial nursery men. They are also encouraged to plant more acreage over and above the five acres, and are free to sell any of this additional planting material to private buyers.

B. COMMERCIAL APRICOT MARKETING AND EXTENSION

There is a substantial unmet international demand for properly grown dried apricots. These are one of the most profitable horticultural crops of Afghanistan. Several project interventions are proposed to increase apricot production and improve product quality.

The PSA staff will identify two or more Afghan businessmen already working with the export of dried fruit. These businessmen will be shown improved apricot drying techniques and provided assistance in assessing potential market demand for this product in Europe and elsewhere⁸. Further assistance in market assessment may involve businessmen traveling directly to one or more European and/or Gulf countries, as well as talking to buyers in the Sub-Continent. Further PSA assistance may include preparation of promotional materials and advice on negotiations.

In addition, these businessmen will be asked to recruit up to ten young Afghan crop extension and product development agents, who will become employees of the businessmen's companies. The ASSP/PSA project will help identify candidates and provide technical training in all aspects of apricot growing, drying, processing, and packaging. In the first year ASSP/PSA will cover up to 100% of their salaries, and other direct costs. This amount would be phased down in the next year. By the end of the project, these apricot production and marketing agents will be completely spun off, and will become the full time employees of the commercial fruit wholesalers for whom they work.

C. MECHANIZING HORTICULTURAL PROCESSING

The quality of processing for most horticultural products in Afghanistan is marginal and inadequate or inappropriate for most world markets. In some cases, processing is at such a level that

⁸. ASSP/PSA is currently undertaking a study of horticultural crops and marketing through a sub-contract with High Value Horticulture (UK). The report will be utilized as the basis for advice to interested private sector entrepreneurs.

the Sub-Continent is the only remaining real market for Afghan produce, and there are indications that Afghanistan is losing market share even there. Clearly, more work needs to be invested in this aspect of market development which will require improved processing and packaging.

The Cash Crop Study currently being carried out by High Value Horticulture, Inc. is reviewing potential markets for Afghan produce, analyzing current export capability and predicting realistic potential. Clearly, export expansion must focus on improving the quality of the exported product. One way to accomplish this would be through small, self-contained mechanized processing units. These units will generally be generator-powered and transported on the back of a pick-up or flat bed truck. The units would be designed for specific fruit crops including grapes, raisins, apricots, nuts, and perhaps pomegranates. Initially, one or two prototype units would be purchased and demonstrated by the project for each major fruit crop for which suitable machinery is available. After the machinery has been demonstrated, evaluated, and found satisfactory in the Afghan context, financial mechanisms would be put into place. These mechanisms would allow fruit wholesalers to purchase and import increased quantities of the equipment for lease, sale, or auction to interested participating farmers and/or fruit brokers in key provinces of Afghanistan.

D. FORWARD CONTRACTS FOR APPLE TREES

Apples are an important cash crop in Afghanistan. The country holds a comparative advantage in the production of certain types of apples at certain times of the year. Many apple orchards have been damaged, or in some cases destroyed, during the war and now need to be replaced.

In the summer of 1990, ASSP/PSA imported 93,000 apple trees on seedling rootstock from Turkey. For 1991, PSA proposes to forward contract with Turkish producers for the purchase of 75,000 additional apple trees. These contracts will be auctioned off to interested Afghans and sold to the highest bidders. Expected bidders will include the seven commercial nurseries being established (see Section A above), as well as other interested commercial horticultural interests in Afghanistan. The bids will be sold at open auction for whatever the market will bear. The project will work with the nurserymen to facilitate import of these trees, and will bear the cost of transport.

The ADT field staff will be available to assist on an advisory basis with the distribution, sale, planting and subsequent care of these 75,000 apple seedlings.

E. MARKET DEVELOPMENT FOR AFGHAN VEGETABLES

Prior to the war Afghan farmers were beginning to export significant quantities of vegetables to Pakistan but this trade broke down during the war. Afghanistan can produce certain high value vegetables which come to market when there is no comparable product in Pakistan. It is feasible to capitalize on this comparative advantage. Market development work will involve shipment of a few demonstration truckloads of peas, carrots, cauliflower, peppers and cucumbers now being grown in various ASSP/PSA areas or on ADT test plots.

F. INCENTIVE AWARDS

To encourage farmers to grow better crops, and to encourage commercial extension agents to work as effectively as possible, a series of incentive awards will be offered. These would be similar to blue ribbon first prizes at county fairs in the United States for growing the biggest tomatoes or raising the best sheep. A suitable assessment system will be established to judge between various farmers within provinces, and eventually to find the best farmer(s) raising certain products. Then a series of prizes would be awarded. Prizes would include such things as a wheat thresher for the farmer growing the best wheat, or a reaper for the farmer showing the greatest enterprise, or a walk behind tiller for the best fruit orchard. Some bonuses for the best commercial extension agents would also be developed.

G. INVITATIONAL TRAVEL

Afghan farmers can benefit from exposure to technologies in use outside Afghanistan. At the same time, the technologies should not be so sophisticated that they are totally out of reach for the Afghan agricultural sector. Despite the difficulty of sending trainees because of documentation problems, Turkey remains one of the best places to give farmers this type of relevant exposure. PSA proposes to begin advance clearance procedures for invitational travel for up to ten qualified Afghan farmers in 1991.

V. POLICY CONSTRAINT STUDIES

The policy and regulatory constraints restricting the flow of agricultural inputs into Afghanistan fall into two categories. The first relates to goods that are imported from abroad for sale in Afghanistan. At present, it appears that the only way for these goods to transit Pakistan duty free is if they are imported under the trade agreement between Pakistan and the Kabul government. This requires that they be imported officially into Afghanistan by a trader or entity located in Kabul or other urban area controlled by the Kabul government. For products destined directly for the mujahideen controlled areas, the solution thus

far has been to import them under U.S. Government auspices and sell them to private traders for export into Afghanistan. In order for the project and the U.S. Government to extricate themselves from the import business, a way must be found for the private sector to avoid GOP customs duties and other GOP and local taxes for goods destined for Afghanistan. For the project, the immediate concern is the importation of fertilizers that must be ordered this fall in order to arrive in time for the 1991 agricultural season.

This urgent but complex problem requires careful study and quick action. The project will employ a consultant as soon as possible to determine if there are ways for the private sector to import goods through Pakistan for sale in Afghanistan without going through Kabul. If not, the consultant will identify other solutions that are feasible within the time frame of this project.

A second set of constraints relates to goods that are imported into or manufactured in Pakistan and available on the open market. Imported goods are subject to all of the Pakistani custom duties and other taxes. Manufactured goods are frequently subsidized either directly or indirectly through subsidies on raw materials and intermediate goods. The export of these goods is closely controlled by the GOP. Also, there are goods in Pakistan, considered essential by the GOP, that cannot be exported without permission. In addition to these restrictions at the national level, there are a number of local taxes and permits needed to sell and transport goods from one region of Pakistan to another. These are supplemented by special permits needed to move goods to and through the Tribal Areas.

The net result is that the export of agricultural inputs to Afghanistan by the private sector can be extremely time consuming, prohibitively expensive, and sometimes impossible. Project interventions in the trade process in the context of the U.S. humanitarian assistance program for Afghanistan can sometimes, but not always, expedite the process.

The first step in addressing this set of constraints will be to carry out a study of all policies affecting agricultural inputs likely to be exported to Afghanistan under this project. These include import restrictions and duties, domestic subsidies, restrictions on exports, restrictions related to the movement of goods in the Tribal Areas, and any politically motivated restrictions related specifically to trade with Afghanistan. The purpose of this study will be to identify steps the project or USAID can take to change or bypass these policies and regulations. Because many of the issues to be addressed in this study stem from basic GOP economic policies as they affect the Pakistani private sector, it will be carried out in close coordination with the Private Sector Office of USAID/Pakistan.

Considerable research has already been carried out on these issues by USAID and other donors. The PSA study will build on these prior reports and focus on issues directly affecting private sector export of agricultural inputs to Afghanistan.

This study will be carried out within the next six months and its findings incorporated into the 1991 PSA work plan. Project initiatives to move inputs into Afghanistan, however, will not await the findings of the study. PSA will proceed with the full range of initiatives to move inputs into Afghanistan as expeditiously as possible. In fact, experience gained from these initiatives may identify specific issues to be addressed by the study and perhaps provide insights contributing to the study's recommendations.

PSA CONCLUSION

The PSA budget can be examined at three levels. First, the Executive Summary outlines distinct programmatic activities and costs, yearly overall component budgets and project totals. The second level provides greater detail about each component. This level outlines the costs of all planned activities as well as defined human resources, capital investments and recurring operational costs. Finally, the third level provides the greatest detail. All activities of each component are broken down into itemized expenses. The assumptions for these costs are also provided in this section.

Following is the detailed budget and time line for phasing of project activities.

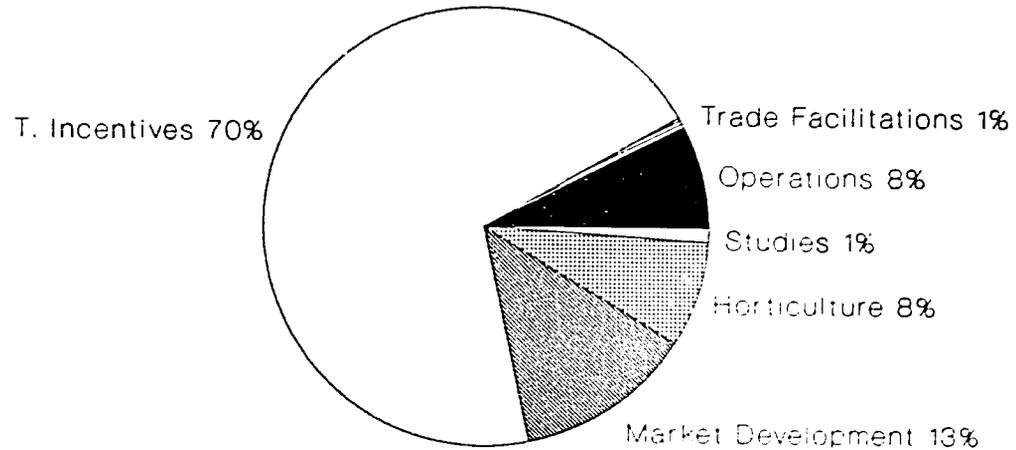
**PRIVATE SECTOR AGRIBUSINESS
 SUMMARY PAGE**

	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	12 Month Forecast
(i) Operations	129	317	237	87	770
(a) Human Resources	35	40	49	53	177
(b) Capital Expenditures	67	254	158	0	479
(c) Recurring Operational Costs	27	23	30	34	114
(ii) Trade Facilitation	0	23	23	33	79
(a) Brokerage/Border Depots	0	6	6	16	28
(b) Trade Promotion	0	17	17	17	51
(iii) Trade Incentives	3,339	55	0	3,660	7,054
(a) Fertilizers	3,229	0	0	3,660	6,889
(b) Thresher Rebates	55	0	0	0	55
(c) Tractor Reates	55	55	0	0	110
(iv) Market Development	242	192	118	762	1,314
(a) Seed	242	80	6	650	978
(b) Farm Machinery	0	62	62	62	186
(c) Chemicals & Soil Additives	0	50	50	50	150
(v) Horticulture Commercialization	0	75	491	215	781
(a) Commercial Nursery Development	0	75	30	87	192
(b) Apricot Marketing	0	0	137	12	149
(c) Mechanization	0	0	75	75	150
(d) Apple Trees	0	0	188	0	188
(e) Other Horticulture Activities	0	0	61	41	102
(vi) Policy Constraints	0	0	100	0	100
	3,710	662	969	4,757	10,098

PSA 12 MONTH FORECAST \$000
 10,098

PSA PROGRAM BUDGET

July 1990 - June 1991

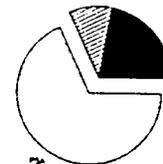


PSA EXPENDITURES

- Operations — \$770 thousand
- Trade Facilitations — \$79 thousand
- Trade Incentives — \$7,054 thousand
- Market Development — \$1,314 thousand
- Horticulture — \$781 thousand
- Policy Constraint Studies — \$100 thousand

ASSP/PSA PROGRAM BUDGET

July 1990 - June 1991



(i) Operations

(a) Human Resources	Units	R\$/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST
1. Headquarters								
- Secretary/ Admin Ass	1		1,200.00	4	4	4	4	16
							
SUBTOTAL				4	4	4	4	16
2. Trade Centers/Depots								
- Directors	2	12,000.00	547.95	3	3	3	4	13
- Logistics Supervisor	2	8,000.00	365.30	2	2	2	2	8
- Marketing Specialist	2	8,000.00	365.30	2	2	2	2	8
- Purchasing Agent	2	6,000.00	273.97	2	2	2	2	8
- Warehouse Man	7	3,500.00	159.82	3	3	3	4	13
- Depot Sales Managers	3	5,000.00	228.31		2	2	2	6
- Accounting Clerks	2	5,500.00	251.14	2	2	2	2	8
- Receptionist	2	3,000.00	136.99	1	1	1	1	4
- Data Entry Operators	4	4,500.00	205.48	2	2	2	3	9
- Typists	4	3,000.00	136.99	2	2	2	2	8
- Admin Asst	2	4,500.00	205.48	1	1	1	1	4
- Drivers	14	2,400.00	109.59			5	5	10
- Guards	8	2,000.00	91.32			2	2	4
- Guards	10	1,600.00	73.06			2	2	4
- Cleaners	2	1,600.00	73.06	0	0	0	0	0
- Tea Bearers	2	1,600.00	73.06	0	0	0	0	0
							
SUBTOTAL				20	22	31	34	107
3. Afghan Bazaars								
- Representatives	18	5,000.00	228.31	1	4	4	4	13
							
SUBTOTAL				1	4	4	4	13
4. PL 480 Wheat Team								
- Team Leader	1		3,000.00	9	9	9	10	37
- Trader Liason	1	6,000.00	273.97	1	1	1	1	4
							
SUBTOTAL				10	10	10	11	41
Total Human Resources				35	40	49	53	177

(b) Capital Expenditures	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST	
- 4WD Landcruiser	10		20,000.00			200		200	
- D/Cab Pick Up	2		15,000.00			30		30	
- Sedan Station Wagon	2		12,000.00			24		24	
- 125 cc Motorcycles	30		1,000.00	30				30	
- Fruit processing Eq.	6		25,000.00				150	150	
- TC Office Furniture	2	100,000.00	4,566.21	9				9	
- Photocopier	1	100,000.00	4,566.21	5				5	
- Computers	6	85,000.00	3,881.28	23				23	
- Printers	3	2,000.00	91.32	0				0	
- Bazaar Office Furnt.	16	10,000.00	456.62				7	7	
- Video Equipment	1	20,000.00	913.24				1	1	
								0	
Total Capital Expenditures				SUBTOTAL	67	254	158	0	479

(c) Recurring Operate.Costs

- TC Lease - Peshawar	1	30,000.00	1,369.86	4	4	4	4	16	
- TC Lease - Quetta	1	25,000.00	1,141.55	3	3	3	3	12	
- Warehouse Lease	3	11,000.00	502.28	2	2	5	5	14	
- Border Depots Lease	3	10,000.00	456.62	1	1	3	3	8	
- Bazaar Office Lease	7	500.00	22.83	0	0	1	1	2	
- Utilities	7	2,250.00	102.74	2	2	2	2	8	
- Office Supplies	2	3,000.00	136.99	1	1	1	1	4	
- Fuel/Petrol	14	600.00	27.40			1	1	2	
- Telephone	2	2,000.00	91.32	1	1	1	1	4	
- Per Diem	1	12,000.00	547.95	2	2	2	2	8	
- H/Q Local Travel	4	10,000.00	456.62	5	5	5	5	20	
- Inter'l Travel	4		4,000.00	4			4	8	
- Insurance	2		220.00	1	1	1	1	4	
- Maintenance	14	600.00	27.40	1	1	1	1	4	
Total Recurring Operational Costs				SUBTOTAL	27	23	30	34	114

Total Operations 129 317 237 87 770

(ii) Trade Facilitation Activities

(a) Brokerage/Border Depot Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST
- Inventory Carry Cost	23	45,000.00			2	2	6
- Transport Assistance	23	60,000.00			3	3	8
- Hired Labor	23	11,250.00			1	1	2

Total Brokerage/Border Depots			SUBTOTAL	0	6	6	16	28
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(b) Trade Promotion

1. Trade Fairs

- Transportation	9	25,000.00	1,141.55		1	1	1	3
- Materials/Resources	9	40,000.00	1,826.48		2	2	2	6
- Facility Rental	9	10,000.00	456.62		0	0	0	0
- Consultants-local	9	10,000.00	456.62		0	0	0	0
- Hired Labor	9	5,000.00	228.31		0	0	0	0

			SUBTOTAL	0	3	3	3	9
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2. Trade Associations

- Support Grant	9	100,000.00	4,566.21		5	5	5	15
- Materials/Resources	9	100,000.00	4,566.21		5	5	5	15
- Facility Rental	9	50,000.00	2,283.11		2	2	2	6
- Consultants-expat.	9	50,000.00	2,283.11		2	2	2	6
- Consultants-local	9	10,000.00	456.62		0	0	0	0
- Hired Labor	9	5,000.00	228.31		0	0	0	0

			SUBTOTAL	0	14	14	14	42
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Total Trade Promotion				0	17	17	17	51
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Total Trade Facilitation				0	23	23	33	79
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(iii) Trade Incentives

(a) Fertilizers	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST
1. Fert. Procurement								
- Procurement	22500		177.73				2,222	2,222
- Ocean Transport	22500		113.00	1,415			1,438	2,851
- Inland Transport	22500	700.80	32.00	320				320
- Hired Labor & W/h sp	22500	20.00	0.91	12				12
							
SUBTOTAL				1,745	0	0	3,660	5,405
2. Fin. Guarantees								
- Fertilizer	0		300.00					0
							
SUBTOTAL				0	0	0	0	0
3. Fert. Rebates								
- Fertilizer	63000	2,500.00	114.16	1,484				1,484
							
SUBTOTAL				1,484	0	0	0	1,484
Total Fertilizers				3,229	0	0	3,660	6,889
(b) Thresher Rebates								
- Threshers	450	8,000.00	365.30	55				55
							
Total Thresher Rebates				55	0	0	0	55
(c) Tractor Rebates								
- Tractors	450	16,000.00	730.59	55	55			110
							
Total Tractor Rebates				55	55	0	0	110
Total Trade Incentives				3339	55	0	3660	7054

(iv) Market Development

(a) Seed	Units	Rs/Unit	\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST	
- Wheat seed	1500		460.00		230			230	
- Rice seed	2000		650				650	650	
- Transport - Pakistan	3500	1,000.00	45.66		23			23	
- Transport - Afg.	3500	2,500.00	114.16		57			57	
- Tree Seed	250	0.00	24.00		12		6	18	
Total Seed				SUBTOTAL	242	80	6	650	978
(b) Farm Machinery									
- Develop't Activities	9		62,000.00		62	62	62	186	
					0	0	0		
Total Farm Machinery				SUBTOTAL	0	62	62	62	186
(c) Chemicals & Soil Add.									
- Financial Assistance	9		50,000.00		50	50	50	150	
Total Chemicals & Soil Additives				SUBTOTAL	0	50	50	50	150
Total Market Development					242	192	118	762	1,314

(v) Commercialization of Horticulture

(a) Commercial Nursery Development

- Tree Samples	3000		6.50				20	20	
- Seed/Transport	500		24.00				3	3	
- AlmondApricot Graftwood .2m		3.25	0.15			30	7	37	
- Bareroot Trees	6000		6.67				10	10	
- Russian Olive Trees .7 mil		3.25	0.15				47	47	
- Contract/Land Rent	3	75,000.00	3,424.66		75			75	
Total Commercial Nursery Development				SUBTOTAL	0	75	30	87	192

(b) Apricot Marketing

- Hired Labor	20	2,000.00	91.32			5	5	10	
- Sulphur/Materials	1		15,000.00			2	2	4	
- Mkt Develop't/Travel	1		40,000.00			5	5	10	
- Commercialization	100000					125		125	
Total Apricot Marketing				SUBTOTAL	0	0	137	12	149

(c) Mechanizing Horticul. Units	Rn/Unit	\$\$/Unit	3rd Q '90 \$ 000	4th Q '90 \$ 000	1st Q '91 \$ 000	2nd Q '91 \$ 000	'12 MONTH FORECAST	
- Mechanization	1	150,000.00			75	75	150	
Total Mechanizing Horticulture							
			SUBTOTAL	0	0	75	75	150
(d) Apple Trees								
- Trees/Transport	.15 mil	2.50			188		188	
Total Apple Trees							
			SUBTOTAL	0	0	188	0	188
(e) Other Hort. Act.s								
- Afghan Veg Transport	1	20,000.00				19	10	
- Incentive Awards	1	50,000.00				13	13	
- Woodlot seed/rent/la	1	61,000.00			61		61	
- Consultants	1	45,000.00				18	18	
Total Other Horticulture Activities							
			SUBTOTAL	0	0	61	41	102
Total Horticulture Commercialization							
				0	75	491	215	781
=====								
(vi) Policy Constraint Studies								
- Study A	1	100,000.00			100		100	
- Study B	1	100,000.00					0	
Total Policy Constraints Studies							
			SUBTOTAL	0	0	100	0	100
Total PSA			=====					
				3,710	662	969	4,757	10,098
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PSA ACTIVITY TIMESHEET

		3rd Quarter 90	4th Quarter 90	1st Quarter 91	2nd Quarter 91
1.	Establish/Operate Bazaar Offices 1	>>-----	-----	-----	-----
	Establish/Operate Bazaar Offices 2	>>-----	-----	-----	-----
	Establish/Operate Bazaar Offices 3	>>-----	-----	-----	-----
	Establish/Operate Bazaar Offices 4	>>-----	-----	-----	-----
	Establish/Operate Bazaar Offices 5	>>-----	-----	-----	-----
	Establish/Operate Bazaar Offices 6	-----	-----	-----	-----
	Establish/Operate Bazaar Offices 7	-----	-----	-----	-----
2.	Establish/Operate Bazaar Depots 1	>>-----	-----	-----	-----
	Establish/Operate Bazaar Depots 2	-----	-----	-----	-----
	Establish/Operate Bazaar Depots 3	-----	-----	-----	-----
3.	Brokerage/Transport Rebates	>>-----	-----	-----	-----
4.	Trade Fairs 1	-----	-----	-----	-----
	Trade Fairs 2	-----	-----	-----	-----
5.	Establish Trade Association	-----	-----	-----	-----
6.	Fertilizer Procurement (Take Delivery)	-----	-----	-----	-----
7.	Fertilizer Distribution	-----	-----	-----	-----
8.	Wheat/Rice Seed Procurement(Take Delivery)	-----	-----	-----	-----
9.	Wheat/Rice Seed Distribution	-----	-----	-----	-----
10.	Tractor/Thresher Marketing	-----	-----	-----	-----
11.	Mkt. Development Farm Machinery	-----	-----	-----	-----
12.	Mkt. Development Chemicals	-----	-----	-----	-----
13.	Commercial Nursery Development	-----	-----	-----	-----
14.	Apricot Marketing	-----	-----	-----	-----
15.	Other Horticulture Activities	-----	-----	-----	-----
16.	Policy Constraints Studies	-----	-----	-----	-----

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