



CHEMONICS INTERNATIONAL INC.

PHILIPPINE AGRIBUSINESS SYSTEMS ASSISTANCE PROGRAM

FINAL REPORT

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ACRONYMS

ASAP	Philippine Agribusiness Systems Assistance Program
CHARM	Cordillera Highland Agriculture and Resource Management project
DA	Department of Agriculture
DTI	Department of Trade and Industry
EAGA	East Asean Growth Area
FRLD	Foundation for Resource Linkage and Development
GATT	General Agreement on Tariffs and Trade
GATT-UR	Uruguay Round of the General Agreement on Tariffs and Trade
GEM	Growth and Equity for Mindanao project
GOP	Government of the Philippines
ITC	International Trade Centre
LOE	Level of effort
PHTRC	Post-Harvest Training and Research Center
PSIA	Philippine Seed Industry Association
PVO	Private voluntary organization
SAF	Special activity fund
UPLB	University of the Philippines, Los Baños
WTO	World Trade Organization

SECTION I PROJECT DESCRIPTION

A. Background

The contract for the Philippine Agribusiness Systems Assistance Program (ASAP) was signed May 1992 between USAID and Chemonics International Inc. During the 46-month contract period, ending March 1996, the ASAP team exceeded all major milestones established at project start-up. An unusual mix of expatriate and local consulting companies comprised the team as a result of USAID's decision to merge the top two competing bids for the project's implementation. Chemonics was selected as the prime contractor for overall project management, market development, and training and communications, and Development Alternatives was subsumed as a subcontractor for policy analysis and advocacy. Other subcontractors included Access Asia (local), Louis Berger International Inc. (expatriate), the Asian Institute of Management (local), Cesar Virata and Associates (local), and John Mellor and Associates (expatriate).

In addition, to collaborate on ASAP efforts, USAID provided grants to the Foundation for Resource Linkage and Development (FRLD), the University of the Philippines/Los Baños Foundation/Agriculture Policy Research and Advocacy Assistance Program, and the Philippine Statistical Association. While these organizations participated in complementary activities, this report does not address their impact.

Coincident at the time of ASAP start-up, the Ramos Administration was sworn into office and proceeded to foster many free market goals for the Philippine economy that the ASAP team promoted in the agribusiness sector. The new agriculture secretary and assistant secretary—our counterparts in the Government of the Philippines (GOP)—were principal proponents of ASAP and contributed significantly to the project's overall success.

B. Budget

ASAP was a component of a larger program by the same name that had an initial \$80-million budget targeted as follows: \$55 million to the GOP, which would be released in installments as policy reform benchmarks are met; \$17.3 million to general contractors for support services; and \$7.7 million to six Filipino institutions, through cooperative agreements, for support services. However, due to budgetary constraints, USAID awarded only \$15 million of the policy grant to the GOP. Despite this, the project, working in tandem with the GOP, successfully promoted initiatives such as the Uruguay Round of the General Agreement on Tariffs and Trade (GATT-UR). In the project's final months, the general contractor budget was reduced by about \$481,000 due to USAID budgetary constraints.

C. Program Goal and Purpose

ASAP was intended to foster sustained private sector-led growth in the agribusiness system with a significantly higher annual growth rate in value added. To achieve this goal, the project

was to improve the policy environment for private investment in agribusiness linked to a more efficient small farm production subsector. As defined in our contract, we were to implement two sets of activities:

- **Advocacy and policy reform**
 - Develop private/public sector advocacy for open market policy reforms
 - Monitor the impact of recently introduced policy reforms
 - Identify new policy reforms for introduction in the out-years of the program
- **Private sector support**
 - Increase private sector responsiveness, particularly among small and medium-sized firms, to the improved agribusiness policy environment
 - Increase the efficiency of the small farm production subsector through improved vertical coordination and integration

Under ASAP, Chemonics and subcontractors (hereinafter general contractor) had three directives:

- Provide assistance in policy analysis and advocacy to the Department of Agriculture, private sector organizations, and USAID. (This includes facilitating policy dialogue with the GOP on relevant policy reform agenda issues.)
- Implement the majority of ASAP market development activities. (This includes the organization of trade fairs in collaboration with the GOP and private sector associations and of trade missions intended to foster closer technical and commercial ties between Filipino and U.S. entities.)
- Assist in monitoring the economic, business, and environmental impact of ASAP in general and its various components.

By the end of the project, we expected these accomplishments under ASAP's support service component:

- Strengthened policy analysis and dialogue capacity of at least 15 agribusiness trade associations and other private sector groups that enabled them to become strong advocates for GOP policy reforms supporting private sector-led agribusiness growth
- More broad-based and sustainable growth in agribusiness, as evidenced by at least 50 agroprocessors benefiting from stronger linkages with producers, sources of technology, and consumer markets

SECTION II PROJECT INPUTS

A. Budget

The initial budget proposed by the general contractor for the ASAP support service component was \$17,387,064. However, due to budget cuts and USAID/Manila's changing priorities, only \$16,905,962 was made available. Despite the cut of more than \$481,000, we were still able to provide 95 percent of the projected 1,141 person-months of level of effort (370 long-term and 771 short-term person-months).

Within the project budget, \$1 million was for commodity procurement (vehicles, computers, communications equipment, and furniture) and \$3 million was for a special activity fund (SAF). The SAF was a grant fund used for local initiatives, identified by our field staff, that generally included technical assistance, local training, trade missions, publications, promotional activities, and workshops and conferences.

B. Staff Retention

Although there was initially a delay in hiring the full contingent of long-term technical staff, the project did not undergo a high degree of staff turnover. In the first six months of the project, the trade and investment linkage coordinator and trade and investment advisor left due to personal reasons, and we replaced the former with a highly skilled Filipino from CITEM and obtained USAID approval to replace the latter with an expatriate advisor concluding assignment on a successful USAID high-value agriculture project in Central America. ASAP's accomplishments were achieved with only one expatriate, the trade and investment advisor, among the long-term staff members. This is certainly a tribute to the high quality of the local staff.

C. Market Development

Market development activities were designed to address four constraints:

- Inadequate and untimely market information
- Poorly organized farm-to-market linkages
- Weak or non-existent commercial linkages between U.S. and Philippine agribusiness entities
- Undeveloped export market niches for Philippine products

A number of strategies were implemented to overcome these constraints:

- Providing direct technical assistance
- Supporting trade missions to third countries and the United States
- Organizing and conducting seminars and conferences
- Organizing one-on-one trade and investment sessions

- Facilitating technology identification and transfer

Fundamental to these strategies was an emphasis on providing assistance and services through farmer groups and associations to leverage the impact of project resources. Training sessions, workshops, and seminars were conducted on a cost-sharing basis, which further leveraged resources. In addition, groups and associations typically charged modest fees to their members and used these revenues to improve the organization's operations. The market development team leader's summary report is presented in Annex A.

D. Policy

Policy activities included conducting policy analysis and advocacy work through private and public sector entities. Private sector groups included trade associations, chambers of commerce, universities, and local farmer groups. Activities were intended to strengthen these groups' capacity to contract and produce studies, workshops, seminars, and publications. The general contractor installed a policy analysis and advocacy unit within the Department of Agriculture's Planning and Monitoring Service to supplement in-house economic analysis capability. We also assisted the Department to address new legislative initiatives that would impact the agriculture sector by conducting studies, workshops, and seminars and providing data and other printed material to the GOP. The policy analysis/advocacy team leader's summary report is presented in Annex B.

SECTION III PROJECT OUTPUTS

Project outputs were significant given the reduced budget and abbreviated project period. While a number of ASAP initiatives were joint efforts of the market development and policy units, this section organizes project outputs into these two technical areas.

A. Budget and Level of Effort

At the project's end on March 31, 1996, the entire budget had been expended and the general contractor had delivered 1,116 person-months of level of effort (LOE). The LOE is 98 percent of the total contracted and slightly higher than the proportion of the budget—97 percent of total—that was ultimately obligated. This does not, however, include LOE expended through the purchase order mechanism (described below). Approximately 64 person-months of LOE was provided through purchase order. It is significant to note that ASAP services were delivered to the government at a considerable savings in several budget line items.

Special activity fund (SAF) grants exceeded the original budgeted amount. This is a reflection of effective marketing of the fund by the ASAP staff and the intense interest by Filipino beneficiaries in accessing training and technical assistance resources in nontraditional agriculture development. The SAF amount spent also reflects the reliance that the project placed on the fund to provide technical assistance during the contract's final months, after it became clear that the total contracted LOE would be exceeded. Because the USAID contract office determined that it could not increase our LOE ceiling, it recommended that we use purchase orders to provide technical assistance. Thus, these subcontract costs were charged to the SAF. Table III-1 (see page 6) summarizes overall contract costs to USAID.

The general contractor was able to provide ASAP services to USAID at a lower cost than initially anticipated. Fringe benefits, overhead, and general and administrative costs, which contractors typically overrun, are actually significantly lower than budget. Also, other direct costs and labor are below budget. Consultant allowances exceeded the original budget because of the addition of the expatriate market development team leader and his family, which was not anticipated at the beginning of the contract. Given the quality of technical product delivered, which USAID and ASAP customers agreed was excellent,¹ we provided the U.S. Government a good value.

B. Market Development

In every category, market development activities exceeded projections. Over the 46-month contract, the general contractor conducted 263 in-country training activities and trained 21,028 participants in high-value horticulture production, feeds and livestock, cutflower production and marketing, and other commodity areas. More than 8,600 recipients, or 41 percent, were women.

¹USAID Contractor Performance Report on the ASAP Project, September 6, 1996.

A detailed outline of ASAP-funded training programs is presented in Annex C. All training activities were funded through the SAF, with an activity's proponents cost-sharing a portion of the expense.

Table III-1. Summary of ASAP Expenditures

Line Item	Budget	Actual	
		Total	Percent of Budget
Salaries	\$2,200,786	\$2,108,141	96
Fringe benefits	364,786	301,322	83
Consultant allowance	511,810	585,448	114
Travel and transportation	449,668	413,708	92
Special activity fund	3,000,000	3,417,419	114
Subcontracts	5,385,862	5,213,405	97
Other direct costs	1,809,792	1,408,547	78
Commodities and equipment	804,238	789,365	98
Overhead	1,397,796	1,239,063	89
General and administrative	491,362	458,562	93
Fixed fee	970,982	970,982	100
Total costs	\$17,387,064	\$16,905,962	97

Cost-sharing allowed for considerable leveraging of contract resources and ensured beneficiaries had a stake in the conduct and success of an activity. Table III-2 summarizes SAF costs by type. Beneficiaries contributed \$5.1 million, or 48 percent of the \$10.6 million estimated total cost of these activities. A breakdown of each SAF activity is presented in Annex D.

Table III-2. Summary of SAF Activities*

Type of Event	ASAP	Proponent	Total
Market linkages	\$27,803	\$26,919	\$54,723
Workshops and training	44,159	18,381	62,540
Technology transfer	1,620,186	2,623,847	4,244,033
Trade fairs	920,861	980,277	1,901,138
Missions from Philippines	2,723,922	1,397,172	4,121,094
Missions to Philippines	115,871	70,985	186,856
Special studies	48,629	0	48,629

Type of Event	ASAP	Proponent	Total
Market development	3,695	12,296	15,991
Total	\$5,505,126	\$5,129,877	\$10,653,003

* Includes project expenditures under labor, travel and transportation, other direct costs, equipment, and subcontracts/consultants line items in addition to those costs allocated to the SAF line item.

C. Policy Analysis and Advocacy

From August 1992 to December 1995, the policy team completed 44 studies and reports, conducted in four key categories:

- Options for increasing the competitiveness of the feed and livestock sector
- Options to improve the collateral value of agriculture lands
- GOP regulations/taxation affecting the agribusiness system
- An integrated distribution system for bulk agricultural commodities

A list of the studies produced is contained in Annex E.

The team, located within the Philippines Department of Agriculture, assisted that agency in advising and formulating policies to enhance private sector expansion in agriculture and agribusiness. Based on the results of its studies, the team formulated policy recommendations for achieving private-sector led and broad-based growth in the agribusiness sector in the first 18 months of the program. With these recommendations as a foundation, the team conducted a communication and information campaign for policy reforms in agribusiness. Through this campaign, the team enriched the policy debate among policy makers and the general public, assisted the GOP and the private sector advocate for specific positions, assisted in consensus-building on specific policy measures, and helped implement the chosen policy options.

C1. Private Sector Policy Analysis and Advocacy

The policy team organized a Seed Act Caravan in collaboration with the Philippine Seed Industry Association (PSIA) to generate awareness for the impact of seed rules and regulations. As a result of this and other ASAP-organized efforts, restrictions on the importation of seed and planting materials were relaxed. In another result, PSIA became more involved in advocating for lower tariffs of other agriculture inputs.

In conjunction with the GOP, private sector foundations and trade associations, and journalist organizations, the project joined the Agribusiness Coalition to facilitate forming a single position on GATT ratification for the agriculture sector. Coordinated activities and the strong support of private sector groups led to the Senate of the Ninth Congress ratifying the Uruguay Round of GATT. Further, after sustained advocacy by the Agribusiness Coalition, the GOP changed from an initial recommendation for GATT implementation that included high tariffs on packaging materials (e.g., paper and plastic) and consumer durables to one of lower tariffs for these inputs.

C2. Public Sector Policy Analysis and Advocacy

This assistance was largely comprised of assisting the Department of Agriculture develop terms of reference for policy studies and facilitate dissemination of study findings. Of particular note, activities were conducted to ensure better communication and relations between the agency and the Philippine Senate and House Committees on Agriculture and Food.

SECTION IV

ASAP'S IMPACT ON MARKET DEVELOPMENT AND POLICY ANALYSIS AND ADVOCACY

In this section, we quantify the achievements of ASAP activities in market development and policy analysis and advocacy. Overall, ASAP improved the policy environment for private investment in agribusiness activity linked to a more efficient, small farm production subsector. There were three primary indicators of success:

- Increased private sector responsiveness, particularly among small/medium-sized firms, to the improved policy environment
- Increased efficiency of the small farm production subsector through improved vertical coordination and integration
- Enhanced complementary private/public sector advocacy for open market reform and monitoring of the impact of these reforms

This section will examine the impact of ASAP from this perspective.

A. Market Development

Market development activities produced a more dynamic and efficient production and postharvest subsector in the Philippines. The combination of training, technical assistance, introduction of new technologies and varieties, support of trade missions, and marketing assistance increased sales of nontraditional food items and sales to new markets. This, in turn, increased income at the farm level.

For example, ASAP-supported or -initiated interventions led to \$19.9 million in sales and investment transactions, including a \$10.2 million corn transaction to the National Hograisers Group of the Philippines and \$976,000 spent in the United States for equipment, seeds, and other agriculture inputs. An additional \$1 million in services and supplies was purchased in 29 states of the United States as a result of ASAP-sponsored trade missions. A summary of individual transactions, as a result of trade missions, market linkages, and trade fairs, is contained in Annex F.

A1. Impact of Market Development Activities

- **Crop diversification.** ASAP's activities have raised the productivity and income of rural farmers by encouraging crop diversification to high-value products and linking growers with processors. For example, introduction of Kennebec and Atlantic potatoes from the United States resulted in yield increases from 3 MT to up to 26 MT per hectare in the Bukidnon Highlands. This translates into a net income increase per hectare of 17 times over that of production of traditional crops such as corn or beans. The project also linked a loofah processor with two farmer groups, for an increase in farmer income by \$100/month in the Mt. Isarog and Siluay-Buayan areas. In another region, ASAP

convinced members of six farming cooperatives to switch from traditional corn to high-value pineapple production, which increased small growers' annual income by 100 to 300 percent.

- **Market linkages.** ASAP's market linkages increased the international presence of Philippines agriculture in the Pacific Rim. The project brokered a strategic alliance—called the Global Sourcing Initiative—between a California-based marketing firm, U.S. military base commissaries, and Filipino producers. This initiative will source an estimated \$3.3 million of food provisions from the Philippines to supply military bases in the South Pacific, South Korea, and Japan. Another linkage resulted in the export of 1,000 dozen orders of chrysanthemums and roses per week to Hong Kong, and a mission to Japan netted \$27,000 per month in orders for Filipino nata de coco. Other products and byproducts exported with ASAP assistance included mangoes, tomatoes, melons, papaya, banana chips, yam, macapuno, onions, coconuts, juices, and a number of floral varieties.
- **Trade missions.** These combined technical exposure and training with access to high-value agriculture inputs and market linkages. For example, several missions involving members of the Orchid Society of Davao and other representatives of the Philippine floral industry exposed them to advanced breeding, production, and postharvest care of flowers at the Hawaiian Tropical Flower and Ornamental Plant Conference and the International Floral Short Course in Ohio. During these trade missions, delegates were able to procure seeds and planting medium materials worth \$80,000 from U.S. suppliers.

In another trade mission, to the International Exposition of Food Processors in Chicago, delegates purchased \$79,000 in food processing equipment and packaging materials, and a Filipino confectionary firm and a U.S. wholesaler formed a commercial arrangement that led to an estimated \$29,000 in sales to the United States. A visit by Filipino potato producers to the north-central United States resulted in purchases of \$30,000 in U.S. seed potatoes.

- **Technical assistance.** Assistance to a meat processing cooperative raised production levels, increased the work force from 25 to 76 (55 percent of the newly employed were women), improved product quality, and reduced waste. Assistance to another processor included helping to procure \$20,000 in processing equipment, which increased meat processing from 100 to 200 kg/hr (see box). After training in postharvest

**ASAP's Cost-Sharing Training Efforts
with the Delimpex Cooperative**

Delimpex, a small cooperative meat processing plant located on the outskirts of Davao, received product quality and sanitation training for its workers and officers through an ASAP cost-sharing grant. In addition, cooperative representatives participated in a trade mission to the United States to learn about the latest meat processing techniques and equipment. As a result of these interventions, the cooperative introduced nutritional labeling and bar coding, enabling it to boost its exports to the East Asean Growth Area. ASAP is credited with increasing annual sales to \$250,000, cutting product waste by 30 percent, and reducing production costs by 5 percent.

handling, mango and langsat marketers began using hot water dips, extending shelf life and allowing them to begin exporting these products to the Asian Rim. An ASAP consultant introduced the first balanced cattle feed ration that is based on entirely locally produced products, improving rate of gain in cattle. The project also introduced the concept of refrigerated packinghouses and transport.

- **Training outreach.** ASAP's coordination and implementation of more than 250 decentralized training activities to introduce new crops and improve postharvest handling and processing has resulted in increasing output and improving product quality to meet export buyer specifications. In some instances, individual farmers, using new practices covered in training, increased their net income per hectare by 400 percent. Training seminars conducted in 1995 reached more than 7,000 small producer recipients. In all, 21,026 participants (41 percent of them women) attended ASAP training events.

The team worked hard to establish institutional and business linkages between the Philippines and the United States. This was accomplished by providing technical assistance (hiring expertise through private organizations and universities), training, or equipment and technology acquisition. We believe that by establishing these linkages we have created the best possible opportunity to develop sustainable business and technological exchanges between the two countries.

For example, ASAP publicized the agribusiness investment and marketing opportunities in the Philippines to U.S. businesses through a National Association of State Development Agencies annual meeting. As a result, the Minnesota Department of Trade and Economic Development and the Florida Department of Economic Development both organized trade missions to the Philippines, cost-shared by ASAP, for companies in their states. These visits resulted in commercial sales to the Philippines and potential purchasing arrangements from the Philippines. In another example, for Filipino cattle raisers, we supported training in artificial insemination in conjunction with U.S.-based World Wide Sires. This training resulted in the sale of equipment and genetic material to the Philippines.

ASAP linked 25 associations, at least 30 equipment and technology companies, and 12 universities from the United States to the Philippines during the life of the project. Annex G presents a list of U.S. associations, private companies, and universities that were introduced to the Philippines through ASAP.

B. Policy Analysis and Advocacy

The team's policy analysis and advocacy efforts were instrumental in four key areas:

- Building public consensus and support for the Philippines' accession to the World Trade Organization
- Improving the policy environment conducive to sustained private sector investment in agribusiness

- Expanding support services for the agribusiness system
- Increasing private sector participation in the policy reform process

B1. Impact of Policy Analysis Activities

The policy team assisted the private sector Agribusiness Coalition, which formed to mobilize for GATT ratification. This advocacy effort helped coalition members realize the potent force that a united stand could bring to bear to achieve policy reform. The coalition lobbied the government to deliver on its promised safety net measures that would be needed, as a result of reduced tariffs on agribusiness inputs and commodities, to enhance the sector's competitiveness. Lobbying was credited with an increase in the Department of Agriculture's annual budget to \$952 million, an unprecedented amount.

The ASAP policy team provided the coalition with position papers, primers on the effects of tariffs on the sector, and articles for the print media. This assistance helped the coalition effectively address, at the executive level, the competing interests of the better-financed petrochemical, automotive, and consumer durable sectors. This effort contributed to the revision and signing of Executive Order 264, which provides extensive tariff reductions on critical agricultural inputs such as fertilizers, pesticides, plastics, and refrigeration and transport equipment. A summary of these tariff rates are presented in the policy team's summary report in Annex B.

B2. Impact of Policy Advocacy Activities

Notably, ASAP's analyses and coordinated advocacy efforts were instrumental in the ratification of GATT by the Filipino Senate. The ASAP policy team estimates that when GATT is fully implemented, 500,000 jobs and \$2.2 billion will be added annually to the Philippine economy from increased agricultural activities.

ASAP conducted a successful campaign to modify the rules and regulations of the Seed Act of 1993 to enable the importation of new seed varieties and other genetic material to the Philippines. Our analysis shows potential exists for up to a 50 percent increase in production of certain crops, totaling the equivalent of up to \$130 million in additional production per annum.

Also as a result of GATT ratification, the Department of Agriculture was the recipient of a P23.8 billion (\$952 million)² budget for 1996 to improve support services, infrastructure, and technology dissemination and for development of agribusiness cooperatives. Ironically, at this time, whether the Department can effectively use these funds given its current staffing levels is questionable. Therefore, we strongly recommend that the Department obtain skilled assistance in programming, contracting, and managing the use of these funds.

² Conversion rate: P25 = US\$1.

B3. Conclusion

There is little question that ASAP's policy activities had a significant impact in liberalizing the agriculture sector in the Philippines. It was fortuitous that the policy change principles were supported by the government of President Ramos and that the GATT-UR issue was addressed at the national level at the time of ASAP implementation. The ratification of GATT in particular became the policy component "silver bullet" that allowed the project to far exceed its targets. Nonetheless, the policy team and the entire general contractor staff are to be commended on their tireless work, which has borne commendable results. We recommend that USAID work to quantify the economic impact of these changes so that it can fully gauge the effects of this significant policy change.

SECTION V

ASAP'S IMPACT ON THE AGRIBUSINESS SECTOR'S GROWTH RATE

The goal of ASAP was to promote sustained private sector-led growth in the agribusiness system with a significantly higher annual growth rate in value added. To examine progress in achieving this goal, it is necessary to measure changes in employment, income, business start-up and growth, and the net contribution of private agribusiness to the economy of the Philippines.

Obviously it is difficult to credit, that is, measure and attribute in a statistically significant manner, the project efforts to attainment of sustained private sector-led growth in agribusiness. This is a classic difficulty in many if not all development projects of this nature, due in great degree to the need to factor out all "noise." An example of this "noise" is the economic liberalization that was taking place in the Philippines concurrent with ASAP implementation. We can, however, look at evidence that would allow us to determine whether progress toward attaining the ASAP goal has been made.

To measure program impact, we conducted case studies of three of the subsectors that are the project's focus: cutflower/foilage, fruit and vegetables, and agroprocessing. A fourth subsector, feed/livestock, was not studied due to budgetary constraints that led to early closure of the project. A summary of the three subsectoral case studies is given below. These studies were conducted during year 3 and 4 of ASAP implementation and, thus, the level of impact should be judged accordingly.

A. Cutflower/Foliage Subsector Study

The cutflower/foilage subsector was studied first (April 1994) since ASAP had been significantly involved in this area from the project's inception and is based on only two years of activities. We followed a case study format and evaluated 20 assisted firms/cooperatives. Findings are as follows:

- Cooperatives and firms that received technical assistance and training increased the area under cultivation by 77 percent, their capital investment by 34 percent or P23.7 million, and their employment by 43 percent, or 113 workers (30 of them women).
- Among the beneficiaries of ASAP cutflower/ornamental activities, 65 percent, or 2,090, were women.
- Sales for assisted cooperatives and firms increased from P51,000 to P2.6 million per year. While the sales increases are in general due to larger output, additional factors are higher quality output, more diverse production available, and an extension of the growing season through introduction of new varieties and improved technology.
- Of the 20 cooperatives and firms studied, 15 indicated that project assistance helped them to break into new markets, including export markets such as Hong Kong, Saudi Arabia, Austria, Japan, and Hawaii.

- Membership in cooperatives included in this study increased by 56 percent, or 383 members, after ASAP intervention. According to members interviewed, this gain in part reflected our initiatives to provide access to information on new technologies, assistance in entering new domestic and export markets, access to books and publications, and assistance in conducting trade fairs and missions.

B. Agroprocessing Subsector Study

In the agroprocessing case study, conducted in October 1994, we evaluated 15 agribusiness firms and four agroprocessing-related trade associations. The study concluded the following:

- Because of linkage activities between farmers and processors, members of one farmer cooperative increased their per hectare profitability by 191 percent.
- Training in production and postharvest handling improved selling prices of peanuts for a cooperative from P19/kg to P34/kg.
- A meat processor that received assistance subsequently increased employment from 78 to 91 workers (70 percent of them women) and capitalization from P8,000 to P10 million. Another assisted meat processor increased production from 4 to 20 tons per month, profits from a loss of P526,000 in 1992 to a profit of P108,000 in 1993, and its workforce from 25 to 76 (55 percent of them women), as well as improved quality control of its processing line.
- After ASAP assistance, including a marketing trip to Hong Kong, a processed food company increased annual production by 50 percent and its workforce from 207 to 250 employees (70 percent of them women).
- A meat processor received help to procure \$20,000 in equipment from the United States and doubled its processing capacity from 100 to 200 kg/hr.

Generally the agroprocessing study found that because of ASAP assistance, processing plants were more efficiently run, upgraded equipment, focused on quality control and reduction of waste, increased employment, and improved profitability. Also, linkages created between farmer groups and processors provided small farmers with additional market outlets, more diverse production options, and increased income.

C. Fruit and Vegetable Subsector Study

The fruit and vegetable subsector study was concluded in November 1995. This sector was a priority area for the project team in recognition that introduction of production of nontraditional, high-value fruits and vegetables offered Filipino farmers the greatest possibility of income growth. General findings proved this thesis to be valid and that farmers had indeed made additional investments in this subsector. After studying 42 cases, the team made the following conclusions:

- Intensive training, improved postharvest handling/grading, and market development efforts resulted in the export of up to 1,000 pounds of lanzones per week to Hong Kong.
- A Mindanao cooperative was able to obtain a P1.5 million Department of Trade and Industry line of credit and a Philippine Government contract for P1.2 million to grow and provide durian and mangosteen planting materials as a result of ASAP assistance.
- A larger fruit-growing cooperative expanded its durian, mangosteen, and rambutan orchards by 50 hectares. Estimates suggest that each hectare of additional fruit tree production results in 12 new full-time jobs.
- Because of ASAP assistance in expanding mango production and improving postharvest handling of bananas, cooperative members sold more than 20,000 mango seedlings, organized the construction of 50 kilometers of farm to market gravel roads, and obtained financing of a P1.3 million fruit processing plant.
- Training and technical assistance in potato production helped cooperatives with more than 4,900 members to increase their average yield per hectare from 18 to 30 tons.
- Because of direct technical assistance and market linkages, a strawberry grower was able to increase sales from P11.8 to P30.2 million in three years.

D. Conclusions

All three case studies concluded that project activities produced significant impacts on agribusiness sector growth. This is a striking achievement, especially considering that the project was implemented in a little less than four years. Sustained assistance to the subsectors, such as that being provided in Mindanao under the USAID-funded Growth and Equity for Mindanao project and the anticipated ADB Cordillera Highland Agriculture and Resource Management project, will continue to build on these gains if the assistance is well targeted, benefactors are prescreened, and the costs and risks are shared between the projects and the proponents. We are confident, however, that many of the cooperatives, associations, and individuals assisted under ASAP have already sustained and accelerated their activities in this high-potential sector.

SECTION VI LESSONS LEARNED

Agribusinesses have overwhelmingly responded to ASAP services. They indicated a high level of satisfaction with ASAP technology transfer activities in agriculture and livestock market matching activities and trips abroad for technology acquisition. ASAP's success in these areas indicates that there is a deep demand for these activities and that they must be continued. The Department of Agriculture, as well as important production and marketing associations, relied on ASAP policy analysis, advocacy, and market development services to assist their activities and their members' interests. This section presents key lessons learned.

Alternative crops. Farmers and businessmen alike are searching for crops that will give them a higher return. ASAP identified many of these crops. If the country's agriculture is to be successfully diversified, introduction and promotion of these crops must be accelerated. ASAP identified a number of significant crops and product opportunities and suggested strategies for successful market entry, including support for industries that package, transport, store, and distribute agribusiness products. The need for crop diversification is national in scope and must not be addressed in only one region.

Extension services. Farmers and agroentrepreneurs are not receiving information and training on a consistent basis in crops other than staples. Because of the devolution of extension services to local government units, agriculture extension services by and large lack the resources to respond flexibly to new opportunities or deal with new crops. ASAP was able to fill this need by providing relatively expensive commodity teams specific to certain crops. But ASAP's actions only scratched the surface of the large demand for expertise in assisting farmers to exploit these new commodity areas.

ASAP's commodity teams drew largely on national expertise that is available but not harnessed in an effective extension system. In crop areas such as durian and mangosteen, ASAP drew on regional foreign experts to supplement national talent while always ensuring that local experts participated. The main reason for this, obviously, was so that all could learn from each other. A secondary reason was to ensure that the foreign experts benefitted from having a local counterpart to explain aspects of the local culture to them and serve as translators when necessary.

Although many national research institutions in the Philippines are staffed by internationally respected personnel, there is a generalized lack of effective information dissemination, training, and extension opportunities for them. This is due largely to severe budgetary constraints but also to jurisdictional fragmentation and institutional overlap. Overall, fewer agencies with more funding would be more effective in carrying the findings and recommendations of researchers to the field level. This is a critical need that is not being addressed by the Philippine Government.

Postharvest handling. The rates of fruits and vegetables lost between farm gate and market exceed 40 percent, resulting in low farm gate prices for farmers, high consumer prices,

and far greater pressure on land use than necessary. Farmer and consumer well-being are seriously affected. ASAP developed a close working relationship with the Post-Harvest Training and Research Center (PHTRC) of the University of the Philippines at Los Baños to address these issues and help devise strategies for lowering loss rates in specific crops. Two very successful ASAP-PHTRC collaborations involved adoption of hot water dip to reduce postharvest fungal infections in mango and the use of improved packaging and bagging to reduce browning and shriveling of lanzones. Another action precipitated through collaboration with PHTRC was start-up of national postharvest symposia designed to familiarize farmers, traders, and agriculture sector officials with key issues and practices. These symposia, held in 1994 and 1995, were carried out in cooperation with the University of California at Davis. We anticipate that this linkage will continue now that the project has ended.

Marketing. There are many market constraints, and most are not related to excess supply or insufficient demand. In general there is strong demand for a limited supply of low quality products. Unfortunately, the systems meant to link suppliers with consumers are defective, when they do exist. This has led to high costs, appalling product quality, and high loss rates. Farmers and consumers are losers in this situation. Both groups tend to blame this situation on traders, but in reality traders generally do no more than survive in an imperfect environment in which they are continually challenged to minimize losses arising from factors they cannot control.

Market awareness. ASAP conducted studies that for the first time called attention to the existence of specific market opportunities in nearby foreign markets such as Hong Kong, Taiwan, Japan, Singapore, and Eastern Russia. ASAP also took agribusiness practitioners to these markets to establish linkages and gain understanding of the market requirements regarding quality, packing, and packaging. Market awareness was also created through attendance at international trade events in the region and key agribusiness trade shows in the United States. These activities were generally cost-shared 50-50 by the project and the participant. Filipino entrepreneurs experienced state-of-the-art technology and became aware of the need to update and upgrade their own practices and products in preparation for entry into the regional and global marketplace. This heightened awareness of market trends and opportunities must continue for the country's agribusiness system to develop. The question left unanswered at the end of the project is, who will carry out this function in the absence of ASAP?

Interrelationship of market development and policy analysis. Designed to run on a parallel track with the policy analysis and advocacy unit of the project, the market development component of ASAP continually came up against constraints to agricultural development that were rooted in the policy environment of the Philippines. Many of these constraints are rooted in a well-meant, if paternalistic, intent to help small farmers. For example, government interventions in seed production resulted in seed shortages created due to public sector displacement of the private sector. Both units of the project frequently worked hand in hand to address these constraints to private sector-led growth in agriculture.

While the policy unit of ASAP had a predetermined agenda at the project's start, sufficient flexibility existed so that we could address inefficient policies identified by the team during implementation. To USAID's and ASAP designers' credit, this flexibility allowed for a profound

policy agenda change that was indeed “market-based.” For example, while we dropped the emphasis on reducing the influence of the National Food Authority and the GOP divestiture of PhilPhos, we influenced a major rewrite of seed importation rules and regulations that, for the first time in decades, enabled importation of improved seed varieties. Similarly, we provided essential support to the GOP in its successful effort to ratify the Uruguay Round of GATT. These two issues, whose positive impact to agriculture will be in the billions of pesos per year, were not even on the radar screen at the beginning of the project. This flexibility, which enabled us to address key constraints as opportunities arose, was an essential design feature that led to significant implementation success. A summary of these complementary efforts is presented in Annex H.

Structural reform and systems planning. The way the agricultural portfolio is apportioned among government agencies should be restructured. Under the current situation, it is difficult to bring the disparate elements of the portfolio together in a single concerted effort. Needless to say, focused and effective outreach are difficult to attain as long as this situation persists.

Part of ASAP’s strength in the agribusiness arena was its ability to bridge the institutional barriers and gaps that hobble much of the government sector’s efforts in this field. Another strength was ASAP’s ability to call on technical expertise both from in-country and foreign sources. The project drew on the expertise of Filipinos, Americans, New Zealanders, Thais, Malaysians, Indians, and other nationalities in carrying out its technical programs. This ability to access expertise from abroad enhanced and strengthened the technical interventions that ASAP sponsored.

An important contribution of ASAP was the recognition of emerging production centers in the Bukidnon Highlands of Mindanao and the Kapatagan area of Davao that possess the potential to feed the emerging metropolitan areas of the Philippines. Cities such as Cebu, Illigan, Cagayan de Oro, and Davao are experiencing rapid growth in fast-food and supermarkets and offer many new agricultural opportunities. ASAP gave considerable attention to development of horticultural production in these areas. As a direct result of ASAP interventions, high-value products such as onions, bell peppers, potatoes, and leaf lettuces were successfully grown and marketed in these areas.

In an equally important contribution, ASAP recognized that with increasing urbanization and changes in food consumption habits, the demand for many food products becomes constant rather than seasonal. During the rainy season, Manila is unable to obtain supplies of many fresh fruits and vegetables that are still available in other areas of the Philippines. ASAP called attention to the opportunity posed by the lack of integrated national systems for the production, distribution, and marketing of fruits and vegetables. Addressing these opportunities can increase farmer prosperity and provide for urban consumer welfare.

SECTION VII CONCLUSIONS AND RECOMMENDATIONS

Any recommendations must include a continuation of the activities that have thus far worked so successfully under ASAP and that are currently not being provided by either local governmental or non-governmental programs. These activities include production support, adaptive research and extension, market information, market matching, joint ventures, support to associations, coalition formation, and policy analysis.

Production support. This includes introduction and technical support for growing new flower, fruit, and vegetable crops and using new breeding technologies for livestock. As discussed earlier, there is no effective centrally organized and supported extension service for the Philippine agriculture sector, and with the current effort toward devolution of services to the local level, a national network of information and support does not exist. The university system, while offering some of these services, currently lacks the resources to be effective here.

Adaptive research and extension. With the liberalization of importation of planting and genetic material through the Seed Act Implementing Rules and Regulations, producers and agriculture input businesses are actively or intensely interested in importing new, high-yielding varieties and improved genetic material. These new varieties must be tested in the diverse ecological zones of the Philippines. Adaptive trials were standard operating procedure for ASAP assistance. Trained personnel must be available to farmers and farmer groups who have an interest in using improved or new varieties.

Market information. A principal activity of the market development team was to provide Filipino agriculturalists and associations with reliable market information and contacts in the Philippines and other Asian markets. Many contacts have now been made and relationships established. Agroentrepreneurs who have successfully entered these markets or realize the opportunities that these new markets present will continue to keep and build these relationships. New entrants also must have this information available. In an important step, the GOP supports and subscribes to the International Trade Centre's market information bulletin, which is expanding to include key Asian markets. This nominal investment by the GOP will pay great dividends to those agribusinesses now routinely targeting these fast-growing markets.

Market matching. ASAP's matching services between producers and marketers/processors were highly successful. As stated earlier, ASAP area marketing advisors assisted producers to make more than \$19 million in transactions. Much of this success is due to the project's ability to provide technical support to producers as well as market information and contacts. There is little doubt that the advisors' understanding of market requirements and demand provided them with considerable advantage in identifying these opportunities. Technical assistance in production also was a key factor. Several ex-area marketing advisors continue to use the expertise they gained on ASAP as they work as private consultants with local companies, but technical assistance resources in production are still lacking. A critical mass of expertise must be developed to provide more support here.

Joint venture development. The project did not experience a great deal of success in this area. We believe that in many cases the Philippines was just not ready, from a production and policy perspective, for the scale of production required to support processing ventures. For example, in working with a tomato processing facility, the Bukidnon Resources Company, Inc., that was underutilized due to the seasonal production of tomatoes, ASAP recommended other vegetable crops and equipment so that the plant could extend its period of operation by several months to become more cost-effective. To be successful, most joint venture proposals will require technical assistance in production and marketing to make the proposal bankable.

Support to associations. Associations were the most effective delivery system of ASAP services. The spread effect that the project enjoyed by providing training and technical assistance to producer associations resulted in the stunning number of beneficiaries assisted. ASAP-sponsored activities also helped the associations become stronger by enabling them to use technical workshops and sessions to raise funds by charging fees to their membership. This was a classic win-win situation. We encourage continuation of this modality, whether under subsequent donor or GOP programs.

Coalition support. The project also played an important role by catalyzing associations and other interest groups into coalitions to address constraints in the agribusiness system. The ASAP document “Building Sustainable Work Coalitions” explained the phenomenon of coalition forming as “ad hoc, temporary, and lacking a formal constitution, written rules or plans.” However, it also noted that coalitions “are effective in advocating policy changes and helping firms respond to market opportunities.” The study concluded that donors and governments can assist in coalition mobilization by establishing a private voluntary organization (PVO) grant fund that is managed by a competent PVO or contractor. This proved to be most effective for policy change and market development.

Policy analysis. Placing the policy analysis team within the Department of Agriculture Policy and Planning Division was effective. This accomplished team, supported as necessary by short-term technical assistance, provided the analytical information required by agriculture policy makers in the GOP at a reasonable cost. Less successful were efforts to incorporate this expertise in independent associations and other advocacy groups. The primary constraint was that these organizations lacked resources, mainly funds, to hire manpower to carry out this work.

Given the significant increase in the Department of Agriculture’s budget, it now has the financial capability to either hire or contract for much of the expertise provided under ASAP. Independent associations and organizations with an interest in promoting a liberalized agriculture sector should continue to receive support through grants and contracts since it is unlikely that most of these groups will be able to pay for this expertise in the foreseeable future. An experienced contract team should be identified by the Department to assist it in fulfilling its now ambitious mandate.

ANNEX A
MARKET DEVELOPMENT TEAM LEADER REPORT

Introduction

The strategy used by the market development team in the Philippines was to assess the comparative advantages of the of the agribusiness sector, including geographic, climatic, and proximity to markets and market networks. We were then able to determine the product mix that made sense, the inputs and technology required for production, and most importantly, postharvest handling and marketing requirements that were typically lacking to deliver the goods to a consumer's table at a reasonable price. The project accomplished these tasks using a variety of techniques that were a part of the initial design or an evolution of strategies developed through other agribusiness development projects. These strategies included market development trips to new product destinations, technical assistance and training in production and processing by industry leaders, institution building to develop capabilities in post-harvest handling and marketing, developing linkages with international organizations and associations, conducting workshops and caravans to train a critical mass of small farmers, and organization of in country trade shows.

The market development team worked closely with the policy team to address policy inefficiencies. This included taking steps to measure these inefficiencies and gauge the impact of policy modifications, and to involve farmers and businessmen in advocating these modifications to the appropriate members of the government and legislature.

The end result was a formula that was flexible but was consistently applied. In addition to the successful introduction of new products and technologies that are described below, the project also was able to develop a core staff with competence in market development techniques. As a result, all four of these Filipino market development advisors are now successfully consulting to local companies on agriculture production and marketing issues.

Arriving at a Focus

One of the first tasks addressed by the market development team required the identification of priority products that we could promote. Studies carried out under the policy component of ASAP demonstrated negative returns on investment from raising traditional cash crops such as corn and rice without the use of hybrid seeds or chemical fertilizer. While the national government is moving toward a rationalization of the grain production system, we discovered early on that nothing was being done to develop crops with higher income potential for the small and medium-scale farmers. It was with these crops that ASAP defined its role as catalytic agent, calling attention to and carrying out activities designed to increase the production and marketing of crops other than rice, corn, pineapple and coconut.

The typical size of a Filipino farm varies from region to region, from a low of .7 hectares in Ilocos, to a high of a bit over 3.1 in Mindanao, with the average at about 1.3 hectares. This translates to a bit under 4 acres generally. Under the Comprehensive Agrarian Reform Law (CARL), the maximum holding permitted under the law anywhere in the Philippines is 6

hectares, or 15 acres. Based on returns per hectare comparisons developed under the project it is evident that growing traditional crops guarantees a life of poverty for the average Filipino farmer. We therefore began to think in terms of the highest possible value of production per hectare in term of crops or cropping sequence as a key objective of our strategy to promote key crops. Our success in communicating this message and developing packages for farmers to adopt these new sequences is one of the most meaningful contributions that the project made to the future of Philippine agriculture.

As this process continued, the project increasingly found that ready markets and buyers for most products existed in the Philippines. The problems faced by the Philippine agribusiness system were found principally on the supply side and included low productivity, high post-harvest loss rates, poor farm to market infrastructure, an absence of any cold chain, and a lack of understanding of market standard products and market information. This is not to say that during the course of the project's existence there were not moments of market saturation for some commodities, but it is to state that production opportunities are significant and exist for every region of the country. It is also to state that one of the original premises of ASAP, that marketing is a problem because demand is weak or difficult to identify, was simply not true.

What seems to have been missing at the beginning of the project, and what the market development team began to formulate, was a vision for the development of the multiple crop opportunities extant in the country and an awareness of the future consumption trends already apparent in the country. As importantly, we began to focus attention on what neighboring countries were asking for in terms of possible imports from the Philippines. This vision, and a long-term plan to provide the necessary infrastructure for the distribution and marketing of the nation's agricultural products, were the keys to developing the country's agriculture.

As part of our strategy for market opportunity identification, the market development team also analyzed import data and found that there were significant opportunities for import substitution in areas as surprising as peanuts and mung beans. Peanut imports were found to be on the order of \$40 million yearly in 1993, and rose to an estimated \$60 million just two years later. As the Philippine economy began to recover in 1994, demand for snack food took off which was clearly reflected in the rising demand for and import of peanuts.

To determine why the demand for peanuts was expressed in rising imports and not in increased domestic production is to understand many the reasons for the underdevelopment of the Philippines agribusiness sector. Chief among these reasons continues to be government policies which created disincentives for efficient production and marketing and protected large and inefficient agribusiness interests.

Another part of ASAP's strategy involved looking at emerging trends within the Philippine economy and the implications for farmers and the agribusiness opportunities that derived from this situation. As the economic recovery that began in late 1993 accelerated, demand for snack food, fast food, and meat grew at very high rates. This increased demand had significant implications for farmers. One implication was that potatoes for processing were in high demand, were being imported to meet this demand, and was one crop that farmers could produce

competitively and profitably. The opportunities available to livestock raisers were also a focus since imports of meat and of cattle for fattening, mainly from Australia, was increasing dramatically. As one model of a response to this opportunity, ASAP teamed with Pioneer Hi-Bred, a U.S. company's local subsidiary, to disseminate silage-making technology to small and medium-scale livestock farmers. In addition, ASAP provided short term technical assistance to ranchers and feedlot operators in feed ration development, using locally grown products, that resulted in accelerated weight gain in cattle and increased markets for agriculture biproducts.

A final component of ASAP's analytical strategy involved exploring nearby export markets to determine trends and opportunities for Philippine agribusiness products. In the course of these explorations, significant opportunities were found to supply Hong Kong with Honeydew melons and seedless watermelon, with tomatoes both for cooking and slicing, with counter-seasonal supplies of vegetables, and with durian after the end of the Thai supply season. Opportunities were found in Taiwan to supply green coconuts, watermelons, durian, mangosteen and other tropical fruits. The onion market in Japan was found to be changing toward a preference for larger onions, as opposed to the medium sized ones that the Philippines had traditionally supplied to that market.

The Japanese market was also found to be receptive to durian and to be paying high prices for it. This market imported mangosteens in frozen form from Thailand. Opportunities existed for importing large quantities of edamame into this market in frozen form. At least one Philippine company began varietal trials based on ASAP's identification of the product's potential.

As part of the above strategy, ASAP's area marketing advisors, who were all local employees, were familiarized with the important Asian export markets, especially Hong Kong. By project's end they personally knew importers of fresh and processed goods in those markets and were assisting exporters in making their own arrangements for export.

Development of Action Plans

Having arrived at a focus, the next step was to formulate action plans for those areas where major opportunities had been found to exist. In most cases this also meant addressing constraints. It also meant devising strategies for technology transfer to farmers. This was developed by the project's training and communication unit and took the form of training events, training manuals, often times in Filipino or other local languages, educational comic books, and organizing hands-on demonstrations through caravans and other types of site visits.

Another strategy was to sponsor marketing trips abroad for the purpose of seeing products that commercial technologies are still under development in the Philippines, and to visit markets where products and technologies could be compared with what existed in the Philippines. The target participants for these trips were key farmers and farmer leaders. These farmers, who in every case had to contribute a portion of the cost for these trips, were usually sponsored by their cooperative or production association. The result of this cost sharing requirement was to have group members being serious and motivated participants.

These marketing missions served to demonstrate innovations and advances in agriculture of relevance to the group. For example, in the case of orchard crops like durian, mangosteen, travel abroad, especially to Thailand and Malaysia, was the only way for Filipino farmers and farm leaders to see state of the art technology and commercial scale orchards.

Initially ASAP's work was to cover the entire agribusiness sector except for rice, coconut oil, pineapple and sugar. Corn was covered only as it was considered a key ingredient in feeds. The development of a focus that was market driven, however, increasingly resulted in the team devoting more of its limited resources to areas of high impact where rates of return promised dramatic increases in farmer livelihood. We sought also to strengthen the agribusiness sector through value adding activities and integration through market.

A. Fruits and Vegetables

A1. Fruits

Significant interventions were undertaken on a wide range of fruit crops. The most significant ones are addressed in this section.

A1a. Mango

We determined that the Philippine mango industry has the most promising growth potential. During project implementation a large growth in demand from Hong Kong was documented with this market supplanting Japan as the principal export market in the region. We found that much of the growth in Hong Kong was due its use as a consolidation point for product going to China and its burgeoning urban markets. During this same period the Japanese market also continued to grow. Philippine market potentials in South Korea, Taiwan, Canada and the US were in various stages of exploration. However, quarantine barriers and issue were a near term disincentive for exporting mango to these potential markets, as well as in Australia.

Despite the ability to produce mango year round in Mindanao, the Philippines remains a largely seasonal supplier with 85% of supplies available between February and July. Our technical assistance called attention to market trends and this supply situation and formulated a strategy for capitalizing on these new opportunities.

The market development team concentrated its efforts in Mindanao to encourage expansion of mango plantings to meet unsupplied demand during the seven lightly supplied months of the year. Mindanao was the area of preference because it is the only typhoon-free area of the Philippines. For farmers with existing plantations in this region we instructed them in flower induction techniques, fruit bagging, and hot water dipping. The first of these practices enables farmers to time the production of the crop to meet market windows and avoid periods of glut. The second technique is an inexpensive means to protect the individual fruits from the effects of rain, fungus and insects. The third technique eliminates latent infections that develop en route to market, thereby improving the quality and the shelf life of the fruit. Other techniques such as high density planting were introduced and discussed, as was the use of irrigation. Most of the

training employed Filipino experts hired by ASAP as short term consultants, as well as the Post Harvest Training and Research Center (PHTRC) of the University of the Philippines/Los Beeps (UPLB).

We also played a catalytic role in market expansion and application of technology to mango shipments by linking a consortium of Philippine mango exporters with marketers willing and able to handle this product in the Canadian market. At the same time the team facilitated linkages between PHTRC and Transfresh, a U.S. company with state of the art ocean transportation systems for carrying fruits and vegetables in modified atmosphere to distant destinations. Shipping mango by sea saves significantly over traditional air shipping, thus enabling Philippine grown product to compete in North American markets. As a result of our initiative, the following had occurred by PACD:

- Transfresh had chosen a Philippine representative who is also a manufacturer of industrial gases and whose family is also actively involved in the export of fresh and processed mangoes;
- Filipino exporters had agreed to pool their resources and jointly ship a trailerload of mangoes to Canada;
- PHTRC had begun discussions with Transfresh for licensing the use of technology capable of permitting the storage of carabao mangoes for up to a month while still allowing for their ripening and marketing;

For direct marketing assistance, we assisted three groups of mango producers from Mindanao to make their first direct shipments to Hong Kong. The most successful venture of the three was run by Bali Fruit, who effectively demonstrated the feasibility of a medium-sized Filipino firm to enter the export market with relative ease. Bali Fruit was successful in its exports for as long as it relied on air shipment. However, reliance on air shipment was costly and effectively meant that Bali could only compete in the market during periods of highest prices, or between September and December. For them to be successful on a year round basis it was necessary to make sea-shipments directly from Mindanao to Hong Kong. In this area they have been less successful to date.

The first attempt at sea shipment illustrates how unexpected events make the life of people in the produce business exciting. It also is a painful reminder of some of the infrastructure and policy problems that will continue to plague the development of a thriving produce export industry in the Philippines. This shipment required flying fruit from Cagayan de Oro to Manila for on-loading to a container. They failed to provide for adequate cold storage and the fruit began to ripen, causing the shipment to be aborted. The fruit was sold successfully in the national capital market with reasonably good recovery of direct costs.. A second attempt to ship directly to Hong Kong by sea involved loading a container in Cagayan de Oro and then shipping to Manila for loading aboard a vessel bound for HongKong. Unfortunately a dock strike broke out in Manila making it impossible to load the container aboard the ship. Because the mangoes had already been cleared for export, it was also impossible to get them out of customs on a weekend

for delivery to a local processor, and by the time they were released, the fruit no longer even met the food processor's standards. Heavy losses were sustained and Bali Fruit decided to temporarily discontinue export operations. It should be noted however that the concept of shipping hot-water dipped mangoes directly from Mindanao to Hong Kong remains valid.

Direct shipment of mangoes from Mindanao to Singapore by sea was also identified by ASAP as a means of improving the Philippines' market share. Australia and Pakistan have basically displaced the Philippines as the supplier of choice because their product is more consistently available at a lower cost. The main factor driving up the cost of Philippine mangoes is the reliance on airfreight for delivery to Singapore. Hot water dips, which extend shelf life by eliminating surface bacteria, and controlled atmosphere shipping technology, will now enable less expensive sea shipment and allow the Philippines to regain this lost market share. What remains to be developed is a reliable transport link that can offer refrigerated transport directly out of Mindanao to Hong Kong.

During the last year of ASAP, a number of joint trainings addressing the opportunities in tropical fruit crops were co-sponsored by ASAP and the Department of Agrarian Reform and through the Land Bank. Issues covered at these sessions included the profitability of growing mango as well as the presentation of production and marketing information.

A1b. Durian

The market potentials of this crop were first explored during assessments of the Hong Kong and Singapore markets in June-July of 1993 carried out by ASAP market development staff. What ASAP found was that what many had considered a noisome minor fruit was in fact a major East Asian commodity, with tremendous profit potential for farmers in areas that can produce it. Not only was domestic supply found to be lacking but ASAP found that regional markets were increasing their imports at a very fast pace. Singapore was found to be consuming over 10kgs per capita per year. Hongkong was already importing enough durian to sustain a 3kg per capita consumption rate. Imports to Taiwan were booming. ASAP also found that there were significant supply gaps in both the Philippine market and these other Asian Rim markets that corresponded well to the production potential of several areas of the Philippines. Base on this encouraging market prospect, ASAP undertook a drive to expand durian plantings in Mindanao, which is typhoon free, and has a number of microclimates which permit variation in the timing of its production during the year.

One of the first constraints encountered in the drive to expand durian plantings was the lack of suitable planting materials. Most Filipino researchers were oblivious to the fact that the Thai durian varieties Chanee and Monthong had already achieved status of market standards, and that export destinations would be expecting these varieties. Despite this reality, the emphasis in the Philippine research community was on breeding or discovering the Filipino variety of durian. Needless to say, there were insufficient materials for planting of even those varieties that have been named and released because much basic nursery activity for horticulture crops is in the hands of the government, rather than the private sector

In response to this situation, ASAP was able to acquire important allies to obtain new sources for nursery stock of market standard durian planting materials. We organized several Central Mindanao nursery operators as well as researchers at the University of Southern Mindanao undertook the mass propagation of clonal materials acquired in Thailand, Malaysia and Singapore in the course of ASAP-sponsored planting material acquisition trips to those countries.

Dr. Pablito Pamplona estimated in mid-1995 that sales of durian and mangosteen planting materials catalysed by ASAP sponsored trainings and technical assistance visits had been enough to plant 4000 hectares to those crops. Value of planting materials sold was estimated to be on the order of over \$22,000.

To reinforce the few experts with durian expertise in the Philippines ASAP was able to initiate contacts with researchers in both Malaysia and Thailand who were working on this crop. Not only were their services contracted by the project for the delivery of technical assistance at various sites in Mindanao, but they were also hosts to various ASAP-sponsored groups that travelled to other Asian countries to see first hand the state of durian production. On each of these trips university researchers from the Philippines were included so that they might also benefit from seeing the latest advances with this crop. Department of Agriculture personnel were also included in these trips with the objective of demonstrating to these policymakers the constraints facing the industry in the Philippines. This strategy appears to have been successful in Region XII and the A.R.M.M., where the Directors both made significant purchases of clonal materials in Thailand and Malaysia with a view to upgrading their own departmental nurseries.

Perhaps one of the most satisfactory developments in the implementation of ASAP's crop development strategy was the enlistment of Provincial and municipal governments in the effort. The governor of Lanao del Norte, Abdullah Dimapporo, and the mayors of Claveria, Nunungan, President Roxas, Datu Paglas and others supported the development of fruit tree plantings in their provinces or municipalities in a manner that holds great promise for the future development of those towns and provinces.

By the conclusion of ASAP the creation of an orchard base for a strong durian industry was well under way in these areas. In the next few years production will grow but it will be some time before national demand is met. Future challenges include the proper packing of durian in cartons and its shipment by refrigerated container to Manila. Sample cartons were obtained by ASAP in Thailand and Hong Kong and turned over to the PHTRC before the end of the Project so that models existed in the Philippines for developing the packaging for the product. Once supplies are adequate for domestic production the Philippines has a clear shot at supplying the burgeoning Hong Kong, Singapore, Taiwan, China and Japan markets with this product. This crop is a market winner for those Filipino farmers who can grow it.

A2. Other Fresh Fruits

Lacatan banana, mangosteen, longan, lychee, and rambutan are fruit crops that ASAP also promoted through training and technical assistance since all were found to have good market potential in the domestic and nearby overseas markets.

A2a. Lacatan

This is the banana of choice in the national market, outselling cavendish by a large margin. It also commands a significant price premium. ASAP also found this a useful commodity to use in intercropping schemes. This technique, first promoted by the University of South Mindanao, uses lacatan bananas as shade for young durian and mangosteen seedlings during their first years. The advantage of this cropping scheme is that it provides the farmer with a good income stream during the early years of fruit tree development, when typically his land would not be income-producing.

A2b. Rambutan

This is a crop supplied to the national capital market from central Luzon and Mindoro during only two months of the year. The production season for this fruit is markedly different in Mindanao. ASAP therefore recommended that this crop be planted in Mindanao for follow-on marketing to Luzon once the main Luzon season had passed. Another ASAP initiative was to work with the PHTRC in developing the packaging and transport techniques for this crop for nationwide marketing. PHTRC has developed technologies that permit rambutan to last up to 12 days if kept in perforated plastic bags and under appropriate temperature. Another ASAP recommendation was to plant varieties like Sri Chompoo, which has an easily removable see, making this fruit an ideal product for canning. A final recommendation was to plant adequate quantities in a given location to make it possible to aggregate shippable or precessable quantities in the not too distant future.

A2c. Mangosteen

This is another crop with a limited supply season in the Metro Manila region but enjoys a great deal of popularity. In addition to an undersupplied domestic market there is very strong demand for mangosteen in Taiwan and in Japan, where it is sold in frozen form. The technologies for storing this fruit under refrigeration for up to 3 weeks have been worked out. What is lacking is the volume of product and the transport and marketing infrastructure to permit economical application of these post harvest techniques. Mangosteen training was provided in conjunction with durian during project implementation.

A2d. Lychee and Longan

The ASAP project identified these two related tree crops as having significant production potential in upland areas of the Philippines where there is a defined dry season. Economic research conducted on these fruits in Thailand documented their importance in economic growth.

For 1995, ASAP market research demonstrated that Longan exports from Thailand had been on the order of \$50 million in 1994. ASAP determined that the Sagada region of the Luzon Cordillera produces longans in October, a unique time of year for these other markets, presenting farmers in this area significant earning potential.

As a result of our identification of this market opportunity, a European Economic Community (EEC) project bought lychee and longan planting materials from ASAP-identified nurseries in Hawaii and elsewhere and began a promotion program in the Kapatagan region of Davao. Results of the introduction were very satisfactory. The planting materials were introduced in sufficient volume to plant around 5 hectares of each crop. This should contribute to a critical mass in supplying the region with certifiable planting material and by cutting crop development times.

As a final recommendation for longans, low-chilling varieties suitable to more tropical areas such as Ilocos had been recommended by Thai experts. These are Khom and Early Bedana. Two other varieties that also do well are the everbearing Pet Sakhorn variety and the Daw variety. All four are good for planting in low elevation regions. While not drought hardy like cashew, these are much higher value crops than cashew, which was being promoted in the region prior to the closing of ASAP. Introducing these varieties should be undertaken either by the DA or by a successor project working in the agricultural development of the Northern Luzon area.

A2e. Lanzones

This fruit also known as langsat is a Filipino favorite. An August-October Luzon season is followed by an October-December production season on the island province of Camiguin which is to the immediate north of Cagayan de Oro. ASAP interventions with this crop and its growers were aimed at improving production, postharvest handling, and expanding markets. Production interventions included demonstrating the use of irrigation and its benefits. In post harvest, cooperation between ASAP and PHTRC led to the design of a carton for Lanzones, as well as for plastic bags designed to hold 500 gram bunches. Lanzones are very sensitive to bruising and dehydration and if not properly cared for, turn brown and are most unappetizing after a very few days. Use of the bags was found to extend marketability from 3-4 days after harvest to 7-8 days.

Marketing assistance included ASAP-sponsored trial shipments of lanzones to Hong Kong from the Camiguin Multipurpose Cooperative. There is a significant population of Filipinos in Hong Kong, Singapore, Tokyo who can be counted on to buy the products that are typical of their country. However, because many of them are domestic helpers or factory workers, the only free time they have is likely to be on either Saturday or Sunday, with a preponderance of the domestic helpers having only Sunday off. Understanding this was important, because it meant that lanzones sent to Hong Kong should be ready for sale by Friday night, and that lanzones not sold by Sunday evening are likely not to be sold at all. ASAP helped the cooperative understand these factors so that they would pick fruit on Wednesday, ship it on Thursday, to be available on Friday at the local markets for the weekend sales window. The other important point was to sell this product to niche marketers, of whom there are several in these markets specializing in Filipino products.

A most significant finding made by several ASAP fruit missions to Thailand and Malaysia was of the existence of a superior variety of langsat called “longkong.” This variety is virtually seedless and free of latex and therefore far more appealing to consumers. Substantial amounts of planting materials were brought home by an ASAP mission that visited Thailand and Malaysia in August of 1995. At present the “longkong” variety of lanzones or langsat commands a price from three to four times higher than the standard variety in Thailand, and the farmers and nurserymen who acquired this variety in the course of their ASAP-sponsored visit to Thailand were looking forward to a similar situation in the Philippines once their trees came into bearing.

A3. Fruit for Processing

ASAP also undertook a series of actions to strengthen the ties between processors of fruits and their suppliers, as well as to help processors become more efficient, more productive, and to source their raw materials more effectively. In this area of endeavour ASAP worked in a number of fruit process areas, of which the most significant are summarized here. Others are discussed under Assistance to Individual Firms.

A3a. Pineapple

ASAP involvement with this crop consisted primarily in providing technical assistance in plant layout and equipment installation to T’Boli Agricultural Development Inc. (TADI). This company, led by former Secretary of the DA Senen Bacani, set up a new pineapple cannery in the upper reaches of the Surallah valley. The entire operation depended on contract farming for its supply of fruit. ASAP’s support to this venture included assistance in drawing up promotional and educational materials explaining the contracting mechanism and the fundamental of pineapple growing and to cost share on designing the cannery layout.

The educational material, essentially comics, was written in Filipino and in Hiligaynon (Ilongo), the main languages used in this area of South Cotabato Province. Other training materials were also drawn up by ASAP for courses and demonstrations put on by T’Boli for the benefit of farmers. ASAP cost-shared with T’Boli for the services of US technical experts who assisted in the design and layout of the cannery and later on with the installation of the machinery for the canning lines. T’Boli, as a start up venture, provided an avenue for higher income to local farmers through contract growing schemes. It was also determined that there was significant employment generation potential should the processing plant succeeded.

A3b. Jackfruit

Toward the end of the project ASAP became aware of substantial processor demand for jackfruit as a dessert ingredient as well as a product for vacuum frying and canning as a vegetable. Another advantage was that the wood is an excellent source of cabinet quality lumber. Early on in ASAP (1993) a few pink-fleshed jackfruit were acquired by a participant of an ASAP sponsored visit to Thailand. These survived and are currently planted in Davao. A 1995 trip to Thailand, Malaysia and Singapore resulted in substantial new acquisitions of planting materials, including jackfruit. ASAP encountered dried jackfruit among the products for sale by Frieda’s

and Melissa's, leading distributors of exotic produce in America and took steps to introduce this product in the Philippines.

A4. Other Tree Crops

ASAP's work with tree crops was part of a strategy to find value in agricultural activities that could significantly contribute to raising incomes in the country side, as well as lay the ground for supplying the emerging mass markets in the growing urban centers of the Philippines. In the course of this activity we also looked at a number of other tree crops, especially some nut-bearing varieties.

A4a. Cashew

ASAP found the Department of Agriculture heavily invested in cashew as a crop in Palawan. Close to ten thousand hectares are reported to be planted to this tree on the island. At the request of the Department, a foreign expert was brought in to assess the state of the plantings, and the crop's prospects for expansion in the Philippines. The expert found a number of problems related to production, which was found to be only 600-800kgs per hectare per year. When multiplied by the average purchase price of the raw nuts for either Palawan or Guimaras, of around 12-14 pesos per kilogram it was very apparent that this was not a high value crop and not necessarily desirable as a small farmer crop.

As a result of this intervention, ASAP recommended a number of measures which if implemented at the field level could bring production up to 1000 kgs per hectare. Other measures, such as vertical integration through processing of raw nuts locally, offer some promise of raising the price paid to the farmer to around some 18-20 pesos per kilogram. Considering that there is a significant cost associated with growing cashews and considerable labor involved in harvesting or gathering them, our conclusion was that this is still not a sufficiently high return to warrant further promotion of this crop.

To avoid embarrassing the DA on this issue, the ASAP findings concerning the lack of suitability or profitability of cashew to the Philippines were diplomatically phrased and embedded in the consultant's report. It was our sincere hope that the report would be read, understood, and acted upon. Unfortunately, nothing of the sort happened and the Department went on to proclaim cashew as a banner crop for promotion to small farmers under its High Value Crops program in the course of 1995. Anticipating the end of its program, ASAP at this point challenged the economic viability of the crop openly and got the attention, through FRLD and several of its board members, of the High Value Crops task force at the DA. ASAP's findings were laid out before the task force and although the enthusiasm for cashew appears to have been moderated, this case illustrates the need for a crop related economic research and analysis unit in the DA to avoid these kind of decisions in the future.

A5. Vegetables

ASAP's approach to this sector took into account a number of factors that make it inherently different from the fruit sector. These factors include:

- Vegetables are short-cycle crops requiring intensive care and special handling in order to achieve optimum result. Entry and exit are therefore easier, and can be achieved in some cases in less than three months.
- There is very little processing activity going on which would allow farmers to obtain market security. Exceptions to this would be tomato farming under contract to tomato paste processors, and potato growing of Kennebec or Atlantic varieties for chipping.
- No significant frozen vegetable industry has emerged as it did in Taiwan, Thailand and China. This is perhaps best understood if one realizes that the industry in Asia is dominated by Chinese, and that the Philippines, due mainly to agrarian reforms, has not had conditions that favor the emergence of an agroprocessing sector. The Japanese are generally the end-buyers of frozen vegetables. The entrepreneurs serving them are generally Taiwanese and the Philippines is not perceived as a safe place by either group. This presents an important opportunity in this sector.

In many other areas, however, the situation of the vegetable industry and the fruit industry are alike. The lack of sizeable volumes precludes export marketing. The deficiencies in farm to market roads, transportation, and lack of suitable packaging materials are all disincentives to the development of this sector. The lack of cold chain is a significant problem in a country whose major marketing centers are all located in the tropical lowlands where daily temperatures well above 28 degrees centigrade. For example, during the months of June through September it is so hot that the normal ripening of tomatoes is impeded- they turn yellow rather than red- and some marketers have learned to carry them up to Baguio or to keep them in air conditioned warehouses to enhance their ripening. Technologically this entire sector is in its infancy.

In the vegetable sector ASAP undertook to work in a variety of areas. One of our basic premises was that the sector in and of itself cannot be developed without action along a series of lines simultaneously. These areas of action include the following: a) availability of seeds; b) intensification of applied research, especially trials of new varieties; c) introduction of precooling at point of harvest assembly, as well as washing, grading, sorting; d) use of refrigerated trucks; e) use of improved packaging materials; f) construction of better marketing facilities and provision of cold storage at these to maintain quality of products.

B. Availability of Seeds

Far more critical to the vegetable industry than to the fruit industry in the Philippines is the need for improved planting materials. Seed is a recurring need in the vegetable industry. Well into ASAP the DA and various of its agencies, particularly the BPI and its Plant Quarantine Division remained committed to a policy of development and use of national seeds, bred by

national researchers, for the nation's farmers. The main result of the policy has been to put the nation's horticulture at least 25 years behind its competitors in the Asian region. The consequence of this approach is low productivity in most crop areas. Another unintended consequence has been rampant seed smuggling and a disregard for Bureau of Plant Industry regulations. This endangers all agriculture in the country because of the risk of introduction of seed-borne diseases and pests from other countries.

In 1993 an attempt was made by the Department of Agriculture to promulgate an interpretation of the Seed Act of 1992 contained in a set of Implementing Rules and Regulations (IRR). This new interpretation would have made access to seeds even more restricted than existing rules. For example, one provision of the proposed rules stated that the country would prohibit the importation of seed of species for which there was a Philippine source. In practice this meant that if there is a variety of Philippine tomato, albeit a canning variety, that the importation of seed of beefsteak or cherry varieties of tomato, which are not produced in country, would be banned. What was especially appalling about the new law was that it paid no attention to the quality of seed, or to characteristics such as yield, quality, disease or insect resistance, but only to its nationality. This again is evidence of a striking innocence by Filipino policymakers about the requirements of agriculture, about the global nature of seed production itself, and tends to show an utter disregard for the interests of farmers and agribusinesses.

Progressive segments within the DA asked ASAP to help mobilize farmers in support of rewriting the proposed IRR, and ASAP undertook this work with the cooperation of leading agriculturalists, farmer leaders and like minded institutions such as the Center for Research and Communications. Based on feedback from these groups, recommendations from the market development team, and with the assistance of the policy advocacy team, an amended IRR was eventually signed which allows for more liberal importation of seed materials. The impact of this policy change on farmers' incomes by using new seed varieties was estimated at \$128 million. The change in the seed IRR also illustrates the synergy that existed between the two components of the project, with the market development team identifying the problem, the policy team analyzing the impact of the policy, and the joint teams working on an advocacy strategy for a new policy.

C. Intensification of Research Extension Activities

In addition to seed, a key need ASAP detected was the need to expose both government agricultural sector workers and farmers to comparative variety trials and varietale demonstration techniques. This perceived need led to collaboration with a number of private groups such as the Philippine Seed Importer's Association in carrying out trials and demonstrations on both government research stations and on private farms. These trials were designed to encourage the adoption of better seed and improved farming practices in the vegetable sector. ASAP also hired an experienced Filipino American horticulturalist with experience in new crops under the PROEXAG/EXITOS project to work with cooperating farmers, companies and institutions to assist in trials for a number of new vegetable varieties in the Philippines. The project introduced artichokes, radicchio, sugar snap peas and other crops and cultivars new to the Philippines in a

variety of locations. In many locations results were good and marketers demonstrated their interest in steady, consistent demand for these products.

Problems encountered included difficulty in obtaining reliable seed supplies and insecure market linkages due to the small scale of production and inability to deal directly with the world of specialized produce trading. ASAP did not have sufficient time to address these issues more effectively.

What ASAP learned from this experience was that introductions of new vegetable varieties have to go hand in hand with first, the establishment of seed supply, and second, with defined market links. Because purveyors of fancy vegetables are not in a position to drive to production centers to negotiate for supplies, much less to pick them up, inspect them, consolidate and transport these to Manila. These activities call for traders who specialize in each product, supplying farmers with the seed and other necessary inputs, and to organize the delivery themselves to those businesses serving the restaurant, supermarket, and hotel trade.

D. Involving the Private Sector

As part of its strategy of building private sector capabilities, ASAP undertook a series of activities in cooperation with the Philippine Seed Industry Association. These were designed to highlight the different varieties of seed available to farmers and to showcase differences in performance among various cultivars. Called "Seed Caravans", these events were in reality field trials of different horticultural crops and served as a vehicle for expanding the outreach of the seed industry to small farmers and to make them aware of the many opportunities available in growing different cultivars.

It was interesting to call the attention of farmers to the performance of some broccoli cultivars which were ready for harvest in only 58 days as opposed to 80 days for others. The farmer gains three weeks toward growing his next crop by using one of these short term varieties. Likewise it was interesting to see farmers note that one cultivar of Chinese cabbage stood out from all the others in terms of its resistance to soft rot under rainy conditions. The seed companies were able to directly access the small farmer also in a very efficient way, since hundreds and even thousands came to see for themselves the results of the trials. These events were very popular, indicating the high level of interest of small farmers in high-value agriculture. For example, a seed caravan held in Laguna in two days of May of 1994 was attended by over 900 farmers; one held over three days in November of 1995 in Bukidnon was attended by 730 farmers.

ASAP also worked with private sector firms to encourage the adoption of new seed varieties. ASAP cooperated with Pioneer Hi-Bred in bringing farmers to corn demonstration plots in Pangasinan. Farmers were able to see varieties of hybrid and open pollinated corn growing on demonstration plots with different levels of fertilizer. They were invited to attend explanations of the latest advances in corn technology which permits small farmers to achieve yields of up to four times the current national average of 1.7 mt per hectare. With ASAP

cooperation, Pioneer was able to bring over 200 farmers to see for themselves the benefits of upgrading technologically.

ASAP also cooperated with Allied Botanical, a Philippine seed company that represents Japanese and American seed companies, to carry out trials of vegetable varieties in cooperation with Benguet State University. Again, farmers were invited to a field day where the salient characteristics of the varieties were explained. A marketer serving the high class hotel and restaurant sector was also invited by ASAP to attend the field day and offered to make purchasing arrangements for the varieties demonstrated with interested traders.

ASAP assistance to Crop King, a Philippine company representing various US seed companies, is yet another example of leveraging the private sector to meet project objectives. The market development team helped Crop King import improved potato seed of varieties from the United States that would be suitable for processing. After two trips to the United States to meet seed potato dealers, Crop King purchased \$30,000 worth of seed potato to be sold to local growers. These trips also included Philippine researchers and agriculture officials, so that they could observe the public/private effort in research and development by the U.S. potato seed industry. Initial yields from these new varieties were very good, doubling the yield per hectare for some farmers to 28 tons.

At the conclusion of ASAP another request to import 7 containerloads (approximately \$50,000) of potato seed from the United States was pending. If potato seed import becomes a normal occurrence, then there is an opportunity to develop at least 3000 hectares of additional potato acreage for processing and will quite frankly result in the development of a new industry in the country comprised of those who grow the potatoes and the workers employed in peeling, cutting and frying the chips. In any case, the liberalization of planting materials is not yet complete. Without adequate access to planting materials, it is difficult to see how Philippine agriculture will be able to compete against imported products in a post-GATT environment, much less catch-up enough to exploit the opportunities available in the export markets around it..

E. Commodity-Specific Actions

E1. Onions

The Philippines produces onion approximately three months of the year on the island of Luzon and stores much of the crop for marketing in the non-harvest months of May through January. During the non-harvest months there is a gradual escalation of the cost of onions so that as the year progresses they become much more expensive. This culminates eventually in their selling at 4-5 times their price at harvest time. This system is profitable for those who control refrigerated storage space and can market onions throughout the year but is obviously not good for consumers. It is also not particularly likely to be able to survive import liberalization after the implementation of the GATT agreement.

Assistance was given to the onion growing sector in the following areas: a) assistance in improving cultural practices in order to raise productivity; b) assistance in conducting variety

trials to determine the best varieties for growing in the Philippines. c) assistance in conducting production trials in new areas of the Philippines (Mindanao); d) assistance in improving postharvest handling practices to meet US grade standards; e) assistance to UPLBs department of crop science in providing the procedures for analytically determining the pungency of an onion; and f) linkages to Japanese and American marketing agents.

At the request of the National Onion Growers Marketing Cooperative (NOGROCOMA), a US expert, Dr Mark Gaskell, was brought in to assess the state of the onion industry. He made a number of recommendations involving trial plantings of different varieties, for the first-ever trial plantings in Mindanao, and for trial exports of red and yellow sweet onions to the US. As with all other ASAP consultants, he was teamed with a horticulturalist from the University to ensure that there would be sustainability of this effort.

One of the more exciting results of the onion work carried out by ASAP was that production was successful in Mindanao as late as August. This is significant because we created a new source of supply for that island, heretofore dependent on imports from Luzon, and we also ensured a longer production season for the Philippines. Obviously this work has possible consequences for the onion trade, especially those engaged in storing onions. However NOGROCOMA, the main producer and trader of onions in the Philippines, was a partner in the trials and they invested their resources to help develop the new growing areas in Mindanao. This way the new onion growers of Mindanao will be linked with the key Luzon traders and marketers.

At the close of ASAP it remained to be seen whether trial onion shipments to the US would occur as had originally been planned for early 1996. The Philippines can compete in sweet and red onions in certain West Coast markets. The market development team linked NOGROCOMA to De Bruyn Produce, the largest marketer of onions in the US and were laying the groundwork for trial shipments. ASAP also obtained expressions of interest in the red shallots from Frieda's, a leading US distributor of exotic fruits and vegetables. We also enhanced the market linkages to Japan by introducing NOGROCOMA to a large independent importer who is supplying the emerging food service industry in Japan.

E2. Tomatoes

ASAP interventions in this area of horticultural endeavor centered around the following: a) assistance in broadening the supply of planting materials available; b) identification of market windows in Hong Kong, Singapore and the Russian Far East; c) assistance in making market linkages in Hong Kong and to procurers for US military bases in Korea; and d) cooperation with a new tomato paste operation located in Bukidnon in training their contract farmers.

ASAP had identified a foreign seed firm with expertise in the breeding of tomatoes for resistance to bacterial, wilt the main disease of tomatoes in the Philippines. In cooperation with a local company, this firm entered into discussions with the University of the Philippines at Los Banos for a joint venture to begin producing improved tomato seed in the country.

By the conclusion of the project trial shipments of cooking tomatoes have been made to Hong Kong. Trial shipments of tomatoes also got under way to US military bases in Korea as a result of ASAP-led market linkages between Global Sourcing of Oakland, California and Bukidnon Resources Corporation Inc (BRCI). This relationship offers provides Filipino producers with the opportunity to enter the beefsteak and cherry tomato markets.

Another initiative was a collaboration between ASAP and BRCI in the training of small farmers in Bukidnon in the growing of tomatoes for delivery to BRCI's tomato paste cannery. As in the case of the pineapple cannery, ASAP considers contract farming a desirable way to ensure the emergence of modern agriculture with price stability for the farmer. Among other achievements in the joint collaboration were the preparation of easy to read primers on the growing if tomatoes in Tagalog and Cebuano languages. The result of this effort was to help corn farmers make the transition to tomato growing, thus increasing their income from this high value crop.

E3. Melons and Watermelons

ASAP's first exploration of the Hong Kong market revealed that cantaloupe, honeydew and watermelon were commanding very high prices during the months of January-May. This corresponded to an ideal growing season for melons in Luzon. During this period the market is mainly supplied from Australia by air and from Mexico by sea. Given its nearness to Hong Kong, its low labor costs, and its dry sunny weather at that time of year, we determined that there was a tremendous competitive advantage over the main producers to supply this market. However when ASAP sought to capitalize on this opportunity, it came up against the constraints and the lack of actualization which have effectively crippled the production abilities of the nation's agriculture.

It was not until the 1995-1996 season that ASAP was able to put together a group of medium sized entrepreneurs interested in venturing into export. The decision was made to grow honeydew, because this crop offered the best potential for resisting transport and handling damage. A systematic plan was drawn-up, wherein ASAP would contract the technical services of an expert to provide guidance in the growing, harvesting and packing of the crop, offer help in the selection of varieties that were likely to meet the size requirements of the Hong Kong market, provide sample boxes to manufacturers and coordinate the manufacture of the same, and to assume a role in coordinating the transport and shipment of the first loads of fruit to the market in Hong Kong. Unfortunately ASAP funds were exhausted before this project could be implemented, and therefore the key actions, which centered around the activities of the expert technician, could not be arranged for in a timely manner with alternate funding.

There is hope that an American melon producing and marketing firm, Lindemann Produce, will still take the necessary measures to help bring about a melon production venture in the Philippines in the 1996-1997 season. They made an ASAP sponsored visit to the Philippines, and also went to Hong Kong (where ASAP introduced them to major melon importers), in 1994. They were impressed with the production potential of the Philippines, and want to pursue it.

They have been linked to ASAP marketing advisors in the Philippines for follow-up on a private basis.

F. Conclusions

With very few exceptions, the scale of fruit raising in the Philippines is so small, and the volumes so atomized, that problems in handling and marketing result that are often misinterpreted to mean that there is insufficient demand for a given product. Nothing could be further from the truth. What is happening is a reflection of the inefficiency inherent in trying to inexpensively pack, grade, assemble, transport and market small, fragmented, quantities of a given product. Supply is not sufficient to warrant interested parties in entering the market or in improving the infrastructure necessary for that crop to be efficiently distributed and marketed. The only solution is to move to increase supplies to a degree that will permit these necessary investments in distribution and marketing infrastructure to be made. It does not make sense to build the infrastructure first, in the absence of a resource base to support it. Rather the resource base should be built first with the required infrastructure to be built shortly thereafter. Because there is a time lag between the establishment of crops and their coming into bearing, there is time for an orderly installation of the supporting infrastructure.

In the area of marketing it was determined that the local ASAP marketing staff was unfamiliar with trends and opportunities in nearby countries so we took immediate steps to address this. ASAP was fortunate to have the support and understanding of the USAID Project Officer, although the FSNs working under him at first regarded this essential training process with extreme skepticism. It was amazing to note that although hundreds of thousands of Filipinos visit Hong Kong yearly, few if any understand the wholesale markets there. ASAP was a pioneer by introducing many Filipinos directly to Hong Kong wholesalers and by letting them see, first hand, the potential that Filipino products had in that thriving market. In this respect part of the intangible legacy of ASAP is to have helped many people gain a first hand awareness of markets in the region and to understand the marketing issues and challenges that face the Philippines. It was gratifying, by project's end, to see the ASAP advisors taking the initiative to call foreign buyers of fruits and vegetables and arrange for products to be shipped there for marketing. One can conclude that a key aspect of the ASAP project, market awareness and access, has been successfully sustained in the private sector.

Overall, those who worked on ASAP feel that the key challenge in the Philippines is now to aggregate production of specific crops and products in such a way as to have the volumes of product that make it feasible to invest in the required handling, storage, packing and packaging, transport and distribution of product. By and large the country has yet to come up with nationally integrated systems for the production or distribution of most fruits and vegetables. It is our conviction that this is a necessary task of vital importance for the country's food supply and for the welfare of farmers and consumers alike. It should be given priority by those departments involved with agriculture, starting with the DA, but including all those other departments holding pieces of the fragmented agricultural portfolio.

G. Floriculture

The Philippine ornamental plant sector is quickly being recognized as one of the Philippines' sunshine industries due to the tremendous growth in domestic and export demand over the past ten years in cutflowers and ornamental plants. In 1992, the Department of Agriculture included cutflowers in its list of 10 priority commodities for development, allotting P423.4 million for its four-year Cutflower Industry Development Plan (CIDP).

Recognizing the strong export potential of cutflowers, the ASAP market development team promoted private sector involvement in cutflower production through several large trade shows made available to cooperatives and agribusinesses on a cost-sharing basis. The project also provided training for growers to maximize cutflower productivity and output as well as several international study tours and trade missions.

ASAP and the Foundation for Resource Linkage and Development, Inc. (FRLD) have provided technical assistance and training to industry participants particularly in the culture, harvesting, postharvesting and marketing of cutflowers and foliage on a cost-sharing basis to improve the industry's competitiveness in the global market. These services included:

- One-on-one consultations with growers by international and local experts
- Training to cutflower cooperatives and grower associations
- Trade missions to the United States and other countries
- Dissemination of technical and market information on domestic and export opportunities
- Provision of technical books and other publications to federations, associations and other key industry players

Likewise, ASAP's Market Development Team and FRLD have facilitated market linkages between growers and buyers, and provided international exposure for Philippine cutflowers and ornamental plants. To promote a healthy investment environment for the sector, ASAP's policy team worked with the University of the Philippines Los Baños Foundation Inc.-Agricultural Policy Research and Assistance Program (UPLBFI-APRAAP) and FRLD to conduct policy research and advocacy activities to address constraints such as an overly protective seed industry and high tariffs for planting and packaging materials.

Particular interventions that were found to be cost-effective included outbound trade missions, study tours, technology transfer training, foreign expert's visits, local trade fairs, policy advocacy activities and book donations. ASAP's strategy of using cooperatives as target beneficiaries was found to be cost-effective in terms of better dissemination of information and planting materials which minimized administrative costs. Through outbound trade missions, representatives of the Philippine floral industry tapped new sources of planting materials, nursery

supplies and equipment from Hawaii, California, Florida, the Netherlands, New Zealand, Malaysia and Hong Kong.

In total, ASAP sponsored 90 special activities and numerous training related to the cutflower and ornamental plant subsectors. ASAP conducted the following support activities in conjunction with FRLD, UPLB, the Philippine Statistical Association, private organizations such as the Orchid Society of Davao and the Philippines Federation of Cutflower Growers that benefitted nearly 4,000 participants:

- 9 trade missions and study tours to the United States, Hong Kong, New Zealand, Malaysia, and the Netherlands
- 1 in-bound mission composed of Hawaiian flower growers
- 4 local trade missions that enhanced the knowledge of participants on updated technologies for production and postharvest handling
- 9 market encounters that included training seminars and trade fairs
- Foreign floriculture expert visits and consultations with local industry players
- 34 technology transfer seminars
- 3 national trade events on a cost-sharing basis with private cutflower associations
- Technical assistance through one-on-one consultations and field/farm visits of 21 expatriate consultants
- 17 market linkages between growers and buyers of plant materials and cutflowers
- A survey of 163 florists in Metro Manila and 160 cutflower growers, the results of which were published in “Agstat View: Ventures”
- Generation of a data bank on 65 cutflower suppliers/growers and 15 cutflower buyers through the MARTLINK Centers on-line MIMS
- International promotion and market information assistance through an Agribusiness Promotion Center at the Ninoy Aquino International Airport
- Publication of “Cutflowers: Marketing Systems in Major Production and Demand Areas in the Philippines” by FRLD;
- Donation of 473 books to 9 cutflower cooperatives and the Department of Agriculture

In addition to the training and market encounter-based activities ASAP also conducted several policy-related activities in support of the cutflower industry:

- 2 policy studies, one on the impact of government regulations on seeds and planting materials on the horticulture industry, and the other on the impact of the packaging industry on Philippine agribusiness enterprises including public consultations on the further reduction of tariffs on packaging materials
- A policy study to streamline quarantine procedures for seeds and planting materials
- Technical assistance to the DA's PAAO in the conduct of policy analysis
- Generation of a databank on legislative bills affecting the floriculture industry (4 national, 25 local bills)
- Networking of 4 House bills to the cutflower industry through linkages with the legislative and executive bodies

A mid-project evaluation of the sector concluded that ASAP's assistance increased the sales volume of cutflowers and ornamentals of evaluated firms and cooperatives from 60% up to 650% due to area expansion, increased production and adoption of new crops and varieties. From the 1990-91 year to 1992-93 growing season, average cutflower production area increased by 8.3% to 906 hectares. With the exception of one group, dendrobium growers receiving ASAP assistance increased average production and sales from 38 dozen/week in 1991 to 312 dozen/week in 1994 after switching to superior varieties. Prices also increased from P60-90/dozen to P80-150/dozen due to the use of improved varieties. Gross sales for a sample group ranged from P51,000 to P2.6M over the same period.

The volume and sales of dried flower production also increased due to new varieties under production, and prices improved following the adoption of improved preservation techniques. Gross sales improved substantially following several seminars on drying technologies. Gross sales for a sample group ranged from P5000/month to P15,000/month. One member of the Flora Filipina Association reported export transactions of P317,000 following the adoption of improved drying techniques.

H. Feed/Livestock

The activities conducted by the ASAP project that supported the Feed and Livestock sector of the Philippines included: support for the formation of a feed/livestock trade association; assistance with formulation of improved feed composition using locally available products; improving the genetic composition of the Philippine beef herd through the importation of improved varieties of cattle and through instruction in artificial insemination techniques; assistance to the dairy industry in improving feed rations and providing assistance in dairy product processing; and assistance to the meat processing industry by providing avenues to acquire new processing techniques and technologies and improve production quality. Assistance

to this subsector is consistent with the GOP's Key Livestock Development Program which is targeting 38 provinces that will be instrumental in making the Philippines self-sufficient in beef production.

Our strategy to assist this subsector was similar to that used in other subsectors: providing technical assistance, training and policy analysis and advocacy activities to improve the productivity, market understanding and policy environment for entrepreneurs investing or working in the subsector. Some examples of the activities provided and their impact are given below.

ASAP assistance supported the formation of the Federation of Cattle Raisers Associations of the Philippines (FCRAP), a national federation that represents beef and dairy producers. Its primary goals are to upgrade the national herd and improve animal genetics. ASAP supported the organization of artificial insemination training for key members of this association, twice supported national beef congresses by supplying training and technical assistance services, and assisted the group during trade missions to the United States where they served as advisors to the GOP in purchasing large numbers of improved breeding cattle. The project also conducted several subsectoral studies in livestock production and in the liberalization of the feed sector, a protected sector that is a principal contributor to the non-competitiveness of the beef/livestock sector.

Assistance provided through the project involved the expertise of many US-based trade associations and agribusiness entities. Included in this group is: artificial insemination training and equipment supplied by World Wide Sires, the US Dairy Genetics Council, and the American Breeders Service; improved breeding cattle provided with the assistance of the Texas Department of Agriculture, the American Brahmin Association, Carey Cattle, Diamond T Ranch, HK Cattle, and J Bar S Cattle Service, Inc.; and equipment and processing technology through Koch Supplies, Land O'Lakes, Inc., Equipment Specialists, and Institute of Food Technologists.

Another example of providing assistance to this subsector was a collaborative effort that the project undertook with Pioneer Seed Company to promote the production of corn silage as a high value feed product for cattle. ASAP assisted Pioneer by supporting a number of training activities for small farmer cooperatives where the concept of silage feed was presented. This technology provides farmers with a new high value agriculture product and a source of improved feed for livestock.

Analyses conducted on the livestock market, particularly pork and beef, demonstrated that there was potential for improving the efficiency of the market system by focusing beef processing closer to the areas of production. Currently much of the beef and pork consumed in the largest market in the country, Manila, is shipped live and processed at the point of sale. This system results in inefficiencies including losses during shipping, quarantines, and disposal of renders after slaughter. The project recommended the creation of more meat processing in the provinces, particularly in Mindanao, and the shipment of frozen, refrigerated or vacupacked carcasses to the major domestic and export markets. This opportunity still remains largely untapped and should be pursued.

ANNEX B
POLICY ANALYSIS AND ADVOCACY TEAM LEADER REPORT

The ASAP policy team's assistance to the Government in implementing policy reforms in the agribusiness sector consisted of the provision of technical policy assistance in the conduct of studies, services, and advocacy activities. Through the conduct of policy studies, policy measures that would encourage private sector investments and sustained growth in agriculture were identified. These studies focused on the policy constraints in the feed and livestock sector, the leading sector in the agribusiness system, and on policy measures that result in lowered production and marketing costs, reduced government regulation of private agribusiness, and more efficient government implementation of the agrarian reform and agricultural support programs.

From August 1992 to December 1995, a total of 47 policy studies and reports were completed, the majority of which were conducted during the first phase of the project. From these studies emerged a set of key policy recommendations for achieving private-sector led and broad-based growth in the agribusiness sector. This set of key policy recommendations formed the foundation for the policy team's second phase program of systematic communication and information dissemination for policy reforms in agribusiness. Under a vigorous advocacy campaign, the team was able to enrich the policy debate between and among policy makers and the general public, assist government and the private sector advocate for specific positions, forge consensus on specific policy measures, and help implement the chosen policy options.

In the course of the project life, the team's policy analysis and advocacy efforts had been instrumental in the following areas:

- Building public consensus and support for the Philippines' accession to the WTO
- Improving the policy environment conducive to sustained private sector investment in agribusiness
- Expanding support services for the agribusiness system
- Increasing private sector participation in the policy reform process

Building Public Consensus and Support for the Philippines' Accession to the WTO
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The policy team played a crucial role in supporting the government's advocacy program for the ratification of GATT Uruguay Round Final Act (URFA). The team developed and executed a Strategic Action Plan to support the Department of Agriculture's advocacy activities. This plan had the following components:

- **GATT Orientation Phase.** A massive information campaign on the GATT, particularly on the Agreement on Agriculture, was undertaken to enhance awareness and understanding of the pertinent issues.

- **GATT Consultation Phase.** A series of consultative meetings with the various agriculture groups, affected industries, and other public and private sector groups were organized and supported by the ASAP General Contractor, Subcontractors, and Grantees. In these consultative meetings, presentations were made on the impact of the GATT and how certain policy and assistance measures can be drafted and submitted to the Philippine Legislature to mitigate GATT's temporary adverse effects, thus strengthening the country's ability to maximize its net gains from the Agreement.
- **GATT Rallying Phase.** A series of well-executed advocacy events were organized and managed to generate support for proposed policy and support measures for dealing with the impact of the GATT, solicit resolutions of support from agricultural groups and affected industries for these proposed measures, and provide critical analysis and data to Government advocates of the ratification.

In support of the GATT Strategic Action Plan, technical analyses were conducted on market access opportunities for the Philippines resulting from the Agreement, the agribusiness sector's competitiveness in emerging new markets, the impacts on key traditional Philippine crops and on the welfare of the country's farmers, and the effect on export revenues of rejecting or delaying the ratification of the Agreement. The team prepared GATT primers, presentation materials, briefing papers, and other advocacy paraphernalia. As part of the consultation process, the team managed advocacy events on behalf of the DA such as the regional consultation on GATT and its impacts on Philippine agriculture, and industry briefings, seminars, and conferences with various private and public sector groups. The team worked with two ASAP grantees, the Foundation for Rural Linkage and Development and the University of the Philippines at Los Baños.

The GATT Ratification as a Catalyst for Internal Policy Reforms

The Treaty was ratified by the Philippine Senate on December 14, 1994. With this ratification, the prospect for a vigorous and broad-based growth of the Philippine agribusiness system had never been as bright. The Senate action ensured the continuation of the Philippines' membership to the World Trade Organization or WTO (previously known as the GATT) which provides Most-Favored-Nation status to the country as well as enforces rules and regulations in the conduct of world trade in merchandise, including farm products, and services. Included in the package of services this organization would accord the country are the reductions, amounting to as much as 33 percent, in agricultural tariff rates by WTO member countries. All these changes provide a strong signal for the private sector to invest in agribusiness.

The ratification of the URFA serves as a catalyst for internal policy reform within the Philippines' agribusiness system. The implementation of the agreement includes the lifting of all quantitative restrictions on imported agricultural products, with the exception of rice, and the conversion of such restrictions into their tariff rate equivalents. Such products include corn, coffee, onions, garlic, potatoes, cabbage, swine and pork, poultry, beef, and sugar.

In the outpouring of concerns by various sectors during the GATT ratification debate and consultations, a set of policy reform and infrastructure support measures were drawn-up and

agreed upon by both the Legislative and Executive branches of Government. This was referred to as the GATT Action Plan. Thus, the agricultural sector became the key beneficiary to billions of pesos to finance public sector infrastructure investments aimed at increasing its productivity. Competitiveness enhancing measures such as, among other things, the reduction of tariff protection on key agricultural production and marketing inputs such as seeds and planting materials and packaging materials, and the cost of money, as well as the simplification of government's regulatory powers over the private sector were made during the process. If implemented, these reforms are certain to empower the country's agribusiness system to become globally competitive.

Improving the Policy Environment Conducive to Sustained Private Sector Investment in Agribusiness

To help achieve the desired policy environment supportive of enhanced economic efficiency and international competitiveness, the policy team assisted both the government and private sector groups in identifying policy options, pushing for their adoption, and ensuring the implementation of the identified policy reform measures.

In the course of the team's work, notable gains in policy implementation were accomplished, including:

- Ensuring access to affordable and quality world-competitive seeds and planting materials
- Reducing tariff rates on agribusiness inputs
- Improving the collateral value of agricultural lands

Ensuring Access to Affordable and High Quality Seeds and Planting Materials

On 27 March 1993, Republic Act (RA) No. 7308, "An Act to Promote and Develop the Seed Industry in the Philippines and Create a National Seed Industry Council" was signed into law. An initial assessment, however, indicated that the RA and its initial implementing guidelines were too restrictive, prohibiting farmers and agribusiness entrepreneurs' access to world-quality seed varieties.

With the University of the Philippines at Los Baños, an ASAP-grantee, the team prepared an in-depth analysis of the provisions of the RA and presented these findings in a multi-sectoral workshop on "Ensuring the Sustainable Growth of the Horticulture Industry." A series of DA private sector dialogues and consultations were also organized to solicit the views of farmers and other seed users, and most especially, the members of the seed industry—the intended beneficiaries of the law. In all fora, producers and users of seeds lobbied for:

- Strong private sector representation in seed policy making
- Open access to all species/varieties at reasonable costs, subject to normal quarantine procedures
- Speedy and least costly procedures for imports and exports

- Entry of foreign firms to help develop the seed industry

To generate awareness on the impact of the RA, a seed caravan was organized by the ASAP General Contractor (GC), in collaboration with the Philippine Seed Industry Association. This activity increased the awareness among farmer-participants of new, high-quality, seed varieties, and re-oriented the seed industry away from trade protectionism.

A media campaign was also organized by the GC. The team supported this campaign by providing technical material and information for the preparation of news articles. This media campaign, combined with the continuous process of dialoguing with affected sectors, generated expressions of support from private sector groups, academia, and the legislature. Such expressions of support included the following:

- National Agricultural and Fishery Council Resolution “*Adopting the results of the horticulture workshop and calling for a seed act that is more flexible and supportive of internationally competitive and domestically efficient horticulture industry.*”
- Letter of peasant sector representative Leonardo Montemayor to DA Secretary Robert Sebastian presenting his comments on the Seed Act’s Implementing Rules and Regulations (IRR) and calling for a more liberal approach to seed sourcing, easier access to foreign genetic material and technology, additional incentives for the production and dissemination of foundation and breeder seeds, and a more market-oriented seed program.
- Passing of Senate Resolution No. 621 authored by Senator Butz Aquino, entitled “*Resolution directing the Committee on Agriculture and Food to Review, in aid of Legislation RA 7308, otherwise known as the Seed Industry Development Act of 1992, with the end-view of further enhancing the Seed Industry of the Philippines to generate export earnings for the country.*”

With the strong lobbying for a re-draft of the previous implementing guidelines, a working group was created by Department of Agriculture to refine the Seed Act’s Implementing Rules and Regulations (IRRs). The policy team assisted in re-drafting of the IRRs of the Act. The re-draft incorporated the concerns of both seed users and producers and provided for the development of the domestic seed industry on the basis of eased restrictions to ensure improved access to genetic materials at affordable prices and investment incentives to bring down costs in seed growing. This re-draft was issued as **Administrative Order No. 3**.

Reducing Tariff Rates on Agribusiness Inputs

A key component in the Social Contract forged during the GATT ratification debate is for Government to provide the agriculture sector with the means to make it competitive in world markets. In the past consultative dialogues organized by the team, and as repeatedly emphasized during the GATT ratification debates, farmers and agribusiness entrepreneurs argued for the immediate reduction of tariff rates on critical production and marketing inputs. Production inputs included veterinary medicaments, biologics, and feed additives, fertilizer, pesticides and herbicides, irrigation equipment, and agricultural machinery while processing inputs included machinery and refrigeration equipment. Inputs to the efficient marketing of agriculture and agri-based products included various packaging materials, and vehicles and transport equipment. Specifically, various farmers organizations, trade associations, individual farmers and agribusiness entrepreneurs recommended that tariffs on these inputs be immediately lowered to a range of from 3 to 10 percent.

It is interesting to note that while before, these entities in the agribusiness system frowned and resisted tariff reductions in general, they now, as a result of the advocacy efforts, fought for deep and immediate cuts in tariff protection.

The Department of Agriculture (DA) supported and endorsed to the Tariff and Related Matters (TRM) Committee, the trade policy making body of the Executive branch of Government, the private sector position.³ During the deliberations on the directions of the Government's tariff reform program, the DA had specifically asked for the implementation of a sector-neutral tariff policy and called for the reduction of tariffs on industrial products used as inputs to agriculture. With technical inputs from the policy team, the DA argued that high tariff protection on agricultural inputs raises the prices of agribusiness products, undermines international competitiveness, and distorts allocation of resources away from products in which the country has natural comparative advantage. In particular, the growth of the country's tropical fruits and vegetables sector has suffered from high post-harvest losses due to high cost of packing and packaging materials, refrigeration equipment, transport vehicles and equipment, agricultural machineries and equipment, fertilizers and agro-chemicals. The possible downstream industries of the sector have remained stagnant, if not non-existent, because of the high cost of primary products and unreliable supply and quality thereof.

The DA's position, however, was over-ruled by majority of the members of the TRM. The petro-chemical, automotive, and consumer durable industries were the major forces and constituencies fighting for protection. The petro-chemical industry had been identified as a flagship program of the Ramos administration, thus, the tariff protection. The quantitative restrictions on automotive and consumer durables were tariffed and thus, again justifying an increase in tariffs. Increased tariff protection for the above industries therefore, became the position of the TRM Committee.

By mid-1995, a draft Executive Order (EO) prescribing the tariff rates on industrial products (Chapters 25 to 97 of the Tariff and Customs Code of the Philippines), which included agricultural inputs had been prepared by the TRM. This EO, although reducing the tariff rates on agricultural inputs, was not at levels required by the agriculture sector and recommended by various farmer groups and agribusiness trade organizations. Moreover, these cuts were not forthcoming until after 1998. In addition, there were exceptions to the tariff cutting exercise in three important sectors deemed to be hold-outs of protectionism in the Philippines: petro-chemical, automotive, and consumer durable industries. Tariff rates on the products of these industries were to be increased by the draft EO. In the case of the petro-chemical industry, increasing the tariff rates on polymers, inputs to making plastics, from 10 to 20 percent was part of the package of incentives provided by the government to entice a group of foreign investors to invest and develop the country's petro-chemical industry. As for the automotive and consumer durable industries, the higher rates converted non-tariff measures of protection into ordinary customs duties

Before the EO was signed by the President, the Department of Agriculture, with technical support from the team and financial support from the ASAP General Contractor, organized a series

³ The TRM's core group is composed of the Departments of Agriculture, Trade and Industry, Environment and Natural Resources, and Finance, the National Economic Development Authority, Tariff Commission, and Board of Investment. The DA has one vote on this committee.

of consultations and strategy meetings with the private sector. It was during these consultations were the private sector organized themselves and formed the **Agribusiness Coalition**.

Recognizing the Coalition's potent force in influencing policy change, several operating units of ASAP, including the policy team, APRAAP, and FRLD, and GC Market Development team, provided technical assistance to the agribusiness coalition. This came in the form of technical analyses, the preparation of a primer and other advocacy materials, and the facilitation of strategy meetings and consultations, as well as briefings of key policy makers in both the legislative and executive branches of government.

On Industrial Products Used as Inputs to Agriculture

Executive Order 264 containing the tariff rates of industrial products for 1995 to 2000 was signed into law by the President in 22 July 1995. This EO provided tariff reductions on critical agricultural inputs (please see Table 1).

Table 1
Comparison of Tariff Rates of Major Agribusiness Inputs
Between Final and Draft EO 264
(in percent)

Agribusiness Inputs	Current EO 470	1995	1996	1997	1998	1999	2000
Fertilizer EO 264 Draft EO	15	7 15	7 15	7 10	3 7	3 7	3 3
Pesticides and Herbicides EO 264 Draft EO	10	4 10	4 10	4 10	3 3	3 3	3 3
Plastics and Plastic-based Packaging Materials EO 264 Draft EO	18	18 19	18 19	11 15	10 13	10 13	9 12
Chest-type freezers EO 264 Draft EO	30	40 60	10 30	10 30	10 30	10 20	10 20
Vehicles and Transport Equipment EO 264 Draft EO	34	23 34	17 27	17 27	15 26	15 26	12 20

While it would be impossible to directly measure impact of these achievements at this time, several indications of the possible impact at the firm, industry and economy-wide level can be presented. Thus,

- The reduction of tariffs on key agricultural inputs reduces the cost of production of agribusiness firms. The Philippine Food Processors and Exporters Organization (PHILFOODEX) claims that packaging materials constitute 30 percent of their costs. In particular, the tariff on plastics and plastics packaging materials will decline by 50 percent from the current 18 percent to 9 percent. Assuming a fixed coefficient technology and the 30 percent proportion of cost, this means a decline of some 15 percent in cost. If the cost of packaging declines, food processors are expected to reflect this in their output prices which, in turn, is expected to trigger higher demand for their products. In addition, there are downstream linkages between agro-processing and primary agriculture.

It must be noted that by preventing the rise in the tariff of petrochemical products, the economy was spared the additional burden of expensive plastic packaging materials. Rough calculations made by the policy team showed that agreeing to the proposal of the petrochemical industry to raise the tariff rates on petrochemical products (particularly polypropylene and polyethylene) which are used in the manufacture of plastic packaging materials to 20 percent until the year 2000 will cost the consumers and downstream industries some 1.8 billion pesos annually. It was also pointed out it would be cheaper for society to provide credit subsidies or tax incentives to the industry.

- PHILFOODEX notes that, as the cost of packaging materials decline, new products can be introduced. From the stand point of product mix, high cost of packaging materials encourages bulk-orientation. With lower cost of packaging materials value-adding through retail marketing will now be viable.
- The reduction in tariffs on packaging materials forces packaging industries to be less oligopolistic. In the face of competition from exports, packaging firms have to weigh between defending their profit shares or their market shares. As mentioned above, Mr. Sayo of PHILFOODEX observed that suppliers of flexible laminates, kraft paper bags and similar products have started reducing their selling prices even before the full implementation of the tariff reform program. As oligopolistic tendencies decline, product quality improves as competition grows.
- The tariff reform program also removes the duty-free incentives for exporting. Thus, the segmentation of domestic and export markets will be minimized. The removal of artificial barriers also removes incentives for enterprise strategic behavior that always works against the consumer.
- Cheaper packaging materials will mean better post-harvest handling. This will reduce post-harvest losses. United Nations studies have estimated that in underdeveloped countries, between 30 percent to 50 percent of food is lost due to poor packaging. In developed countries, however, this is only in the order of 5 to 10 percent.

On Seeds and Planting Material, and Animal Germplasm

As a result of previous advocacy activities, particularly the consultations on the Seed Act and the Seed Caravan, tariffs on seeds and planting materials were reduced from a range of 3 percent to 30 percent to 3 percent. In addition, those on animal semen and breeders were reduced to 3 percent. These reductions were provided for in Presidential **Executive Order 288** issued last 14 December 1995.

Improving the Collateral Value of Agricultural Lands

The ASAP-commissioned study on “Improving the Collateral Value of Agricultural Lands Covered by the Comprehensive Agrarian Reform Program (CARP)” recommended that the Land Bank of the Philippines (LBP) issue guarantees for loans covered by CARP. This and other recommendations were adopted by the Presidential Agrarian Reform Council chaired by President Ramos. Consequently, a **PHP100 million credit fund** to provide guarantee cover for loans with agricultural lands under CARP as collateral was created. This action is a major policy gain for Philippine agriculture and agricultural processing which have suffered significant cuts on production loans because of the uncertainty created by the implementation of the CARP.

This policy gain was achieved mainly through the advocacy efforts of the Cesar Virata Associates, with the support of the Management Association of the Philippines. It is important to note that the key advocate, Mr. Cesar Virata, is a financial and management adviser known and respected by the key players in institutions whose support necessary to the implementation of this policy reform. Such institutions include Bankers Association of the Philippines, Land Bank of the Philippines, and the Department of Agrarian Reform.

Expanding Support Services for the Agribusiness System

The nature of government support to the agribusiness sector has primarily been in the form of price supports and input subsidies. Not only are these support measures unsustainable, they also reach only less than ten percent of the country’s farming population. On the contrary, public infrastructure support for agriculture has failed to keep pace with the increasing demands for such services. Public investments in rural roads, sea and air port facilities, irrigation, and storage and post-harvest facilities, as well as expenditures for research and development have declined in recent years.

Limited budgetary resources need to be channeled into areas where these resources derive the highest possible returns—public support services for agribusiness. These services include infrastructure support, including but not limited to farm-to-market roads, irrigation support, and post harvest facilities. They also cover agricultural research, technology development and dissemination as well as support to develop genuine business cooperatives of agricultural producers. If these services are provided, then the market transactions costs to agribusiness producers would be greatly reduced.

As a result of the general concern that emerged during the GATT ratification consultations and debates, the Department of Agriculture became the recipient of an unprecedented **PHP23.8 Billion** budget for 1996. This represents an increase of nearly three times over its previous budgetary allocation.

A threat unfortunately surfaces. Given the state of preparedness of the DA and the executive branch as far as moving budgetary resources is concerned, it is likely that not only will these obligated funds be not fully utilized, the delivery of support services which such funds make available will also not be made in a timely and efficient manner. It is therefore important to provide technical assistance to the DA bureaucracy to improve its ability to make effective use of the human and financial resources available to it. Terms of References for these assistance have been prepared by the policy team. Although approved by both the DA and the USAID, these assistance packages were withdrawn as a result of the abrupt termination of the ASAP project.

Increasing Private Sector Participation in the Policy Reform Process

The policy team, in coordination with the GC market development team, FRLD, and the UP Los Baños Foundation, provided technical assistance to various private sector groups in the analysis of various issues constraining growth in their respective sectors. The policy team also assisted these groups in advocating for policy reforms to address such constraints. Specifically, the team provided assistance to various private sector groups in the following areas:

Management of advocacy events

The Philippine Seed Industry Association

The ASAP policy team provided technical assistance to the Philippine Seed Industry Association (PSIA) in organizing a workshop to assess the prospects for the development of the Philippine white potato industry in the light of the growing importation of semi-processed potatoes. The workshop highlighted the need for a more liberal import policy on seeds and planting materials by demonstrating how the local white potato industry's ability to meet the growing market demand for processing-type (both for snack food and french fries) have been hampered by the lack of appropriate seed varieties.

First of its kind for the industry, the workshop provided the forum for discussing the status, constraints and opportunities for developing the Philippine white potato industry and determining strategies that would help realize the potentials of the industry. The participants of the workshop included potato growers and traders from Benguet, Bukidnon, South Cotabato and Davao, representatives from fastfood chains, potato-based snack food manufacturers, as well as representatives from the government, academia and other institutions like the Centro Internacional de la Papa (CIP). Papers commissioned by the policy team, and prepared by the PSIA, and presented during the workshop assessed the production, market, and technological capabilities for enhancing the growth of and addressing the constraints faced by white potato producers.

National Farmers Supreme Council or SANDUGUAN

As part of the consultation phase of the GATT Strategic Action Plan, the policy team supported the SANDUGUAN in conducting a consultation/dialogue among their members around the country. During these consultations, presentations were made by the officers of the association on the content and scope of the GATT agreement and its impact on their farming systems and incomes. Recommendations to enable the agriculture sector to take full advantage, and mitigate the negative impacts of the GATT Agreement were made. These consultations resulted in the SANDUGUAN

becoming an advocate of the GATT ratification. Moreover, its recommendations became vital inputs in the GATT Master Plan, which both the Executive and Legislative branches adopted as the Government's program to make agriculture world competitive.

Philippine Food Exporters Confederation or PHILFOODEX

As one of the most affected sector by the appreciation of the Philippine peso, PHILFOODEX sought the assistance of the policy team in conducting a forum for discussing the issue and advocating for the implementation of a competitive exchange rate. This forum helped elevate the issue to the country's financial managers.

The team likewise assisted the PHILFOODEX in the conduct of consultative meetings to discuss various issues constraining the growth of the processed food sector and in advocating for policy reforms to address such constraints. These reforms include the lowering of tariffs on packaging material inputs and outputs, the rejection of the senate bill banning the importation of sugar, and the correcting of the bias of the value added tax system against agro-processing.

Provision of technical analyses, and strategy formulation and implementation services

The Agribusiness Coalition

ASAP supported the Agribusiness Coalition's agenda by providing technical analysis, strategy formulation and implementation support. The policy team prepared position papers, a primer on tariffs, and articles for the print media for the Coalition. In addition, strategy meetings were organized to assist the Coalition in understanding the trade policy reform process, particularly in identifying the stakeholders to the proposed reform and the major policy decision makers.

The Coalition therefore, worked hard to improve the design of the draft Executive Order (EO) and accelerate its implementation. They met with the highest powers in government, the President, Senate President, Speaker of the House, and Chairperson of the Senate Committee on Agriculture, to plead their case. They relayed their concerns with members of the TRM Committee. They used the media to get the sympathy of the broader public for an improved EO. They caused another round of public hearing on the proposed tariff reforms to occur; and they made sure that in that hearing which placed them against a well-financed lobby for the petro-chemical, automotive, and consumer durables sectors, that their concerns about the draft EO and their proposals for improving it were clearly presented.

In less than a month, President Ramos signed EO 264. It was a determined push for an outward-looking Philippine economy, and vote for economic efficiency and stronger economic growth. Above all, the signing of the EO and the process which it culminated marked a higher policy awareness in the general public and heralded the rise of a more participatory and productive policy formulation process in the Philippines; and to learn that even small farmers and agribusiness persons have been involved in this process, heretofore a province of big industrialists, is news.

ANNEX C
SUMMARY OF TRAINING ACTIVITIES

This annex is located in a separate file: ASAPAnxC_D_F_H.pdf

ANNEX D
SPECIAL ACTIVITY FUND SUMMARY

This annex is located in a separate file: [ASAPAnxC_D_F_H.pdf](#)

ANNEX E
SUMMARY OF ASAP STUDIES
(As of December 4, 1996)

I. Policy Studies

- 1.01 - Liberalization as a Macro Policy Approach
By: Augusto de Leon, January 20, 1993
- 1.02 - Rethinking Grain Price Stabilization: The Philippine Case
By: Dr. James Roumasset, January 1993
- 1.03 - The Role of Government in Sustainable Agribusiness Growth
By: Dr. James Roumasset, September 1993
- 1.04 - An Evaluation of Project Self-Reliance (PSR) From the Perspective of Farmers and Farmers Cooperatives
By: Raul Montemayor, June 1993
- 1.05 - Follow-up Evaluation of Project Self-Reliance in Davao del Norte
By Raul Montemayor, May 1994
- 1.06 - Rural Roads Development: Current Status and Initiatives for the Department of Agriculture
By: Ramon Abracosa, February 19, 1993
- 1.07 - Issues and Options for a National Land Use Policy
By: Rolando Dy and Cid L. Terosa, March 10, 1993
- 1.08- The External Environmental Analyses of the Project Self-Reliance in Davao del Norte, Nueva Ecija and Tarlac
By: Raymundo Roberto and Ida Monzon, May 28, 1993
- 1.09 - The Comprehensive Agrarian Reform Program and the Collateral Value of Agricultural Lands
By: Basilio Estanislao and Gilberto M. Llanto, June 15, 1993
- 1.10 - Estimating Land Value Using the Linear Programming Method
By: R. Garrido, June 15, 1993
- 1.11 - The Philippine Horticulture Industry: Access to Seeds, Planting Materials and New Varieties
By: Rolando Dy, July 17, 1993
- 1.12 - Policy Options in the Philippine Corn Sector

- By: Dr. Robert Teh, Jr. and Dr. Jose Yorobe, July 29, 1993
- 1.13 - The Administration and Political Economy of Corn Pricing Policy
By: Dr. Alex Brillantes, August 23, 1993
- 1.14 - The Taxing Issue of the Philippine Value Added Tax: Its Impact on Agro-Processors
By: Dr. Rosario Manasan, August, 1994
- 1.15 - Survey of Policies Affecting Agribusiness
By: Beulah M. De La Pena, November 8, 1993
- 1.16 - The Impact of the Packaging Industry on Philippine Agribusiness
By: Emmanuel de Dios, November 12, 1993
- 1.17 - Framework for Issuance of Government Instruments as Collateral for Loans to Agricultural Land Owners
By: Gilberto Lianto
- 1.18 - Design of the Poverty-Targeted Food Subsidy Program in the Philippines
By: Arsenio Balicasan, February 10, 1994
- 1.19 - Alternative Public Investment Allocation Schemes for the Department of Agriculture
By: Epictetus Patalinghug, March 18, 1994
- 1.20 - Assessment of AGMARIS-Related Activities: Site Monitoring, Commodity Baskets and WNA Coverage of Marketing Costs
By: Dr. Merle R. Menegay, October 1993
- 1.21 - Prospects for Filipino Banana Exports: Market Trends and Policy
By: Martha Blaxall and Tom Lenaghan, June 1994
- 1.22 - The Effects of Alternative Corn Supply Policies on the Philippines' Corn and Livestock Markets (May 10, 1993)
By: Larry C. Morgan
- 1.23 - Economic Impact of GATT-Uruguay Round Agricultural Agreement on Philippine Agribusiness (May 23, 1993)
By: Larry C. Morgan
- 1.24 - Farm Enterprise Budget Study (December 1994)
By: Epictetus E. Patalinghug et.al.
- 1.25 - Costs, Returns, Profitability and the Need for Policy Reforms (January 1995)

- 1.26 - Industrial Use of Corn in the Philippines
- 1.30 - Agro-Processing Study
- 1.31 - The Uruguay Round's impact on Philippine Agribusiness Competitiveness: Fruits and Vegetables
By: Senen Bacani

II. Advocacy Studies

A. Policy Impact Conference Papers, 11-14 May 1993

- 2.01 Technological Potentials for Expanding Corn Production in the Philippines: Lessons Learned from other Developing Countries
By: Bruce Johnston, June 1993

Comparing the Corn Economies of the Philippines and Thailand (Paper provided as Annex to the main paper by Bruce Johnston on Corn Production and Technology)
By: Manuel Gaspay, 1993
- 2.02 - Macro Policy and International Trade Perspectives on the Agricultural Sector and Feed and Livestock Subsector in the Philippines
By: Romeo Bautista, June 1993
- 2.03 - Technological Potentials & Constraints in the Philippine Corn Feed Industry
By: Achilles Costales, May 1993
- 2.04 - Invigorating the Smallholder Livestock Industry in the Philippines
By: Leo Gonzales, 1993
- 2.05 - Rural Infrastructure in the Philippines and Options for Reducing Com/Livestock Marketing and Distributions Costs: International Comparative Perspective
By: Robert Rafloski, May 1993
- 2.06 - Philippine Rural Infrastructure and Options for Reducing Corn and Livestock Marketing and Distribution Costs
By: Roberto J. Garrido, 1993
- 2.07 - Philippine Development and the Livestock Sector
By: John Mellor, May 1993
- 2.08 - Livestock Development Scheme for Smallholders in Taiwan
By: Chui Shu-Yen, May 1993
- 2.09 - Livestock Development Potential in the Philippines: An International Perspective

By: Lovell Jarvis, May 1993

- 2.10 - Philippine Feed and Livestock Subsector: Leading Edge of Rural Development in the Next Decade, Volume I: Summary of Proceedings
- 2.11 - Philippine Feed and Livestock Subsector: Leading Edge of Rural Development in the next Decade, Volume II: Technical Papers

B. Others

- 2.12 - Development Potential of the Philippines' Horticulture Sector
By: Larry C. Morgan (Market Development)
- 2.13 - Reform and Revolution: A Century After
By: Alejo Villanueva, Jr., January 7, 1993

III. Proceedings of Consultations, Seminars, and Workshop and Other Papers

- 3.01 - Multi sectoral Consultations on Corn and Livestock Trade and Pricing Policies (January 19 to February 10, 1993)
- 3.02 - Ensuring the Sustainable Growth of the Horticulture Industry (August 6, 1993)
- 3.03 - Strategic Direction and Action Agenda for the Philippine White Potato Industry (November 11, 1993)
- 3.04 - Development of Statistical Tools for Monitoring and Analysis of Commodities: Selected Reports (no copy)
By: Rex Daly, November, 1992
- 3.05 - Assessment and Special Analysis of Selected Commodities: A Compilation
By: Rex Daly, November 1992
- 3.06 - Seizing the GATT Opportunities for Accelerated Philippine Agribusiness Growth
- 3.07 - Feeling the People's Pulse on GATT and Agriculture: An Interim Progress Report on the Joint Executive Legislative Consultative Caravan on GATT and Philippines Agriculture, July 1994
- 3.08 - Workshop Proceedings: DA-ASAP Complementmentation Workshop on Market Development in Support of the Medium Term Agricultural Development Plan Focusing on the Key Commercial Crops Development Program and the Medium Term Livestock Development Program (September 30 - October 2, 1993)
- 3.09 - GATT Consultative Caravan: An Information Campaign for Broad-based Participation in Policy Reform (30 May 1994 - 15 August 1994)

- 3.10 - FRLD GATT Consultation Series: A Private Sector-Organized Multi-Sectoral Policy Dialogue

IV. Market Development Papers

- 4.01 - Opportunities for Marketing Philippine Fresh Produce and Meats in the Hongkong Market
By: Ricardo Frohmader and Donald Taylor, 1993
- 4.02 - Horticulture Market Focus Strategy Study: Selected Fruits, Vegetables, Spices and Cutflowers
By: Raoul U. Stuart, 1993
- 4.03 - An In-Country Study to Evaluate the Philippine Fresh Potato Sector and the Status of the Philippine Processing Type of Potato (Executive Summary)
By: Roy E. Bosley, 1993
- 4.04 - Cashew Production and Processing in Guimaras and Palawan
By: Derek Bryant, May 1994
- 4.05 - Recommendations for Improving Onion Production in Selected Areas of the Philippines
By: Mark Gaskell, March 1994
- 4.06 - Market Opportunities for Durian and Mangosteen
By: Ricardo Frohmader, 1993
- 4.07 - Development Potential of the Philippines' Horticulture Sector
By: Larry C. Morgan
- 4.08 - Export Opportunities Symposium in the Asia Pacific Markets, June 1994
- Marketing Opportunities for Agricultural Products in South Korea, May 1993
 - Market Trends for Nata de Coco in Japan, March 1994
 - The Japanese Flower Market & the Philippine Floriculture Industry, March 1994
 - The Japanese Fresh Produce Industry, March 1994
 - Report on Foodex '94 and Wholesale Markets in Japan, March 1994
 - Report on the Philippine Food Selling Mission to Osaka, March 1994

- Assessment of Singapore as Market for Processed Fruits, March 1994
 - Report on the Food Selling Mission for South Korea, March 1994
 - Philippine Participation in Food and Hotel Asia '94 Singapore, April 1994
 - Report on the Philippine Food Mission to Guangdong, China, April 1994
 - Philippine Food Selling Mission to Hongkong, April 1994
 - Singapore Terminal Market Observations, April 1994
- 4.09 - Evaluation of ASAP Assistance to the Cutflower & Ornamental Plant Sector
By: Dr. Corazon T. Aragon, September 1994
- 4.10 - Gateway to Opportunity: SOCSARGEN Investors Promotional Package (includes description of 45 investment project opportunities)
- 4.11 - Market Development for Philippine Fruits
By: Ricardo Frohmader & Raoul U. Stuart
- 4.12- Market-led Growth Strategies for Beef & Dairy in the Philippines: The Role of the ASAP
By: Donald M. Taylor

V. ASAP Annual Work Plans/Accomplishment Reports

- 6.01- First Annual Workplan: July 1992 - June 1993
- 6.02 - First Quarterly Accomplishment Report: June 1 - August 31, 1992
- 6.03 - Second Quarterly Accomplishment Report: September 1 - December 31, 1992
- 6.04 - Third Quarterly Accomplishment Report: January 1 - March 31, 1993
- 6.05 - Fourth Quarterly Accomplishment Report: April 1 - June 30, 1993
- 6.06 - Highlights of the First Year of Implementation: July 1992 - June 1993
- 6.07 - Second Annual Workplan: July 1993 - June 1994
- 6.08 - First Quarterly Accomplishment Report (2nd Year): July 1 - September 30, 1993
- 6.09 - Second Quarterly Accomplishment Report (2nd Year): October 1 - December 31, 1993

- 6.10 - Overview of ASAP Activities: January - March 1994, (Third Quarterly Accomplishment Report (3rd Year): January 1 - March 31, 1994
- 6.11 - Overview of ASAP Activities: April - June 1994, (Fourth Quarterly Accomplishment Report (3rd Year): April I - June 30, 1994
- 6.12 - Building Sustainable Work Coalitions: Lessons from ASAP Experience
By: Allen Eisendrath & Robert Rabatsky
- 6.13 - Overview of ASAP Activities: July - September 1994, (First Quarterly Accomplishment Report (4th Year): July I - September 30, 1994)
- 6.14 - Overview of ASAP Activities: October - December 1994, (Second Quarterly Accomplishment Report (4th Year): October I - December 30, 1994)
- 6.15 - Selected Cases of ASAP Assistance to Associations/Individuals in Mindanao & Other Areas
- 6.16 - Integrated Final Year Work Plan (1995-1996)

VI. ASAP Training manuals

- 7.01 - Investor's Manual: Business Opportunities in Feedlot Operations Using Silage Technology
- 7.02 - Making Silage to Feed Cattle
- 7.03a - Asparagus Production - Establishing the Plantation (Module 1)
- 7.03b - Asparagus Production - Care and Management of Plantation (Module 2)
- 7.04 - Cashew Production and Management
- 7.05 - Training Manual for Peanut Production in the Philippines
- 7.06 - Onion Export Production Guide
- 7.07 - Guide to White Potato Production in the Philippines

VIII. Slide Sets (w/ TCSU)

- 8.01 - Feeding Silage to Your Cattle (66 color slides w/ accompanying tape) Proponent: Pioneer Hi-Bred Agricultural Technologies, Inc.
- 8.02 - New Vision for the Philippine Dairy Industry (80 color slides w/ accompanying tape)

Proponent: Philippine Dairy Corporation in Cooperation with Dairy Confederation of the Philippines, March 1993

8.03 - The Medium Term Agricultural Development Plan: Key Production Areas, Targets & Programs

- Overhead transparency set
- Slide set (60 color slides w/ accompanying tape)

Proponent: Department of Agriculture, November 1993

8.04 - Philippine Agribusiness Opportunities (A Presentation by Sec. Roberto S. Sebastian to the American Business Community (56 color slides)

Proponent: Department of Agriculture, November 1993

8.05 - Give-Me-Five (A promotional campaign to eat five servings of fruits and vegetables everyday, 51 color slides w/ accompanying tape)

Proponent: Department of Agriculture and National Nutrition Council, June 1994

VII. Brochures

9.01 - Primer on ASAP

9.02 - Cost Sharing Facility

9.03 - Consumer's Guide to Food Values of Fruits

9.04 - Consumer's Guide to Food Values of Vegetables

9.05 - Give-Me-Five: Better Health from Fruits and Vegetables

IX. Philippine Agribusiness Opportunities

Issue No. 1 (Jul 1994) - Nata de Coco Exports: Towards Zero Rejects

2 (Sep 1994) - Rice Farmers Go For Higher Incomes

3 (Nov 1994) - Coco Coir & Dust Raise Small Farmers' income

4 (Dec 1994) - Pera sa Patola

5 (Jan 1995) - Meat Processors' Coop Captures New Market

6 (Mar 1995) - Onion Growers Pioneer New Trail to Prosperity

7 (Apr 1995) - North Cotabato Farmers Turn Annatto into Major Money-maker

8 (May 1995) - Mindanao Mangoes Penetrate HK Market

9 (Jun 1995) - Bukidnon Firm and Farmers Team Up in World Class Tomato Enterprise

10 (Jul 1995) - Small Upland Farmers Venture Into Commercial Bell Pepper Farming

12 (Sep 1995) - Cebu Mango Firm Gets Large Slice of Export Market

ANNEX F
SUMMARY OF TRANSACTIONS FOR TRADE MISSIONS,
MARKET LINKAGES, AND TRADE FAIRS

This annex is located in a separate file: [ASAPAnxC_D_F_H.pdf](#)

ANNEX G
U.S. LINKAGES RESULTING FROM ASAP ACTIVITIES

U.S. Industry Liaison

Food Processing Machine & Supply Association-food processing equipment
National Food Processors Association-food processing equipment
Produce Marketing Association-fresh fruits and vegetables, postharvest handling, marketing, 5 a
Day program
Floral Marketing Association-fresh and cut flowers, ornamentals, marketing
United Fresh Fruits and Vegetables Association-fresh fruits and vegetables, congressional liaison
American Seed Trade Association-new seed varieties, seed company linkages to the Philippines
National Association of State Development Agencies-marketing tours to the Philippines for US-
based agriculture companies (equipment and services mainly)
National Cooperative Business Association-cooperative development, market outlets
American Frozen Food Institute-frozen food processing technology, equipment
Ohio Florists Association-cutflowers, ornamentals
Association of Specialty Cutflowers Growers-cutflowers
Pennsylvania Flower Growers-cutflowers, ornamentals
American Association of Meat Processors-meat processing equipment, technology
American Meat Institute-meat processing
Institute of Packaging Professionals-food processing and packaging technology
World Wide Sires- sales of genetic material, artificial insemination training
American Breeders Service- sales of genetic material, artificial insemination training
American Brahmin Association-sale of cattle, genetics, herd management
US Dairy Genetics Council-sale of genetics, herd management techniques, milk production
Red River Valley Potato Growers Association-sale of seed potato, production technology
Oregon Department of Agriculture-contacts with Oregon-based agribusinesses, sale of
agriculture inputs
Texas Department of Agriculture-cattle genetics, contacts with Texas-based agribusinesses
Minnesota Department of Trade and Economic Development-contacts with Minnesota-based
agribusinesses, sale of agriculture inputs
Florida Department of Economic Development-ditto with above
US-Asean Council-US agribusiness contacts

U.S. Businesses (illustrative list)

Carey Cattle
Diamond T Ranch
HK Cattle
J Bar S Cattle Service, Inc.
Bluebook
North American Publishing Company
Freida's Finest
Caterpillar

Burpee Seed
Gloeckner Seed
Bonanza Seed
Sunseeds
Lockhart Seed
Jacklin Seed
Womack Nursery Company
Koch Supplies
Land O'Lakes, Inc.
Genuardi Agriculture Foundation
Equipment Specialists
Institute of Food Technologists
Produce Business
Ball Publishing
Produce Reporter
The Packer
Biopack
Freeborn Foods Company
Daniels Food Equipment
Ryan Potato Company
Valley Potato Grower, Inc.

U.S. Universities

University of California/Davis-fresh fruits and vegetables, food processing, post harvest handling
University of Florida-fresh fruits and vegetables, coconut coir research
Iowa State University-coconut coir research
Georgia State University-onions
Idaho State University-potato varieties, seed potatoes, shipping
North Dakota State University-potato varieties, seed potatoes, processing technology
University of Minnesota-potato varieties, seed potatoes, processing technology
Ohio State University-fresh and cut flowers, ornamental plants
Purdue University-livestock
University of Hawaii-fresh and cut flowers (orchids particularly), ornamental plants
University of Texas-cattle genetics, onions
University of Nebraska-potato varieties

ANNEX H
POLICY AND MARKET DEVELOPMENT AND THE PRIVATE SECTOR

This annex is located in a separate file: [ASAPAnxC_D_F_H.pdf](#)

ANNEX I
ILLUSTRATIVE ASAP ACCOMPLISHMENTS AND NEW TECHNOLOGIES

New Technologies Introduced as a Result of ASAP

Many of these are not new technologies in the first world, but were newly introduced to the Philippines:

Refrigerated transport-introduced the concept of refrigerated (refer) transport and postharvest handling, resulting in adoption of some improved cold storage at marketing points, and adoption of refrigerated transport by at least one producer/marketer. Result was increased sales to Japan of ochra.

Conducting post harvest handling courses in the Philippines. With assistance of UC/Davis, the preeminent authority worldwide on this subject, PHH course was designed and delivered by four UC/Davis faculty members to Philippine agbusinesses and faculty of the Philippine Post Harvest Training and Research Center to over 145 participants. Subsequent courses delivered by PHTRC faculty, thus effectively institutionalizing state of the art PHH techniques to a local institution. Link between UC/Davis and PHTRC also established, for future trainings and technology transfers.

Researched chemical and structural characteristics of coconut coir to be used as a planting medium instead of peat. Peat supplies, a product of wetlands, is more and more difficult to find. Sales in Europe and the US exceed a billion dollars a year. Coir, a byproduct of the coconut industry, is very similar in structure and makeup to peat. In collaboration with Iowa State University and the University of Florida, ASAP conducted a study of its chemical and physical makeup, and made recommendations to the industry in the Philippines for processing coir to ensure a consistent standard. This is to prepare for the sale of coir to the horticulture industry of Europe and the United States.

The project introduced hot water treatment for scales and ants, and perforated plastic bagging of langsat, a tropical fruit. This ensured a high quality product for sale to domestic and Asian Rim markets.

The project also introduced intercropping of mangosteen and durian trees in banana plantations. These two fruit crops have the potential for high returns for small farmers. One disincentive of growing fruit trees is that it requires several years before the trees begin to produce commercial yields. By intercropping with bananas, the farmer is ensured a return from the banana crop until the fruit trees begin to produce.

ASAP brought a cattle expert to the Philippines to analyze the crops/plants available there that can be used for animal feed. He developed the first feed ration that was based entirely on local products for cattle, thus enabling small farmers to improve the diets of their herds, and ensuring higher rates of gain.

ASAP introduced the following new crops to the Philippines: artichoke, raspberry, radicchio, sugar snap peas, Brussel sprouts, mini squash, calla lilies, sandersonia. New cultivars of onions, potatoes, flowers, vegetables, and cattle were also introduced.

ASAP sponsored training courses in artificial insemination for Filipino cattle ranchers and breeders that were conducted by the American Breeder Service. The ABS contributed trainers' time and genetic materials for this training, while the project paid for their transportation and per diem.

Illustrative ASAP Accomplishments

Hawaiian Tropical Flower and Ornamental Plant Industry Conference, July 1992. Mission cost to project \$44,000, purchase of \$80,000 in planting material, with estimates for reorders of \$18,000.

Orchid Society of Davao Workshop. Provided 2 international resource speakers (one from Hawaii) at the cost of \$4,300 to the project. Workshop proceeds (registration fees) totaling \$10,500 to the Orchid Society were used for their future programming and other association activities.

Eleven Filipino participants attended the October, 1992 Produce Marketing Association convention in Denver, Colorado. As a result of the convention and subsequent marketing tour, these participants purchased \$23,000 in production and processing supplies from US dealers. Cost of the mission to the project totalled \$43,000 in registration fees and per diem, while participants paid for their own international airfare totalling \$18,000

In November 1992 the project supported a trade mission by representatives of 7 West Coast US firms in the food processing and retail business. The project provided logistical support, hotel and per diem, and made appointments with over 50 local business executives. Local companies were interested in purchasing processing equipment, processed foods, flowers, seeds and Christmas trees. In turn, the US companies brought samples of various processed food items to the US for exploratory marketing. At the same time, in another technical assistance and trade mission, eight Hawaiian cutflower growers came to the Philippines participated in a major flower show. The growers displayed samples, gave seminars, and visited production areas to provide advise. As a result of the visit, the growers sold over \$8,000 in plant varieties and established contacts for further orders.

As a result of a buying mission to the International Exposition of Food Processors in Chicago in February, 1993, \$79,000 in food processing equipment and packaging materials were purchased from US firms. In addition, market ties were established between one Filipino confectionary firm and a US wholesaler, resulting in an estimated \$29,000 in sales to the US.

In the first quarter of 1993, deals between the Cattle Raisers Multi-Purpose Cooperative in South Cotabato and US-based Pioneer/Ralton Purina companies were concluded where Purina and Pioneer jointly provided technology on cattle feeding and established pilot farms. Pioneer subsequently conducted training programs on the preparation of ilge Production and feeding and has been used as a model throughout the country.

A June 1993 sales mission to Hong Kong arranged by ASAP for cutflower and foliage producers from the Philippines resulted in sales contracts for 500 kilograms per week of lilies and cut foliage, and 1,000 dozen per week of chrysanthemums and roses.

Two trade missions to the US in June of 1993, to attend the Floral Marketing Association annual convention in Florida and to attend a bulb production and management training in Oregon, resulted in the purchase of over \$63,000 of supplies and production equipment.

Seed study estimated that only 11% of Filipino farmers had access to high quality seed before the adoption of the new Seed Act IRR. It is estimated that a 10% growth in the adoption of modern seed varieties would mean an additional 3.2 billion pesos (\$130 million) in agriculture value-added. The project then arranged for four members of the American Seed Trade Association to meet with key agribusinesses of the Philippines Seed Industry Association in September 1995. The ASTA members agreed to send PSIA vegetable and forage seeds so that trial plantings could be conducted.

In coordination with the Philippine Department of Agriculture, organized and supported a livestock buying mission to Texas and Hawaii during the month of February 1994 which initiated negotiations for over \$2 million in breeder cattle. In turn and in collaboration with the USDA Agriculture Attache, coordinated a visit by American Marketing Services of Hawaii to Cagayan de Oro to investigate further sales of breeding cattle.

As a result of a trade mission organized to visit the Foodex Japan in March 1994, orders for halo-halo in excess of \$27,000 per month were placed by Japanese buyers, with negotiations for further orders of processed yam and macapuno.

Beginning in early 1994, identified buyers and assisted with negotiations for sale of mangos between Davao del Sur and Cebu producers and Manila buyers. Before delivery, demonstrated the effect of hot water treatment of mangoes to producers. As a result of the treatment, buyers paid 5 pesos per kilo premium for the product.

In April 1994, imported over \$2,100 in raspberry and blackberry cuttings through the University of Idaho for use by cooperative farmers in Mindanao.

A second quarter 1994 assessment of the ASAP Project's work with the outflow sector in the Philippines found that the benefit to cost ratio to the sector was estimated to be 2, that employment in project-assisted firms increased 27%, that firms expanded their planted hectareage by 8%, and that capital investment by these firms increased by 34% or nearly \$1 million.

As a result of marketing linkages forged with Hong Kong buyers, Bali Fruits and Vegetables of Mindanao sold over \$80,000 worth of mangos and had commitments to deliver 2-3 shipments per week via air. Bukidnon Resource Company of Mindanao received a contract for a minimum order of 2 containers of fresh tomatoes per week beginning in the fourth quarter 1994 as a result of a successful trial shipment of 2 containers worth \$16,000. As a result of a processed product marketing tour to Hong Kong, Philippine exporters received orders to deliver \$364,000 worth of banana chips and were in the process of negotiating orders for papaya relish, mango juice and nata de coco.

As a result of trade mission to the International floriculture Show to Ohio and Hawaii in 3rd quarter 1994, group purchased \$47,000 of supplies in Ohio and Hawaii. In addition, one participant signed an agreement with a US flower grower, OPTIMARA, to become an exclusive dealer of their varieties of african violets in the Philippines.

Because of the contacts made during a marketing tour of US onion producing and processing facilities, a tentative marketing arrangement made between De Bryun of the US to purchase yellow onions during January-February from NOGROCOMA of the Philippines.

As a result of training in dried flower production in 3rd quarter 94, a Cagayan Valley cooperative sold over \$2 thousand in product to Taiwan. A secondary result of the training was the proper handling and disposal of some potentially harmful chemicals used in the process, hence reducing harmful effect of the process on workers and to the environment.

A short term consultancy held in the second quarter 1993 by a US potato expert determined that policy obstacles resulted in an insufficient supply of improved seed stock. Due to a 10 year ban on imports, only 5% of demand was being met by domestic seed producers. In addition, these restrictions kept out the most sought varieties that could be used in the potato processing industry. By allowing the importation of improved varieties suitable for chipping he estimated that demand would increase by 200%. As a result of these recommendations and a change in seed importation policy, a third quarter 94 trade mission to Wisconsin, Minnesota, N. Dakota and Idaho was organized by the project. Filipino growers purchased and imported three 40 foot containers of seed potatoes worth \$30 thousand from Ryan Potatoes, a North Dakota seed company.

As a result of 3rd quarter 1994 market linkage activities by project personnel, Bali Fruit and Vegetable Corporation consummated sale of mangoes to a Hong Kong importer, shipping 2 to 3 shipment of mangos per week by air. Cumulative sales as of Sept 94 exceeded \$80 thousand. Sale by Bukidnon Resource Corporation, Inc. of two trial shipments of tomatoes to Hong Kong earning \$16 thousand. Resulted in contract to supply 2 containers of tomatoes per week to importer.

As a result of contacts made by ASAP personnel between Filipino fruit and vegetable producers and Special Commodities Services of Oakland, California, a US-based transport and marketing firm, the first shipment of 11 tons of fruit (bananas) valued at \$5,500 was sent to US Military bases in Korea. Special Commodities is negotiating to provide fresh fruit and vegetables to US bases in the South Pacific, Korea and Japan, sourcing these products mainly from the Philippines and shipping them under controlled atmosphere condition.

During the third quarter 1995 the project arranged for a visit by seven representatives of businesses in California's Central Coast region to Manila. These representatives, whose companies provide agriculture inputs and services, were able to establish contacts with key Filipino agribusinesses.

In the fourth quarter 1994, members of the Davao Orchid Society attended the Honolulu Orchid Society Show to exhibit their products, establish business contacts, and identify supply sources. Members purchased \$50,000 in plants and supplies from US sources.

Arrange for training in artificial insemination of cattle for the Federation of Cattle Raisers Association of the Philippines in October 1994. Training given by American Breeders Service of the US, who provided two trainers. Only cost to project was the airfare and per diem of trainers. ABS received orders for semen and equipment as a result of the training.

Conducted orchid and ornamental plant study tour in 4th quarter 1994 to Thailand where participants purchased \$17,000 of planting materials.

Brokered deal in 4th quarter 1994 between B&G Fruits and Nuts Manufacturing Corp. and Hong Kong importers for eight 40-foot containers of banana chips, totaling \$185,000. In same time period brokered a deal between Ecea Fruits and Hong Kong importers for \$7,600 of fresh mangoes.

During an April 1995 flower marketing visit to California, eleven Filipino participants purchased approximately \$25,000 in planting material.

In June 1995 16 participants attended the Taipei International Food Industry Show through the assistance of ASAP. As a result of this trip and the marketing contacts established, \$56,000 of orders for juices, coconut powder and snack foods were made by Taiwanese buyers, with the anticipation of further purchases to be made.

During a visit of Florida Agro-processing equipment suppliers arranged by ASAP through the Florida Department of Economic Development, potential transactions for the sale of over \$1.3 million in equipment from US suppliers were negotiated.

After marketing visits to Hong Kong, ASAP was able to facilitate a sales contract for \$420,000 of cavendish bananas to fruit wholesalers in the colony.

As a result of the introduction of Kennebec and Atlantic seed potato varieties from the US and technical assistance provided by the project to farmers, trials resulted in an increase from 3 MT to 20 MT per hectare in Benquet province, and up to 26 MT in the Bukidnon Highlands. This translate into a net income per hectare increase of over 17 times that received when growing traditional crops of corn or beans. This has led to a commitment by local importers and government leaders to bring in additional containers of seed potatoes for future plantings.