PRE-CONTRACT SURVEY REPORT

of the

SECONDARY SCHOOLS

Under the Direction of the

MINISTRY OF AGRICULTURE
AND LIVESTOCK

SURVEY TEAM

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October 10, 1963

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AGRICULTURE
APPLIED ARTS

ENGINEERING
APPLIED SCIENCES

CALIFORNIA STATE POLYTECHNIC COLLEGE

San Luis Obispo, California

October 10, 1963

Mr. Lyall Peterson
Head, Rural Development Division
Bureau Latin America
Agency for International Development
Department of State
Washington 25, D. C.

Dear Mr. Peterson:

I am submitting the "Argentina - Pre-Contract Survey Report" which was compiled under Contract AID/la-136. This report was prepared by our pre-contract survey team which studied the secondary agricultural schools that come under the direction of the Ministry of Agriculture and Livestock.

I feel it is a privilege for the college to be asked to make this pre-contract survey. I trust that the report with its recommendations can make a significant contribution to the upgrading of the agricultural education program in Argentina.

Sincerely yours,

Julian A. McPhee

Julian A. McPhee
President

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CHAPTER I

PREFACE

The California State Polytechnic College at San Luis Obispo in California was contracted by the Agency for International Development (A.I.D.) of the Government of the United States of America to prepare a precontract survey report on the secondary agricultural and home economic schools under the direction of the Secretariat of Agriculture and Livestock (hereinafter called the Ministry of Agriculture and Livestock).

Under the contract A.I.D./la-136 (Argentina) dated August 2, 1963 a team of technical advisors from Cal Poly departed for Argentina to prepare the report. The team consisted of three agricultural education advisors, namely: Emile LaSalle, Director of Agriculture, Hanford Joint Union High School; James Merson, Head Agricultural Engineering Department, Cal Poly; J. Cordner Gibson, Assistant Dean of Agriculture, Cal Poly, and two school architectural advisors George Hasslein, Head Architectural Engineering Department, Cal Poly; and Kenneth Schwartz, Architectural Engineering Professor, Cal Poly.

The team arrived in Buenos Aires on August 4, 1963 and immediately commenced work on this study. Offices for the team were established at the Ministry of Agriculture and Livestock 922 Paseo Colon in Buenos Aires. Five weeks were spent in Argentina studying the twelve schools which came under the direction of the Ministry of Agriculture and Livestock.

A preliminary report was submitted to Freeman Smith, Food/Agriculture Officer, U.S. A.I.D./Argentina on September 6, 1963.

The final report is submitted to U.S. A.I.D./Washington.

CHAPTER II

ACKNOWLEDGMENTS

The Cal Poly team gratefully acknowledge the support and cooperation of the personnel of the Ministry of Agriculture and Livestock and U.S. A.I.D. Argentina in the preparation of this report.

Particular appreciation is given to the following persons and their staff for their wholehearted support:

Ingenerio Roberto E. Arano	- Director General Agricultural Education Ministry of Agriculture and Livestock, Argentina
Mr. Terry B. Sanders	- Director, U.S. A.I.D./Argentina
Mr. Freeman Smith	- Food/Agriculture Officer U.S. A.I.D./Argentina
Dr. John McKigney	- Livestock Advisor U.S. A.I.D./Argentina

CHAPTER III

THE SURVEY PROJECT

The purpose of this precontract survey is to render technical advice and assistance to Argentina and A.I.D. officials in establishing the requirements for organization, administration, advisors, participant training and development of additional physical facilities incidental to an upgrading and expansion program for secondary agricultural and home economics schools under the jurisdiction of the Ministry of Agriculture and Livestock.

This survey and resulting recommendations are limited to the twelve national secondary schools for agriculture and home economics. The recommendations include requirements for U.S. advisors, school staff training, curriculum, school farms, teaching aids, and materials. The architects on the survey team have included basic cost estimates and general guidelines for necessary construction, remodeling, equipment of physical facilities and technical assistance necessary to carry out the program.

The purpose of the survey team was to determine whether or not there is need to upgrade one or more of the secondary schools to an advanced technical level of instruction. In addition, determination is to be made as to the advisability of a participant training program in the United States.

Based on the great importance of agriculture to the economy of Argentina, the recommendations reflect a long range plan for the improvement of technical agricultural practices through a sound program of education in the secondary agricultural schools. The improvement of the agricultural economy of Argentina can be accomplished through the youth of the country under a revitalized program of agricultural education which can provide new techniques and new technology.

The report is divided into six main parts. Part A includes the introductory statements. Part B discusses the educational assistance program. Part C is devoted to a discussion of the facilities and equipment. There are two distinct areas of discussion; one by the educational advisors and one by the school architects. Parts B and C reflect these two areas. Part D outlines the technical assistance budget. Part E brings together all of the recommendations in this one section. This is a summary of those recommendations made throughout the report. Part F includes the report conclusions and the appendix.

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BACKGROUND AND INFORMATION FINDINGS

A. An Overview of the Agriculture of Argentina

During the past decade, over 95% of the value of all Argentina's exports was provided by her agriculture. Argentina has never developed a strong industrial economy because of her lack of fuel and mineral resources. Argentina's economic structure, then, depends chiefly upon her agricultural resources.

The population of this country has grown from 8,000,000 in 1914 to 22,000,000 in 1963. With the population numbers increasing at about 2% per year, there would soon be no surplus agricultural products left for trade. Census figures over the last 40 years indicate that livestock numbers have not increased in proportion to the population growth. Even as far back as 1956 Argentina operated at $170,000,000 (U$S) deficit in its balance of trade. Argentina has to rebuild its economy by rebuilding its agriculture.

Argentina is blessed with the world's largest areas of first and second class soils and reasonably priced labor. However, it needs tremendous improvements and assistance in its technological problems.

Much of the land now being farmed has rich productive soil and sufficient water to produce abundant crops, either from natural rainfall or gravity water for irrigation. Other large desert or semi-desert areas, particularly in the northwest, could be developed into rich agricultural lands with the future development of irrigation and water resources. Many swamp areas could be made productive with proper drainage.

The productive potential of Argentina's agricultural lands is tremendous. However, the observations of this team in its visits to various agricultural schools, and the surrounding countryside served by them, indicates that a relatively small percentage of the productive potential of these lands is being exploited. Good land is abundant and cheap and the pattern seems to be to farm or graze large acreages, letting nature take its course in determining the yield.

Production efficiency on existing farm lands could be greatly improved through advanced farming and management practices. Range management, rotation of crops and pastures, mechanization, use of fertilizers, weed control, supplemental feeding for faster growth and maturity, and closer attention to the marketing and calving ages of cattle are practices that should greatly improve the agricultural productiveness of the country.

There has been a tremendous increase in flow of population from country to city. In fact, Buenos Aires has over 30% of Argentina's total population. This concentration of populace coupled with other concentrations in a few more large cities leaves a very sparse agricultural population.

Each year, less than 200 agricultural technicians are graduated from the twelve agricultural schools under the direction of the Ministry of Agriculture and Livestock to service a country nearly a third the size of the United States. These graduates primarily go into government service or private industry and do not return to the farm. With the upgrading of the agricultural education program the number of graduates could be increased to 400-500 per year. It is anticipated that many of these would return to the farm and become the leaders in production agriculture. They would be the innovators in new technology.

Roughly 40-50% of the land is in the hands of 3% to 4% of the land holders. In the absence of good farming practices with fertilizers, weed control, pest control, harvesting methods coupled with migration of population from the farms to the cities, Argentina agriculture has not kept pace with the needs of the country.

In 1957 the National Institute for Agricultural Research (INTA) was formed. It is a capable agency but they have too few trained personnel. These specialists cannot cover the country and give all the necessary assistance that might be desired.

One of the greatest stumbling blocks to Argentina's agriculture is its inadequate credit and finance system. Bank managers are not familiar with the farm or its needs. There is very little money available for loans to farmers. This necessitates the farmers' having to sell early, at low prices or borrow from the middleman. Interest rates are high, usually 8% - 15%. This discourages the farmer from making logical needed loans.

Argentina agriculture has developed largely with no guidelines.. Her natural fertility was sufficient to feed her people and leave a healthy balance for trade. The population increase annually requires a larger share of the annual production. This is seriously creating economic problems with respect to balance of trade. There needs to be a renewed interest in agriculture by the government as well as the public to help solve the problems of financing and modernization.

If Argentina does not carefully plan to solve these problems immediately she will be confronted with some serious economic and internal problems.

In recent months there has been a great deal of interest in agriculture as it affects the total economy. The press has been alert to this. Examples of the reports printed in the newspapers indicate the importance of agriculture and the need to strengthen all aspects of its operation.

In the Buenos Aires Herald, May 5, 1963 the then Secretary of Agriculture and Livestock, Dr. Jose Alfredo Martinez de Hoz, said:

> "Argentina was in urgent need of 20,000 scientists and 100,000 technicians." He added, "measures for the attainment of this important objective had already been adopted."

August 6, 1963 the Buenos Aires Herald carried the story of the 1962-63 Report of the National Committee for the Coordination of Rural Societies. This report says:

> "Argentina continues to lose ground in the competition for foreign markets. Grain and meat production is decreasing and the balance of payments problem becomes increasingly urgent."
>
> "We do not ask for privileges. But we do believe that the stagnation in agricultural development must be ended and production invigorated to strengthen this industry--an indispensible factor in the integral development of the national economy."

The Clarian on August 14, 1963 reported on a talk on farm production given by the new Minister of Economy, Dr. Jose Alfredo Matinez de Hoz. He said:

> "One of the principal causes of our actual economic disequilibrium has its origin in the dimension of the agricultural production and the reduction of the remaining for exportation. The volume of our exports, he added, does not reach two thirds of what it was 30 years ago and if we compute the per capita index this number will be reduced 50%---it is necessary to increase the agricultural production and its technology, which should perfect the legal institutions that constitute the legal frame in which this important activity is being developed---land owning and land leasing are traditional institutions and are going toward agricultural enterprise, thus they are increasing in their importance."

The Buenos Aires Herald on September 2, 1963 carried a feature story on the committee report on The Guiding Principles of Planned Development. The report says in part:

> "In any planned economic programme the promotion of agriculture and livestock will play an important role. The basis of this development will be a high degree of farm mechanization in order to lower costs and improve qualities. In 1961 the increase in agricultural equipment was almost the same as in industry. This is not surprising. At present, the investment needs of agriculture per unit of production are the same as for manufacturing, and for each peso invested in the purchase of of land, four have to be invested in equipment. It is not necessary to dwell on the relation to industrial expansion of this demand for equipment. Replacement needs make it a permanent demand. The equipment of the rural sector in 1961 demanded approximately 45,000 million current pesos or 600 million dollars, that is to say 7 or 8% of industrial production at prices FOB factory.

> Farm mechanization opens up new possibilities. Argentina could become Latin America's supplier of dairy products."

The report of the Buenos Aires Grain Exchange was carried in the September 7, 1963 edition of the Buenos Aires Herald. The report says:

> "---the drought in the west and southwest of Buenos Aires province and nearly the whole of the province of La Pampa seriously affected the harvest and that farmers would not fully recover from the drought for many years to come."

The newspaper goes on to comment:

> "Summing up the difficulties facing agriculture during the 12 months under review, the report stresses the need to increase yields, reform the complicated taxation system and provide an effective credit scheme for producers, who, at present, have to negotiate as many as 10 loans a year."
>
> The report also criticises the five percent tax on agricultural products because it tended to hamper the modernization of farming methods.
>
> The grain exchange says that a stable agricultural policy would help the farmer and reverse the flow of capital away from the land."

From these reports it is quite evident there is need to strengthen the agricultural economic sector of the country. Increased production is going to be necessary to meet the country's consumption and export needs. This can only be accomplished through more people in production farming and mechanization. These people are going to have to come from the young people staying on or returning to the farms. Renewed enthusiasm and vigor can be accomplished through education in agriculture.

It is logical to propose, then, that a revitalized program in agriculture education in the secondary school system be undertaken immediately. It is recommended within the scope and power of this Survey Study team, that a program be implemented between the Ministry of Agriculture and Livestock and A.I.D. to reach the greatest number of young people and train them for vocations in agricultural production and processing.

B. An Overview of the Educational System of Argentina

Education in Argentina is under the jurisdiction of the national, provincial and municipal governments and private organizations. The latter are usually religious groups.

The levels of education offered are: Pre-primary; Primary; Media (High School); Superior; and University. Pre-primary grades are not required but Primary is obligatory for all students who must enter

between the ages 6 to 9 and for a period of 7 years. In order for a student to continue his education beyond the primary grade, he must be at least 13 years of age and have satisfactorily completed his Primary level. Thirty four to thirty six percent of Argentina youth complete the 6th grade and only 25% to 30% of these enter Media school. Media schools are generally 5 year schools and prepare students for university entrance. Other Media schools prepare students for vocations and are usually 3 years in length. A "Bachiller" degree is given to the graduate from 5 year Media schools.

A student may enter a university without a "Bachiller" degree if he has the equivalent of a Media education and can pass a written entrance examination. Both sexes are permitted at the universities.

There are 5186 High Schools (Media) and less than half of these are public. Of the 2233 public Media schools, 12 are special schools for agriculture and home economics and are supported and administered by the Ministry of Agriculture and Livestock. A total of 84 National Media Schools offer agriculture courses.

Other Media schools supported and administered by the various branches of the national government specialize in (1) pre-university training, (2) training primary teachers, (3) technical training for industries, trades and crafts.

An important cog in the agricultural education phase of Argentina education, is the Salesian Order schools. This Order operates 14 schools where Agriculture is taught. Twelve offer a 3 year basic cycle and two offer 5 years of work--a 3 year basic and 2 year advanced. The 3 year program is mostly practical work and the advanced 2 years are mostly theory with little practical work.

Upon completion of the primary school, the student interested in agriculture, home economics, farming or rural living may follow one of several courses:

1. He, or she, may go directly to work on the farm or in some agricultural industry.

2. He, or she, may attend one or two years of agricultural school learning Farm Practices, or Home Making skills.

3. He, or she, may enroll in a three or four year course in Basic Agriculture or Home Economics, the curriculum of which includes basic academic courses as well as practical training.

4. Boys may go on to any Secondary school and complete the three year secondary cycle, then transfer to an agriculture school to complete three years of advanced technical training.

5. By slight modification of the course pattern in the third year of the advanced technical program, a student may go on for a fourth year of Professional training to qualify as an agricultural teacher or an extension agent.

6. The student may complete full five years of Secondary school or Normal school and receive his "Bachiller" title. He, or she, is then eligible to go on to University, or girls may enroll in a two year Professional curriculum in a Home Economics school to qualify for teaching or extension work in Home Economics.

The chart on the next page shows in graphic form the pattern of education in the National Secondary Schools.

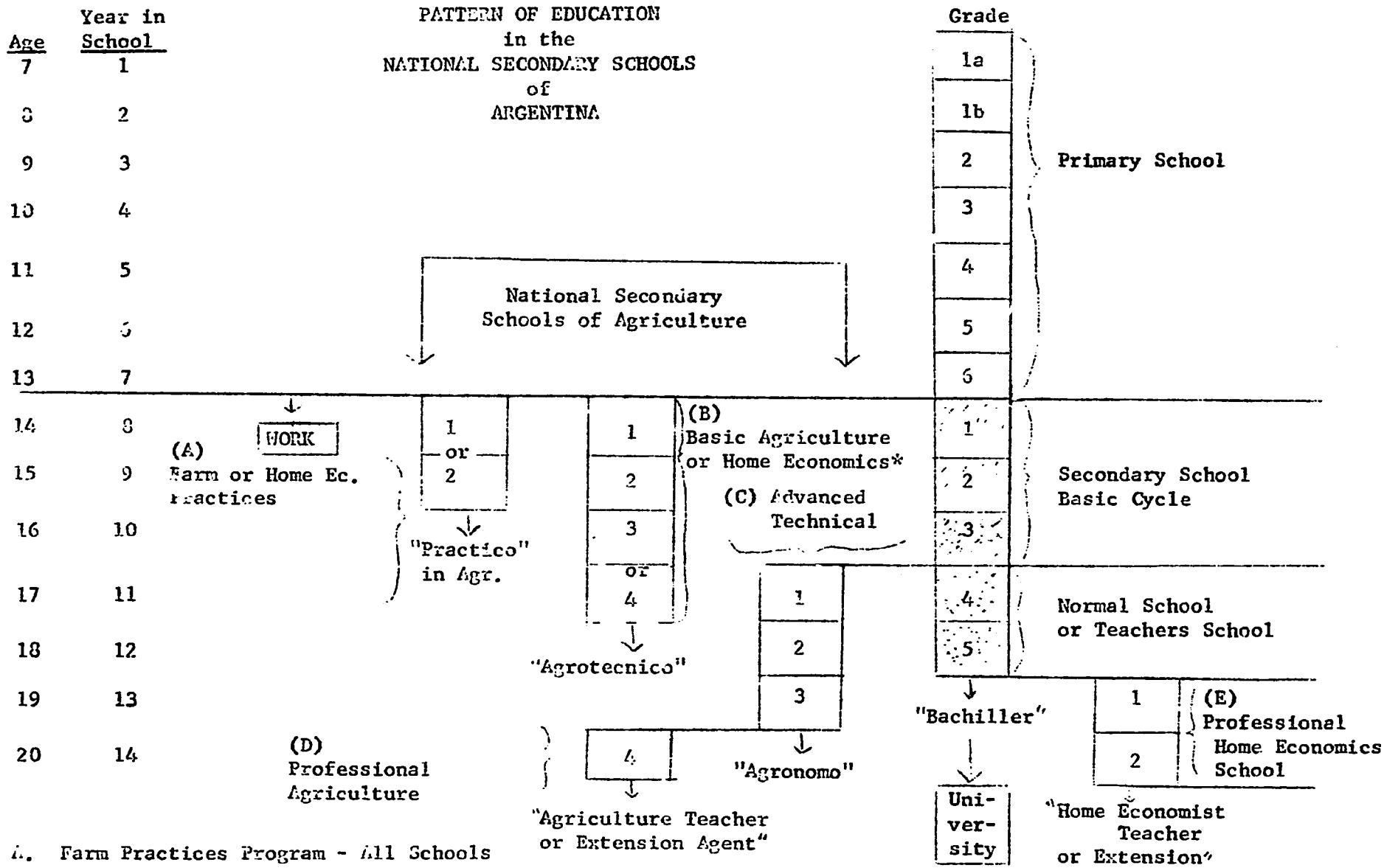
The 12 National Agricultural and Home Economic schools is the group which this pre-contract survey team studied and will make recommendations for up-grading and improving. These schools include:

(1)	Escuela Agrotechnica	- Bell Ville
(2)	Instituto Superior del Hogar Agricola	- Bolivar
(3)	Instituto Superior de Ensenanza Profescional Agropecuaris	- Casilda
(4)	Escuela de Avicultura	- Colon
(5)	Escuela Practica de Granja	- Las Delicias
(6)	Escuela Tecnica Especial Fundacion Mecanico Agricola	- Miramar
(7)	Escuela Practica de Granja	- Olavarria
(8)	Escuela de Cultivos e Industrias Regionales	- Quines
(9)	Escuela Agrotechnica	- Salta
(10)	Escuela de Fruiticultura y Enoligia	- San Juan
(11)	Escuela de Producion en Industrialization de Leche	- Tandil
(12)	Escuela de Cultivos e Industrias Regionales	- Quines

There are 178 Superior Schools offering from two to six years training in various specialty fields. There are 163 National and private universities. Four or five of these offer training in professional home economics. The universities offering training in agriculture give degrees in agronomy (general agriculture) and veterinary medicine. The titles received are "Ingeniero Agronomo" and "Ingeriero Veterinario".

No local taxes are levied for education. Funds to operate the twelve schools come directly from the national treasury. There are no tuition charges in any of the levels of public education.

PATTERN OF EDUCATION in the NATIONAL SECONDARY SCHOOLS of ARGENTINA



A. Farm Practices Program - All Schools
B. Basic Agriculture - Salta, Colon, Las Delicias, Miramar, Victorica, Quines, Bolivar
*B. Basic Home Economics - Bolivar, San Juan, Casilda
C. Advanced Technical - San Juan, Casilda, Olavarria, Bell Ville, Tandil
D. Professional (Boys) - San Juan, Casilda
E. Professional (Girls) - Bolivar, San Juan, Casilda

Eleven of the twelve agricultural schools studied provide free dormitory and subsistence for the students, although donations from the parents of a few dollars per month are encouraged in order to assist the schools to carry this burden.

In the agricultural high schools visited, the feeding of the students is a large item in the budget and this has been a major factor in limiting student enrollment.

Teachers salaries are paid from the national treasury.

During the period of time this survey team was in Argentina, teachers were out on strike twice. According to the newspapers, they were promised a raise but there was not enough money in the national education budget to pay it. They were finally granted a 20% raise. Teachers are woefully under-paid, receiving from $60 - $75 per month. The majority of the teachers must hold other jobs so that they can meet their necessary family expenses. This makes it difficult to attract and hold well qualified personnel with sufficient preparation, experience and background to conduct a strong educational program in agriculture.

An interesting observation was made in the agricultural media schools visited by this survey team in regards to the non-teaching help. Many workers are employed to service the students, work the farms and do chores in the school. It seems that provisions should be made for students to work and the schools could very easily operate a student work program.

The heating of the dormitories and classrooms is very poor. The temperatures were generally in the 40^{o} - 50^{o} range with 80% humidity in some areas during the visitation period of the survey team.

The lighting is usually very poor, with low wattage bulbs and a minimum of light in regular sized classrooms. This was also the case in the dormitories and libraries. It does not appear that a reasonable environment exists for these students to do their best work. It is strongly urged that careful consideration be given to this matter.

Because of the low enrollment, large farming operations carried on by full time hired staff, low productive efficiency of the farm unit and the fact that students receive their food and lodging, as well as their education, free of charge, the cost per student is abnormally high. A requirement that all income from the school farm be returned to the National treasury does little to encourage efficiency of production or the improvement of farming practices at the schools.

There are many news stories and magazine articles discussing the educational problem in Argentina. Problems do exist, namely; (1) low salaries, (2) high drop-out after the required elementary grade, (3) inadequate classrooms and laboratories, and (4) high cost of education per student.

There is a strong demand by agriculture and its related industries for a great many more technical workers than are now being graduated from the agricultural schools. There is also a great need for the preparation of better qualified teachers of agriculture and for students to seek higher degrees at the university level to prepare them for research and extension work. It is hoped that this survey team can make some contributions towards improvement in Argentina's educational system. Many fine, dedicated Argentine people are unselfishly working toward this end.

CHAPTER V

ORGANIZATION AND ADMINISTRATION

The Agricultural Education program studied by the survey team is one of the Departments in the Ministry of Agriculture and Livestock.

The program is under the direction of the Director General of Agricultural Education, Ingeniero Agronomo Roberto E. Arano. It is fortunate for the program that a person of Ing. Arano's background and experience is the Director General. It is quite evident that he is providing dynamic leadership in order to achieve the objectives that have been set. He is exercising personal leadership in the organization and development of the twelve schools under his direction. He is vitally concerned with the up-grading of all the programs and expanding into new ones.

The overall organization which he has developed seems to be working well.

There are two Technical Inspectors each responsible to the Director General and who have been assigned the responsibilities of supervising six schools each. The assignment of the six schools is based on the technical background of the Inspector and not on any geographic lines. This makes for duplicate travel into some areas. The inspectors are located in Buenos Aires, which means an extra amount of travel in order to get to the first school.

It is recommended that the assignment of schools to each Inspector be on a geographical zone or region basis. In the present organization this would mean switching Olavarria to Zone A and Casilda to Zone B.

A strong united spirit and esprit de corps could be developed with an organized zonal approach. Teachers need to feel a sense of belonging to develop pride in an organization. It is evident that the agricultural teachers need to be welded into an organization which will put forth a united front for a total program of agricultural education. It is recommended that meetings of the agriculture teachers of the schools in each zone be held on an annual basis. These meetings could be rotated among the schools in each zone. Such a meeting would provide a vehicle for continuation education or in-service training. Presentations could be made, discussions held and ideas exchanged on many problems such as how to make instruction more effective, school farm operations, student advising and records. The teachers may want to organize into a self-supporting organization to promote agricultural education.

It is recommended that once a year an annual conference of all the administrators and staff of each school be held. Such a conference would build upon the annual Zone meetings. A meeting of this nature would gain the attention of leaders in agriculture and publicize the program. The program would gain recognition and status. The people in the program would feel a part of a total program of agricultural education.

Dynamic leadership is a significant factor in the personnel responsibility for directing the program at each of the schools. The administrative staff plays a major role in setting the objectives of the school and following through to see that these objectives are carried out. The qualifications, particularly of the Directors, and others in administrative positions are important. Adequate academic preparation is essential but the background of experience is of equal importance. A strong preparation in practical agriculture and agricultural education or equivalent in practical experience is a minimum. Work in school administration or experience in administration is essential, particularly for those in positions of serving as Directors. It is recommended that in the selection of new school directors or other personnel in positions of leadership that qualifications of adequate preparation and experience be considered which would insure a strong background in agriculture and agricultural education with work, or, equivalent experience in school administration.

Coordination between all schools and universities is recommended. Horizontal coordination between all secondary agricultural schools is essential and can help in strengthening the overall program of agricultural education. This coordination would include the Ministry schools, the National, Salesian, provincial and private schools. The staff of these schools could cooperate where possible in developing course outlines, audio-visual aids, career guidance information, and promotional brochures. Vertical coordination between the primary, secondary, university and other post-secondary institutions would be most worthwhile. Problems of student follow-up, career guidance, recruitment could be considered. The implementation of both horizontal and vertical coordination could be accomplished through the annual Zone meetings or the annual conference. Additional means of coordination could also be developed.

It is quite evident that the lack of adequate financial resources is a major problem in the operation of the schools. It is imperative that some means of additional financial support be made available. At the present time approximately 48,000,000 pesos or $350,000 is available from government financing through the Ministry of Agriculture and Livestock for operating expenses of the twelve schools. Approximately 6,750,000 pesos or $50,000 is made available for building purposes.

The major deterrent at the present time for the improvement and up-grading of the instructional program in the schools is the lack of qualified capable teachers. This lack of teachers is the result of very inadequate salaries. This situation does not provide the incentive to become dedicated teachers. If the program of agricultural education is to move ahead, adequate teachers' salaries are a necessity. This is essential in order to attract young qualified teachers into a teaching career.

It is recommended that every possible means be explored to provide adequate financing for the operation of the schools and to raise the salaries of the teachers.

One of the salvations to financing the school operations is the formation of an organization in each school called the Cooperators ("Cooperadora"). This group of people is made up of fathers and relatives of students in the school and also interested agricultural leaders. They are organized and chartered by the Ministry of Economy. Their primary function is to assist in the financing of the school program. This organization could be compared somewhat to the College Foundation program at the survey team's home college. Under regular procedures all proceeds from the sale of products from the school farm are returned to the central government. The Cooperator organization by-passes this procedure by taking ownership of the products through buying the seed, or calves, or processed products and loaning them back to the school for use in the instructional program. When the products are sold the proceeds then become the property of the Cooperators. Regular records are kept and this money is used to buy raw materials, instructional materials, and in some cases to pay the salaries of one or more teachers. Last year the Cooperators contributed through their operations some 16,000,000 pesos ($120,000) to the financial support of the National Agricultural schools.

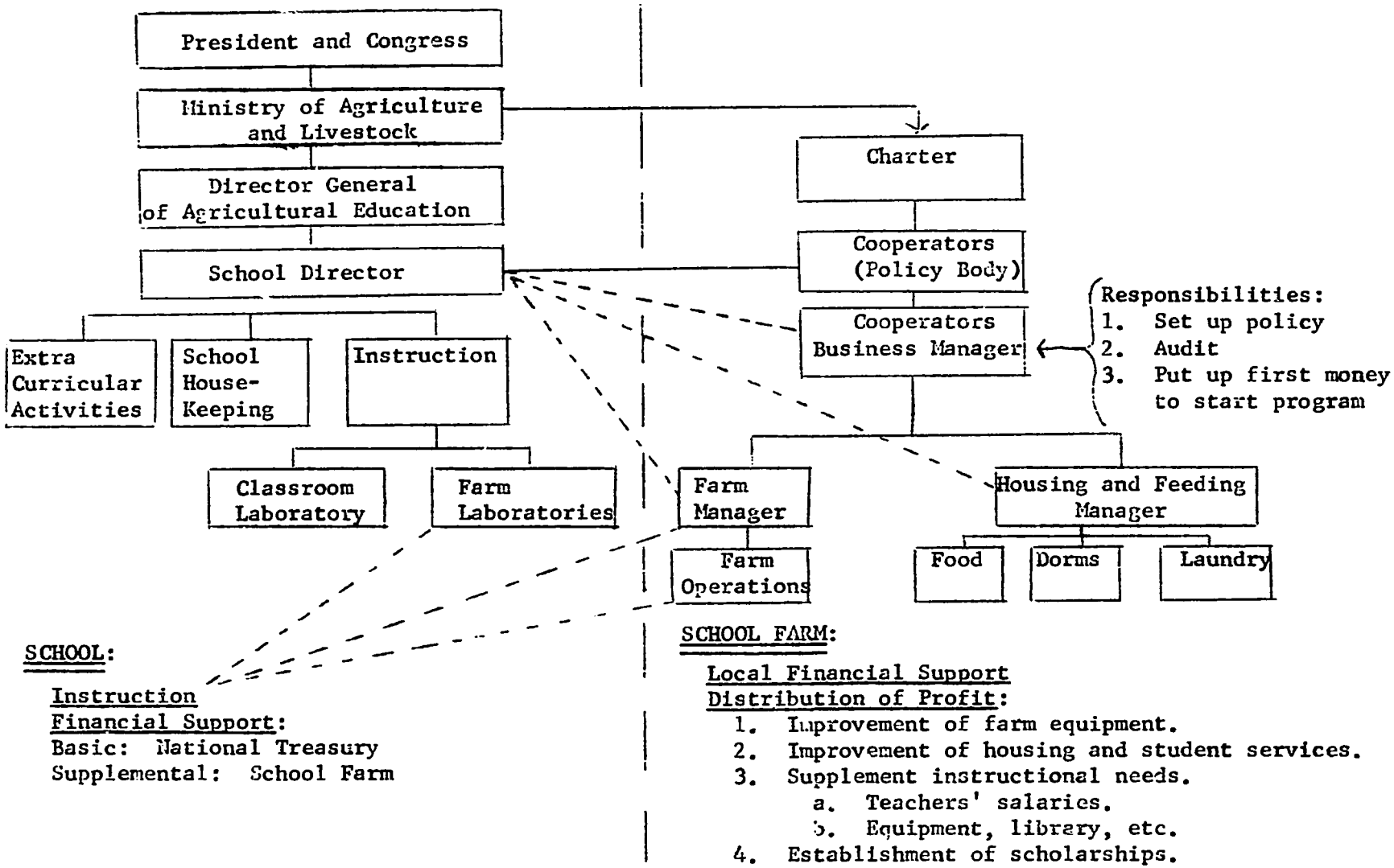
The Cooperator organization needs to be defined more clearly and brought more sharply into focus in the overall operation of the community and school program. It is recommended that the organization of Cooperators become recognized as a community organization that provides support as an auxiliary service of the school and that definite administrative relationship between the school and Cooperators be developed. (See Chart - Page 18).

In this organization system there would be complimentary relationships between the school instructional program and the Cooperators' support program. The Cooperators would have a governing body to set policy and audit. The School Director would be a member of this body. The Cooperators would have a business manager who would direct the farm manager and housing and feeding manager. The School Director would have consultation and advising responsibilities.

The basic financial support for the school instructional program would come from the National Treasury. Some supplemental support would come from the proceeds of the school farm under the direction of the Cooperators. Profits from the school farm operations would be used to improve farm equipment, improve housing and feeding services, provide instructional needs, and could also establish scholarships.

Every school in the system of twelve schools has a school farm. It is evident from observing the operations that it is necessary to upgrade the management efficiency of each farm to the point where it becomes an educationally efficient production unit. To accomplish this, it is recommended that a strong, capable, agriculturally prepared farm manager be selected to manage each of the school farm operations and that he be paid a salary commensurate with his training, experience, and responsibilities.

ORGANIZATION CHART FOR SCHOOL-COOPERATOR RELATIONSHIP



At the present time a large number of workers are employed to do the work on the farm and in the school plant. This adds to the operating costs of the schools. A school should not only provide classroom and laboratory learning experiences, but should also be in a position to provide citizenship learning experience such as developing good work habits, assuming responsibility, and dependability. It is recommended that this be accomplished by providing an opportunity for students to assume work responsibility on the farm and in the school plant to broaden their educational experience. They could be paid a nominal amount for the work that they do.

It has been demonstrated in schools in the United States that one of the greatest interest getters and motivating forces in agricultural education is the student owned or shared project. It appears there needs to be some ways and means to provide students with means of motivating this interest and desire in agriculture. Such a student project program provides positive learning experiences in developing skills and management techniques. It is recommended that to demonstrate the feasibility of this project program that at one school a pilot program be initiated to provide student owned or shared projects.

One of the stimulating experiences for young people is to belong to an organized group that is recognized for its accomplishments. Such a group in the United States is the organization of high school students (young men only are eligible) known as the Future Farmers of America, (F.F.A.). This organization of young men has been an outstanding success. Each state has its own state association and each school has its own local chapter. It has made a real contribution to agriculture in the United States.

It is recommended that a similar organization patterned after the Future Farmers of America be established in Argentina. There is no question but that such an organized group of young men could develop into a strong force on behalf of agriculture. Out of this could come the future leaders of Argentina agriculture. This organization complements the instructional program by providing learning experiences in leadership, cooperation, and citizenship.

The philosophy of education in Argentina is that it is free at all levels from primary through university. This puts quite a strain on the national treasury. Most of the schools in this survey provide housing and feeding on the school site. To assist in paying the costs of this housing and feeding it is recommended that students pay at least a portion of their expenses of room and board. A portion of the room and board could be provided for in the form of scholarships or work experience on the farm or school plant for which the student would get a minimum wage.

The school facilities in all of the schools are old. Some facilities need to be abandoned, some need to be remodeled, and at some schools new facilities need to be built. It is felt that there should be at least one new complete facility constructed that is built on a functional basis, using modern architectural design. This would develop pride in the program and evidence that agricultural education

is moving ahead and getting "out of the basement" up to equal the other school programs. To accomplish this it is recommended that a new complete school facility be built at Olavarria which would encompass a program in livestock production. With Argentina's livestock industry being the largest sector of the agricultural economy it is reasonable to plan for a school with this specialty.

It is recommended that whenever possible tractors and agricultural equipment should be leased rather than purchased. A leasing program would reduce capital expenditure and maintenance costs. Such a program would assure the school the latest models of equipment for students to work with at all times. This program would encourage the cooperation of the farm machinery industry and provide placement opportunities for graduates in that industry.

Preliminary contacts with major Argentina farm machinery manufacturers and distributors indicate that lease contracts could be developed similar to the plan used in the United States. This plan has proven to be very satisfactory. Companies furnish equipment to the school for 10% of the dealer cost per year. Equipment is replaced with a new model generally every two years. In this way the school can provide education in line with new developments.

CHAPTER VI

EDUCATIONAL PROGRAM

Technological changes in farming, changes in all aspects of agriculture and business and industry and the rapid changes in scientific developments in the world have resulted in a growing interest in the educational system in Argentina. The need for an expanding agricultural economy has focused attention on agricultural education.

Modern agriculture is growing as well as changing. The great field of agriculture, with its on-farm and off-farm specialized jobs, including management responsibilities, offers unlimited career opportunities for the alert, and adequately prepared young person.

The basic purposes of a modern program in agricultural education include:

1. Agriculture as a vocation of which farming is primary provides a wide variety of career opportunities dependent on, related to and serving the farming industry.

2. Agricultural instruction in the secondary schools can provide students with the knowledge and experience so that they may possess the proper background and abilities to enter or advance toward employment in the many fields of agriculture.

3. The secondary school agricultural program should serve the student who will end his formal education with the secondary school. It should also provide motivation and essential preparation for entry into post-high school education in agriculture.

4. The exploratory function of agricultural instruction should be emphasized in designing courses of study and in counseling students. Courses in agriculture at the secondary level should make it possible for the students to realize, invigorate, and continue their interests in this field.

The objectives of the agricultural education program may be divided into four categories and stated as follows:

A. Vocational

   1. Make a beginning and avance in farming.

   2. Provide the agricultural competencies necessary for entrance into agricultural occupations closely related to farming.

   3. Apply the principles of science and economics to the efficient production processing and marketing of agricultural products.

B. Exploratory

1. Make decisions concerning the choice of an agricultural career.

2. Develop and maintain interest in an education in agriculture.

C. Preparatory

1. Plan and prepare for the post secondary school education in agriculture.

D. General

1. Participate effectively and exhibit leadership in school and community affairs.

2. Maintain a favorable home environment.

3. Conserve soil and other natural resources.

To achieve the objectives of the agricultural education program a strong course of studies is an essential ingredient. It would be advisable to develop a program with the fundamental basic agricultural skills and techniques included in a three year basic general course. This is essential for a student who would terminate his education at the end of three years. He would have enough skills and abilities that would make him employable or he could return to the farm. This is a basic philosophy that should be incorporated into the curriculum.

Every school is different, but a common core or a basic curriculum seems to be advisable. In any situation adjustments would need to be made according to the specialization in the area to meet the needs of the area.

The following course of studies is recommended as the basic core pattern for the three year basic programs at Miramar, Bolivar, Salta, Colon, Las Delicias, Victorica and Quines.

First Year	Second Year
General Agriculture	Agricultural courses specific to the area
Agricultural Mechanics	Agricultural Mechanics
Agricultural Botany	Agricultural Economics
Economic Geography	Zoology
Applied Mathematics	Physics
Spanish	Soils and Fertilizers
Health and Physical Education	Mathematics
	Spanish
	History

Third Year

Agricultural courses specific to the area
Agriculture Mechanics
Chemistry
Mathematics
Farm Records
Farm Management
Democratic Education
Spanish
Health and Physical Education

Other courses would need to be included in order to round out a full program of studies. These courses would be determined by the local school.

There is a definite need by industry to be able to secure more mature individuals to enter many of the specialized occupations. Students at the present time enter the secondary schools after the primary schools at 13 years of age and are through at 16. It is evident that primary students do not have enough background of preparation and are too immature to meet the demands of technical agriculture. Agriculture has a need for different educational levels of preparation.

It is recommended that three levels of preparation be provided for in the agricultural education program. These levels to include the one to two year farm practice program, the three year basic agricultural program, and the three-four year advanced technical program.

The farm practice program is designed for the student who is interested only in obtaining the basic skills of agriculture. The program would have a minimum of classroom work and a maximum of laboratory and field work. The student could return to the farm or work in business industry where only a knowledge of simple skills is required.

The three year basic agriculture program is designed to meet the needs of agriculture where a student is required to know more advanced skills and some management application. The program would provide a balanced program of classroom work and laboratory and field experiences. The student could return to the farm or enter jobs in business industry where advanced skills and knowledge are required.

The advanced technical program would meet industry needs by providing advanced technological preparation in specialized areas of study. The student would be ready for employment at 19-20 years of age. He would be more mature and able to be employed in positions of greater responsibility. The program would provide a strong emphasis on advanced technology and economics and management principles and practices. There would be a balance between classroom work and its application in the laboratory and field. The student could return to the farm or accept positions in business and industry where advanced preparation and experience were essential.

Admission to the one to two year farm practice or basic agricultural program would require only the completion of the primary grades. Admission to the advanced technical program would require that the student complete the three year "basic cycle" in any of the national high schools. This would provide a basic secondary education pattern upon which a student could then program an advanced agricultural curriculum.

It is recommended that the following schools implement an advanced technical agricultural program in specialized fields. San Juan in enology, olive and olive oil, and food processing; Tandil in dairy production and dairy manufacturing; Olivarria in livestock production; Bell Ville in agricultural mechanics and machinery and dairy production and dairy manufacturing; and Casilda in advanced agriculture, home economics and teacher education.

It is recommended that coeducation programs be initiated at Bolivar, San Juan, and Casilda. This would mean that home economics programs in rural living would be included at San Juan and Casilda. A teacher education program for both agriculture and home economics would be inaugurated at Casilda. Bolivar would add basic agriculture and basic home economics programs to its present advanced technical program in home economics.

The program of home economics needs to be expanded to meet the needs of the growing population. Young women need to be educated in rural living. The demand for extension home economists is every increasing. INTA needs well qualified young women in its educational program. These needs can be met by expanding the programs of home economics.

The recommendations on each of the schools is included under the analysis of each school in Chapter VII.

Even though the specialized schools would have their own individual programs there would still be a need for a basic core or complement of courses that every student should have in addition to the major specialized agricultural courses.

The following course of studies is recommended to be incorporated into the curriculum of the five specialized schools offering the advanced technical program. These schools include Bell Ville, Casilda, Olavarria, San Juan and Tandil.

First Year	Second Year
General Agriculture	Agricultural courses specific to the area
Agricultural Mechanics	Specialized Agricultural courses
Spanish	Agricultural Economics
English	Accounting
Soils and Fertilizers	Public Speaking
Agricultural Chemistry	English
Agricultural Mathematics	History

Third Year

Agricultural courses specific to the area
Specialized agricultural courses
Farm Management
Agricultural Credit and Finance
Agricultural Law and Legislation
Psychology
Report Writing
English

Other courses would need to be added to round out a full program. These courses would be determined by the local school.

The organization of the classes was reviewed quite extensively. The lecture classes are organized by years with each year in a separate class. The laboratory classes are organized with students from each year usually in a laboratory class. They are assigned to various areas of work experience on a rotating weekly basis. It is recommended that a subject matter approach to class organization be implemented rather than by years. It is true most of the classes would still be composed of students in the same class. The difference being one of philosophy. This approach would be a significant change in the laboratory work. For example students enrolled in a vegetable production class would follow through with laboratory work in vegetable production; a student taking an agriculture mechanics class would have a corresponding agricultural mechanics laboratory. This approach would provide class correlation between what goes on in the classroom and in the laboratory.

It is recommended that a specialist from a U.S. institution in agricultural curriculum be assigned to work directly with the schools to assist them in upgrading their courses of study and individual course content.

The implementation of a strong curriculum requires teachers who are well prepared and qualified. There appears to be a need for more and better prepared teachers. It is apparent that a teacher education program would be one factor that could upgrade the instructional program.

Students who would be interested in teaching would need to complete an advanced technical program which would provide them with a strong background in agriculture. Upon receiving their certificate they would be eligible to enter a one year teacher preparation program. This one year would provide the student with skills in teaching methods and techniques, evaluation and records, curriculum development and guidance and counseling. Also a part of the year would be spent at a selected school where the student could obtain experience in teaching under supervision of a qualified instructor.

In order to provide recognition and status to a qualified teacher who has gone through the teacher preparation program, a special certificate of accomplishment or a credential should be given to him.

One school could be developed as the center for teacher preparation. This school should be somewhat centrally located. Therefore, it is recommended that a teacher education program be initiated at Casilda.

It is also recommended that a specialist from a U.S. institution in teacher education be assigned to provide technical assistance in initiating and developing a program of teacher education.

An effective program of education needs a basic complement of teaching aids, instructional materials and audio-visual aids and equipment. Library facilities are important as well as library materials including books, bulletins, pamphlets and periodicals. Up-to-date materials are essential. The utilization of the school farms as an educational laboratory can be a most effective instructional device. The production laboratories and the science laboratories need to be adequately equipped. The utilization of a student project program as a learning experience should be considered on a pilot basis.

It is recommended that ways and means be provided to secure adequate instructional materials, teaching aids and devices, and up-to-date and adequate library reference materials.

It is recommended that the science laboratories and production laboratories be adequately equipped. The equipment of these facilities should be placed high on the facility, building and equipment priority list.

The expense of making available all the equipment necessary to bring every school up to an optimum standard would be an exhorbitant figure. It will be necessary to budget this over a number of years. For this particular project a priority listing will of necessity have to be made. These lists appear in each school analysis and in the conclusions and recommendations in Part B of the report.

To provide technical assistance in developing instructional aids and materials and how to utilize effectively the school farm as educational laboratories, it is recommended that two technical advisors from a U.S. institution be assigned to the team. One of the advisors would have a strong background in the plant science and production field and one in the animal science and production field. Each of these advisors could also provide subject matter counsel and advice on production and management problems.

As indicated in Chapter III, agriculture is the most important industry in Argentina. Agriculture is 95% of the export economy, and 80% of the total economy. Dr. Jose Alfredo Martinez de Hoz, who was the Secretary of Agriculture and presently the Minister of Economy, said that the country needs 20,000 scientists and 100,000 additional technicians. At the present time only about 1000 students are enrolled in the Ministry agriculture schools. The need for students is self evident.

This lack of students preparing for careers in agriculture points up the need for a strong program of guidance and counseling associated with recruitment and selection of students. Thirty percent of the population lives in Buenos Aires, so it is necessary to interest the students in the city in agriculture and to attend the agricultural schools. More important, however, farm and village children should be encouraged to enter the agricultural schools. There is a need to motivate good capable students for a career in agriculture. Information can be developed which explains the many career opportunities. Brochures and pamphlets prepared in an attractive manner would help. Personal school contacts by teachers and students could make quite an impact.

The selection of students is important. In addition to achievement in studies other factors are just as important. Background, experience, interest, motivation, and desire play significant roles in the selection of those students for careers in agriculture.

Counseling programs would be worthwhile to establish in each school. Personal as well as career and vocational counseling is important to students.

Adequate records of accomplishment and follow-up are important. Success on the job is one of the criteria to measure success of the educational process.

To implement a guidance and counseling, and recruitment and selection program, it is recommended that one of the technical assistants be assigned to work with the schools and the office of Agricultural Education in developing a strong program of recruitment to enlist young people to enter a career in agriculture.

CHAPTER VII

INDIVIDUAL SCHOOL ANALYSIS

Eight of the twelve schools were visited by the survey team. It was impossible to visit two of the schools because of inclement weather. Transportation problems prohibited the visit to the other two schools. However, from reading reports and information gained through discussions the team was able to obtain the necessary information for analysis purposes on these schools.

A survey form was developed in order to gather as much significant information as possible on each of the schools. A similar form was developed for use by the architects on the team. Samples of these are shown in the Appendix, Exhibits A and B.

A chart on page 53 shows the rank in importance of the agricultural commodities for the zone of influence served by each school.

This chapter outlines the observations at each school and provides specific recommendations on suggested action to be taken to upgrade the program.

BELL VILLE

(ESCUELA AGROTECNICA)

I. Recommendations

1. Elevate the program from basic general agriculture to advanced technical level and require 3 years basic cycle secondary as an admission requirement.

2. Establish a strong program in agricultural mechanics, including farm power and machinery, irrigation and surveying to replace that now existing at Miramar and to become the temporary center of training for this specialty until a new plant is built at Casilda-Zavalla.

3. Develop a strong program in dairy husbandry and dairy manufacturing.

4. Equip existing agricultural mechanics shop with modern tools and equipment.

5. Build and equip new dairy barn and creamery.

6. Procure adequate laboratory equipment for chemistry, physics and biological sciences.

7. Procure books, audio visual equipment and teaching aids.

8. Augment the present complement of tractors and machinery with modern equipment.

II. Location and Environment

The school is located 1½ miles from the town of Bell Ville in Cordoba province, 280 miles northwest of Buenos Aires. The 1,870 acre school farm is traversed by a main highway and railroad. The quality of soil is excellent and well adapted to a wide variety of crops. The principal crops of the region are grains, vegetables, fruits and livestock. Average annual rainfall is 35 inches but this comes mostly between October and March and there is often a long dry spell during the fall and winter months.

Irrigation is not generally practiced in the area, but a river with ample water flows through one corner of the school property and some irrigation is practiced on the school farm. An abandoned irrigation canal traverses the farm.

III. School - General Agriculture - 4 Year Curriculum

A. Enrollment

Present 79
Projected 250

Students are admitted directly from primary school upon passing an entrance examination, although 95% of those now enrolled have at least one year of secondary school.

B. Curriculum

1. The existing curriculum appears to be oriented toward the preparation for college and university rather than for technical work in agriculture. Except for one three-hour course in the second year, the first two years of study are entirely in academic subjects. Students in the fourth year follow a program of specialized study which, upon completion, will qualify them for admission to some colleges or universities. Part of each day, however, in each of the four years is devoted to practical work on the school farm.

2. Teaching Aids

   A modern library of texts and reference materials is badly needed. Wall charts, film strips and slides dealing with the technical areas of agriculture taught are needed, together with appropriate projection equipment.

C. Staff

Administrators	3
Teachers	9
Workers	25
Service	7
Total	40

Good management practices and husbandry are practiced on the farm and the staff seem to be technically well qualified. Here, as in other schools, the recruitment and retention of qualified teachers is difficult.

IV. Community Resources

Am advisory committee of community agricultural leaders, "Cooperadora," has been in operation for the past two years. This was the first such organization to be created in the National Agricultural Schools. The Cooperadora has been of great help in co-ordinating the educational program with the needs of the community, providing technical assistance, marketing the agricultural products of the school and providing financial assistance for the program. Through the Cooperadora, parents contribute substantially toward the cost of food for the students.

The school at Bell Ville is located near the center of Argentina's farm machinery and equipment industry. There is considerable mechanization of agricultural practices in the area. This together with the large area (1,870 acres) of good farmland on the school farm adapted to a wide variety of crops makes the school particularly well adapted to a specialized training program in agricultural mechanics and farm power and machinery. A large existing shop building could be equipped for such a specialty program at a minimum cost. Proximity of the river with abundant water would make possible a strong program in irrigation and surveying (important elements in an agricultural mechanics program).

A strong program in agricultural mechanics and farm power and machinery would: (1) Make possible more efficient exploitation of the land resources owned by the school, (2) Make available for the farms of the area (and the entire country) a source of graduates trained in agricultural machinery and irrigation, (3) Make available to the farm machinery industry a source of technicians that would enable the industry to better serve the agriculture of Argentina, (4) Develop a closer working relationship between the school and the farm machinery industry by which competent teachers, tractors and machinery and references and teaching aids could be obtained for the instruction program.

Located midway between the three large cities of Rosario, Cordoba and Santa Fe, Bell Ville is ideally situated to develop a strong program of dairy production and manufacturing. The cities mentioned should provide a good market for dairy products. The land is well suited and of sufficient acreage to support a good dairy herd. Dairy and livestock are important elements in the total agriculture of the area.

V. Facilities

The school has 1,800 acres of rich flat agricultural land suitable for diversified farming. There is abundant water for

irrigation. There is an excellent building for agricultural mechanics and good swine and poultry units. The creamery has been recently repaired and painted. New cheese equipment was recently purchased by the "Cooperadora." The fruit production building is in good condition but not equipped or used. The dairy barn is old. Lecture rooms and laboratories are old and in poor condition. Laboratories need new equipment.

BOLIVAR

(INSTITUTO SUPERIOR DEL HOGAR AGRICULA)

I. Recommendations

1. More emphasis should be given to the practical basic program in home economics, and more students admitted directly from primary school for education in rural living. This should be changed from 2 years to a 3-year basic home economics program.

2. A 3-year program of basic general agriculture should be established and facilities provided, including dormitories, for boys. A co-educational program at Bolivar would more effectively use the farm and other excellent agricultural facilities. Boys and girls would study together in classes common to both, further reducing the cost of instruction per student. Boys and girls should use a common dining facility improving the social atmosphere and further reducing costs.

3. Modern texts, references and other teaching aids should be acquired and the library located in a room where it could be used to better advantage by both boys and girls.

4. The Director at Bolivar should be given the responsibility of supervising the home economics programs recommended for San Juan and Casilda.

5. A "casa practica," practice house, should be constructed and equipped in which the students could get homemaking experience in an atmosphere of rural family living.

II. Location and Environment

Bolivar school of 500 acres is located 4 miles north of the town of Bolivar in Buenos Aires province. It is the only Secondary School of home economics in Argentina. The average temperature is 60° F. and the rainfall averages 32 inches per year. The area is well suited for livestock, grain and forage production.

III. School - Home Economics (girls) - 2 Year Professional Curriculum

A. Enrollment

Present 30
Capacity 45
Projected 200

B. Curriculum

This is a two-year professional curriculum requiring 5 years of secondary school (Bachiller) for admission. Girls are also admitted directly from primary school to a two-year practical program of education for rural living. The curriculum is well designed for the type of special program that it serves. More girls should be admitted to the practical basic program.

More modern texts, references and teaching aids are needed. A small library facility exists in the girls dormitory building.

C. Staff

Administrators	1
Teachers	9
Workers	8
Service	3
Total	22

The staff appears dedicated and well qualified. The worker staff is too large for the number of students served.

IV. Community Relations

Program seems to be isolated from the community it serves. Close liaison between farms and school is lacking. There is no "Cooperadora" organization.

V. Facilities

1. Lecture rooms are adequate for present enrollment of 30.

2. 5 new practice kitchen units have been completed.

3. A farm of approximately 475 acres is kept for practice or laboratory use by the students. The facilities include poultry houses, dairy barn and machinery buildings - all in good condition but not being used to capacity. A dairy herd of 102 cattle - Hollanda breed - is maintained. Seven cows are milked twice a day for the manufacture of cheese and butter. The balance are nursing calves or a young stock. The land is being used as follows: Grains, 190 acres; Forage crops, 63 acres; Fruits and Vines, 12 acres; Pasture, 135 acres; Gardens and Parks, 25 acres; miscellaneous, 75 acres.

CASILDA - ZAVALLA

(INSTITUTO SUPERIOR DE ENSEÑANZA PROFESIONAL AGROPECUARIA)

I. Recommendations

1. Extend the capacity of the school to 250 students to meet the need for trained technical and professional personnel and to accommodate the increasing number of applicants.

2. Add 2-year professional and 3-year basic curricula in home economics.

3. Develop strong teacher and extension training programs with competent personnel to meet the great need for professional personnel in agriculture and home economics and to carry out the professional program in which the first beginning class enrolled this year.

4. Obtain new machinery and equipment for the operation of the school farm, dairy and creamery.

5. Procure equipment to properly equip science laboratories and add one new laboratory.

6. Procure additional books and teaching aids for the Library.

7. Construct an additional brooder house for broiler and fryer production.

II. Location and Environment

Casilda is located 30 miles west of Rosario in the province of Santa Fe. This is an area of rich black loam soil adapted to a wide diversity of crops. Vegetables, fruits, grains, forage crops, alfalfa, livestock, dairy and poultry all do well here. The land is flat and the agriculture depends primarily on natural rainfall rather than irrigation. The average annual rainfall is 36 inches, 75% of which falls between October and April. Temperature ranges from 22° F. to 104° F.

III. School - General Agriculture - 4-Year Professional Curriculum

A. Enrollment

Present 136
Capacity 155
Projected 250

Under a new plan started this year applicants must have completed the three-year basic cycle in a general secondary school or normal school to qualify for admission to the four-year agricultural program. A limited number are admitted directly from the primary schools to enroll in a one or two-year practical course for the training of farm workers.

B. Curriculum

There are three curricula offered:

1. A three-year advanced program leading to the title "Agronomo", which qualifies graduates for technical and management positions in agriculture and related industries. Admission to this program requires completion of the three-year basic cycle of a general secondary school or normal school.

2. A four-year professional curriculum for the preparation of Agricultural Teachers and Rural Extension Agents. Entrance requirements and the first two years of this curriculum are the same as for agronomo. In the third year the pattern is changed somewhat to include professional and methodology courses related to teaching or extension as the case may be. The last half of the fourth year is devoted to practice extension work under the supervision of extension personnel (INTA) or to practice teaching in an agricultural school.

3. A one or two year program of practical and applied training for agricultural workers that includes a minimum of academic course work. Entrance to this program requires completion of the elementary school level. The title of "Experto" is conferred upon completion of this course.

There seems to be satisfactory balance between theory and practice in all curricula in accordance with the training objectives. The agronomo and professional curricula however, should be revised somewhat to conform to the proposed basic core curriculum and to include a study of general agriculture in the first year.

4. Teaching Aids

Casilda has a reasonably good library and employs a full time librarian. However, much of the reference material is obsolete and modern texts and references are needed. Wall charts, film strips and slides dealing with the technical areas of agriculture taught are needed, together with appropriate projection equipment.

C. Staff

Administrators	4
Teachers	15
Workers	61
Service	12
Total	92

IV. Community Resources

An advisory committee of community agricultural leaders, "Cooperadora", has been in operation for the past year and a half. This group has been of great help in coordinating the educational program with the needs of the community, providing technical and financial assistance in marketing agricultural products produced by the students. Through the "Cooperadora" arrangements have been made for parents to contribute to the feeding of the students.

The school at Casilda has earned an enviable reputation across the nation for the excellence of instruction in agriculture. It should continue to attract an increasing number of students in the future.

V. Facilities

Casilda is located in a rich and productive agricultural area. Its land and facilities are used effectively in carrying out the instructional program. For the most part, the buildings and facilities are in good condition and well maintained. There is a shortage of student housing accommodations, science laboratories, and farming equipment.

Purebred livestock and poultry is raised and good records are kept. An extensive program of bee breeding and apiary work is carried on. Wheat, corn, oats, barley and rye are the principal field crops. A herd of 130 Holstein cows, 53 horses, 145 swine and a flock of 2,000 chickens, ducks and geese make up the livestock. A variety of fruits, vegetables and forage crops are raised. Some alfalfa, hay and sorghum silage are made for winter feeding.

In addition to the 750 acres on the Casilda campus proper, there is another farm of 1,260 acres at Zavalla, about 15 miles east. This farm is operated as a part of the Casilda program.

VI. Zavalla

The National Agricultural Schools system owns a tract of land at Zavalla, 15 miles west of Rosario, the second largest city in Argentina. This tract contains 1,260 acres of flat rich loam soil, some 250 acres of which are devoted to park. This has been landscaped and planted to a wide variety of trees, shrubs and gardens, which are well maintained. A primary school, storage building, barns for livestock and dwellings for caretakers are the only buildings now on the property. The land is being farmed by the school at Casilda, 15 miles west.

Located as it is near the geographical center of the country with moderate climate and an average annual rainfall of 36 inches, this property would make an ideal location for a post-secondary school of Agriculture and Home Economics at the Junior College level. The large park area with its beautiful trees and plaza-like gardens would make an ideal setting for a campus, with plenty

of room for future expansion. The 1,000 acres of rich farming land would be ample to carry on an intensive post-secondary program of education in agriculture.

The property is located less than one mile from the main highway and railroad to Rosario. This is in the heart of the agricultural machinery and equipment production area.

Since mechanization is destined to play an increasingly important role in the development of agriculture in Argentina, the committee visualizes the future development of a strong program in agricultural engineering and mechanization at the post-secondary level as an important element in the agricultural education program in Argentina.

As the program of agricultural education and home economics in the secondary schools is upgraded the need for better trained teachers and professional extension workers will also grow.

In order to implement a teacher preparation program in agriculture and home economics immediately to meet current needs, the pre-contract team recommended that this program be started at Casilda where a large part of the necessary facilities already exist. However, Casilda needs these facilities for the growing number of students who are applying for entrance to the secondary level program.

To relieve this situation and to provide opportunity for the better students in all secondary schools of agriculture and home economics to continue their education toward teaching and extension careers it is recommended that provisions be made in the near future to construct a complete new school of Agriculture and Home Economics at Zavalla patterned after the area vocational schools in the U. S. which serve students who have completed the media schools and are not able to go on to the university.

One of the duties of the U. S. technical assistance team which will be assigned to assist in implementing the recommendations of the pre-contract team, should be to study further this proposal and to work with Argentine officials in developing the details of the Zavalla campus.

The first step in the development of this property should be to construct facilities for agricultural mechanics and farm machinery. In addition a housing and feeding component for 125 students should be considered in the initial construction plans of this first step.

COLON

(ESCUELA DE AVICULTURA)

I. Recommendations

1. Continue with 3-year basic program oriented strongly toward poultry production.

2. Include more general agriculture courses in keeping with the agriculture of the area.

3. Revise curriculum to conform to 3-year basic agriculture pattern.

4. Remodel dormitories and kitchen to bring capacity of school to 120 students.

5. Purchase new equipment for science laboratories and books for library.

II. Location and Environment

The school is located on the eastern border of Argentina, 3 miles from Colon in the province of Entre Rios. The property consists of 250 acres. The climate is mild with an average temperature of 66° F. Rainfall is heavy, averaging 59 inches per year, with the heaviest precipitation in March and April.

Cereals, hay, and sorghums are the principal crops, and a wide variety of fruits and vegetables are grown. Poultry farming is very important in the area.

III. School - 3 Years - Basic Agriculture, Poultry Production

A. Enrollment

This school was not visited by the team so the current enrollment figure was not obtained.

Projected enrollment is 120 to 150 students.

B. Curriculum

The curriculum is a 3-year basic agriculture program oriented toward poultry production. Students are admitted upon completion of primary school.

C. Staff

Administrators	4
Teachers	7
Workers	9
Service	5
Total	25

IV. Community Resources

An association of cooperators (Cooperadora) has been organized and is functioning at the school. This has been a great asset to the program. There is ready market for poultry products and the Cooperadora has been effective in helping to develop a marketing program.

V. Facilities

Facilities are generally adequate and in good condition. Science laboratories are in need of equipment and library books, references and teaching aids are lacking. Dormitories and kitchen need to be remodeled for greater comfort and efficiency.

LAS DELICIAS

(ESCUELA GRANJA)

I. Recommendations

1. Continue with 3-year basic program oriented toward dairy, livestock and vegetable production.

2. Revise curriculum to conform to 3-year basic agriculture pattern.

3. Purchase new equipment for science laboratories and books for library.

4. Remodel or replace existing buildings to bring them to acceptable standards.

II. Location and Environment

The 750 acre school is located adjacent to the village of Las Delicias 9 miles south of Parana, capital of Entre Rios province. Another farm of 380 acres 60 miles away also belongs to the school. It is used for production only.

The climate is mild and wet with an average temperature of 65° F. and average annual rainfall of 46 inches.

Major crops in the area include wheat, corn, and flax. Dairy and poultry production are important in the area and find a ready market in nearby Parana. Considerable livestock is also produced. Milk is the chief product of the school.

III. School - 3 Years Basic Agriculture - Dairy and Livestock

A. Enrollment

This school was not visited because of inclement weather and bad roads so the immediate enrollment is not known.

Projected enrollment is for 120 to 150 students.

B. Curriculum

The curriculum is a 3-year basic general agricultural program oriented strongly toward dairy and livestock. Students are admitted directly from primary school.

C. Staff

Administrators	3
Teachers	3
Workers	13
Service	2
Total	21

IV. Community Resources

Las Delicias is near the provincial capital of Paraná which provides a ready market for agricultural products of the area, especially dairy, poultry, meat and vegetables. An association of cooperators (Cooperadora) has been organized and functions effectively in coordinating the instructional program with the agricultural needs and problems of the community.

V. Facilities

The school was built 60 years ago and most of the facilities are in bad condition. Many should be replaced. Most of the farm buildings are in good shape. As in other schools, science laboratories are in need of equipment and library needs modern texts, references and teaching aids.

MIRAMAR

(ESCUELA MECHANICO AGRICOLA)

I. Recommendations

1. Change the area of specialization from agricultural machinery and mechanics to a 3-year basic general agriculture program.

2. Move the agricultural machinery and mechanization temporarily to Bell Ville, near where the agricultural equipment industry is centered.

3. Initiate a recruitment program to increase the enrollment to full capacity of the facilities and to meet the needs of the agricultural community.

4. Revise curriculum to conform to the 3-year basic agricultural curriculum.

5. Employ a full time farm superintendent.

6. Use more modern farm management practices.

7. Convert some of the existing shop buildings into classrooms and laboratories.

8. Re-schedule classes to more effectively utilize classrooms, laboratories and other facilities.

9. Provide and equip science laboratories.

10. Provide a modern library of texts, reference materials and audio-visual aids and equipment.

II. Location and Environment

The school is located about 4 miles from the town of Miramar and about 250 miles south of Buenos Aires. The temperature ranges from 20° F. to 100° F. The area is well suited to cattle, which represents about 80% of the agriculture in the area. Some pasture grasses, potatoes and cereals are also grown. The soil is very fertile. Rainfall is the main source of irrigation, with a total annual rainfall of 32 inches.

III. School - Specialty Agriculture Mechanics - 3-Year Basic Curriculum

A. Enrollment

Present 40
Projected 130
50% rural: 50% urban. About 12 graduates each year. Graduates usually return to their family farms or seek employment in the automotive garages in the cities. The demand from farms for graduates is 4 times greater than the supply.

B. Curriculum

The curriculum is a three-year basic curriculum in Agricultural Mechanics requiring completion of primary school for admission.

1. The curriculum is well designed for the type of specialty program it serves. More general education courses are needed and the curriculum should be revised to conform to the recommended basic pattern. Facilities are not being used to maximum capacity, and both lecture rooms and laboratories are idle half of each day.

2. Teaching Aids

A modern library of texts, reference materials, and other teaching aids is badly needed. Science laboratories with necessary equipment are needed.

C. Staff

Administrators	2
Teachers	10
Workers	6
Service	5
Total	23

Qualified instructors are difficult to find in this area. The present staff is doing a good job and students seem interested in their work.

IV. Community Resources

There is little liaison between the school and the farm equipment industry. Many graduates who should go into farms of the area are enticed into the cities to work in automotive garages. The resources and facilities of the school are not being fully utilized because of the low enrollment.

V. Facilities

1. Generally adequate, but not being used efficiently.

2. Science laboratories need equipment.

3. Agriculture mechanics shops are adequate and fairly well equipped.

4. The school campus including the farm consists of 500 acres; with the distribution as follows: Grains, 150 acres; Forage, 5 acres; Fruits and Vines, 25 acres; Pasture Land, 240 acres; balance in buildings and yards. The farm has several tractors available for its operation. However, most of the tractors need repair work.

OLAVARRIA

(ESCUELA GRANJA EN OLAVARRIA)

I. Recommendations

1. It is recommended because of the poor condition of the entire facility, that the present school be moved to another location in this general area and a new facility be constructed on the new site. There is an opportunity to exchange the present land for a new parcel of larger acreage. The instruction should specialize in livestock production and meat processing.

2. The curriculum should be elevated to a three year advanced technical program, specializing in livestock and requiring three years secondary basic cycle for admission.

II. Location and Environment

The present school is located three miles from the town of Olavarria and about 220 miles southwest from Buenos Aires. It serves an area of five counties.

The temperature varies from 14° F. to 105° F. with a mean of 57° F. The rainfall averages about 32 inches annually. This area produces primarily livestock.

III. School

A. Enrollment

Present 23 students
Capacity 40 Students
Projected 250 students

B. Curriculum

Curriculum is three-year basic general agriculture with students admitted upon completion of elementary school.

A few good teaching charts on botany and horticulture are available and used. Need more complete visual teaching aids for all courses.

Good library room but few books. Need a full complement of books in the library to support the courses offered.

C. Staff

Administrators	2
Teachers	8
Workers	6
Service	2
Total	18

IV. Community Support

A committee of Cooperators (Cooperadora) is functioning.

V. Facilities

1. Facilities are old but usable. Poor heating and lighting. Electrical wiring is dangerously exposed and hooked up. School was an old army facility.

2. Need full complement of laboratory equipment for sciences.

3. The creamery facility being used is completely obsolete with old, inefficient equipment which is very difficult to keep clean and sanitary. The school has a good building for Agriculture Mechanics if cleaned and reorganized.

4. The farm contains about 230 acres, 21 milking cows, 39 other cattle and 5 head of horses. Also a fairly efficient poultry brooding unit is in operation. The land is rather poor, with poor drainage. The campus is located close to the city limits.

5. The school has an offer to exchange this campus of 230 acres for a ranch of 3000 acres about 15 miles from Olavarria.

QUINES

(ESCUELA DE CULTIVOS E INDUSTRIAS REGIONALES)

I. Recommendations

1. Finish and equip dormitories, build two new houses for teachers and re-open the school.

2. Curriculum should be a three-year basic general agricultural curriculum oriented toward irrigated diversified agriculture.

3. Organize a "Cooperadora" to help develop a fresh emphasis and enthusiasm for agricultural education in the community.

II. Location and Environment

The school at Quines is located in a semi-arid mountain valley in San Luis province 450 miles northwest of Buenos Aires. The school farm is 750 acres, 450 of which are in rough mountain land. About 200 acres are rich valley soil under irrigation and particularly well adapted to alfalfa, green vegetables, deciduous fruits, grapes, and irrigated pastures. The Quines area is one of the chief suppliers of fresh vegetables, fruits and dairy products for the city of Cordoba.

III. School

A. Enrollment

The school has been closed and is not currently operating due to the lack of teachers and dormitories for resident students. Dormitories for 60 students have been started but left unfinished. Much needs to be done to provide necessary facilities to make the school operable.

B. Curriculum

The school operated for a while with students living off campus. The curriculum was a 3-year basic program in general agriculture with students admitted upon completion of elementary school.

C. Staff

A skeleton staff has been retained to operate the farm and maintain the campus.

IV. Community Resources

There is a tremendous irrigated agricultural potential in the Quines school area, particularly in grapes, olives, dates, alfalfa, fresh vegetables and dairy products. There is an abundance of cheap water for irrigation from dams and canals that have been built.

No community cooperative association (Cooperadora) has been organized as in other agricultural schools.

V. Facilities

With the exception of dormitories for students and housing for teachers the school is reasonably well equipped. Additional books and references are needed, and also equipment for the science laboratory.

SALTA

(ESCUELA AGROTECNICA)

I. Recommendations

1. Continue the four-year basic curriculum in general agriculture. Revise to conform to basic recommended pattern.

2. Employ full time farm superintendent for farm.

3. Increase production of farm and laboratory by more efficient and modern management practices.

4. Improve irrigation by smoothing and rough-leveling the land.

5. Employ more efficient land use within fields.

6. Employ more efficient water distribution methods.

7. Obtain new tractors and equipment in order to farm effectively.

8. Use more modern dairy practices in production and management.

   Example:

   A. Milk cows twice a day instead of once.

   B. Use a cooling and holding tank for the milk.

9. Use more modern swine production practices.

   Example:

   A. Pig brooders

   B. Cholera vaccination.

10. Use the poultry unit more completely.

11. Use more modern poultry management and production practices.

12. Clean and modernize the milk processing laboratory.

II. Location and Environment

The school is located approximately three miles from the city of Salta and about 1,000 miles northwest of Buenos Aires. It serves an area of approximately 10 counties. The temperature ranges from 16° F. to 100° F. The altitude is 3895 feet. The relative humidity averages approximately 69%. The annual average rainfall is about 20 inches. The area grows the following crops: tobacco, corn, sugar cane, fruits, and vegetables. There is some cattle raising and dairying. The soil is fertile and productive. The workable top soil varies in depth from 3 to 7 feet. A ready supply of surface water is available from a nearby river and is distributed over the entire area by a ditch system.

III. School - 4-Year General Agriculture

A. Enrollment

Present 103
Projected 200
50% to 60% of students who start, graduate. 85% are from the Salta area; 10% from other provinces, 5% from foreign countries. Graduates are employed (1) on their own farms, (2) Agricultural Agencies, (3) Plantations, (4) INTA Experiment Stations, (5) 5% go to the University.

B. Curriculum

The curriculum is four-year basic general agriculture and seems to have good balance between general education and agriculture and between lecture, laboratory and farm practices.

The school year is 40 weeks. A few students remain at the school during the summer for practical experience.

C. Staff

Administrators	3
Teachers	7
Workers	31
Service	3
Total	44

IV. Community Resources

A committee of Cooperators (Cooperadora) has been functioning for 1½ years and is a distinct asset to the school.

V. Facilities

1. Lecture rooms are adequate but cold and improperly lighted.

2. Laboratories are adequate except lacking equipment.

3. There are adequate production laboratories except the milk processing laboratory needs new equipment.

4. Modern texts, bulletins and other instructional materials are needed for the library. Wall charts, film strips and slides dealing with technical areas of agriculture are needed together with suitable projection equipment.

5. The 725 acre school farm production is distributed accordingly: Grains, 70 acres; Forage Crops, 42 acres; Poultry, 60 acres; miscellaneous, 26 acres. Some brush land is currently being cleared and readied for production. The soil is typical of the area and varies from marginal to excellent. The school receives free water for irrigating purposes from the nearby river. An open ditch system is used to distribute the water. The farming equipment consists of one operating wheel type tractor, 30 H. P. diesel powered and miscellaneous equipment. Two other tractors are now inoperable.

   The dairy has 30 cows milked once a day. There is evidence of poor herd management. The cattle are Hollanda (Holstein). The bull is an excellent specimen and was acquired from the dairy herd at Casilda. A total of 170 head of cows, heifers and steers are maintained.

   The poultry unit is neat but not used to capacity. The swine herd of approximately 10 Duroc sows and litters is kept in a community pen. There was some recent trouble with cholera. The facilities are good but litters weaned are small.

SAN JUAN

(ESCUELA DE FRUITICULTURA Y ENOLGIA)

I. Recommendations

1. Extend the capacity of the school to 500 students to meet the need for trained technical and professional personnel in the specialized areas of fruiticulture, wine making, olives and olive oil production, food processing and home economics.

2. Modify the curriculum to conform to the recommended 3-year advanced technical program oriented to the above mentioned specialties, and provide for a fourth year of professional training leading to extension specialist work, advanced technology in industry, or teaching. The first half of this fourth year would be spent in Casilda, the second half in San Juan for supervised practice.

3. Maintain the current 3 or 4 year basic agriculture program for students who wish to enter directly from primary school.

4. Establish a three-year basic program in home economics for girls. Provide necessary laboratories and other facilities for this program. No dormitories are needed as all students live in town.

   A co-educational program at San Juan would increase enrollment and insure more effective use of instructional facilities, thus reducing the cost per student. Boys and girls would study together in classes common to both.

   Classes should be re-scheduled to use these facilities both morning and afternoon.

   Food processing, one of the specialties at San Juan, is an important element in the home economics program. Two girls are currently enrolled in this program.

5. An agricultural mechanics facility, properly equipped, should be provided to teach a strong program in agricultural mechanics including irrigation and surveying.

6. Modern tractors and equipment should be procured for the school farm to provide practice for students and to encourage mechanization.

7. A well qualified farm manager should be employed to manage the two school farms.

8. New classrooms and science laboratories should be constructed and properly equipped.

9. A modern library of texts and references, together with instructional charts, film strips, slides and projection equipment should be provided.

   Production laboratories for making wine, olive oil and food processing should be provided and properly equipped.

II. Location and Environment

San Juan School of Fruiticulture and Enology is located in the San Juan River Valley in the Province of San Juan in the foothills of Andes. The area is semi-arid. Average elevation is about 2,000 feet with an average rainfall of 4½ inches. The area depends entirely upon irrigation for its agriculture. Some surface water in an irrigation system is available from the San Juan River. The underground water table stands about 60 feet, assuring reasonably low cost water. The rural areas lack electricity, and pump by diesel power.

The soils vary from deep silty loams to tight clay loams. All of these soils and the general climatic conditions are adapted to grape growing. The general farming practices are excellent although the methods use mostly hand labor. The two chief industries of the area and surrounding region are wineries and olive oil factories.

III. School - 5-Year Fruiticulture, Enology, Food Processing, Olives and Olive Oil.

A. Enrollment

Present 216
Projected 500
Graduates 20-30/year. 90% of the students who enter the school graduate. 85% of the graduates are employed in technical and management positions in the wine and olive oil industries of the area. Students come from the principal wine making areas of the world to study here.

B. Curriculum

1. The 5-year professional curriculum in Fruiticulture, Enology and Food Processing is well designed for the type of specialty program it serves. A three-year basic program is open to students who want more practice and less theory.

2. Teaching Aids

   A modern library of texts and references is lacking. Wall charts, film strips and slides dealing with the technical areas of agriculture taught are needed together with suitable projection equipment. Science laboratories with a full complement of equipment are needed.

C. Staff

Administrators	5
Teachers	11
Workers	25
Service	2
Total	43

Teaching staff seem to be well qualified in both formal education and experience in the industry of their specialty. Salaries are ridiculously low and most instructors own a business or work at other jobs in order to survive. Because of low salaries, it is difficult to attract and hold good full time teachers. The current staff is a dedicated group and the excellence of instruction is reflected in the ability, resourcefulness and attitude of the students and graduates.

IV. Community Support

Liaison with the agricultural and related industries of the community is excellent. A committee of agricultural and industrial leaders in the community known as the "cooperadora" works closely with the school in giving technical advice, recruiting students and placing graduates, providing work experience opportunities and rendering financial assistance to the program. The high quality of instruction given by the school is recognized and respected by the community and the agricultural industries of the area.

V. Facilities

1. Classrooms

The classrooms are old, temporary structures and improperly constructed for adequate ventilation, lighting and heating. The rooms are small with an average of 14 square feet per student. Students and instructors wear overcoats to keep warm.

2. Laboratories

The walls are dark, which coupled with poor lighting, creates a poor atmosphere in which to study. Students use several small rooms throughout the buildings during laboratory exercises because of insufficient electrical outlets.

3. Production Laboratories

In spite of very poor facilities a good job is being done in the laboratories. New laboratories are needed to provide opportunity for the students to practice skills in the technology of enology and oil making. Some reasonably good equipment is on hand and being used.

4. The school farm, composed of 67 acres, is well laid out and close to the center of instruction. It seems to be well integrated into the school curriculum. The school also owns and operates a branch farm of 145 acres, 10 miles from the main campus.

A new well and irrigation pump has been installed at this farm with the water table at 60 feet.

The farm has a variety of fruit trees and vines.

The equipment consists of one 30 H. P. wheel tractor, miscellaneous equipment and a few horses. Much of the farm work is done by hand instead of by mechanical equipment.

TANDIL

(ESCUELA DE PRODUCCION E INDUSTRIALIZACION DE LECHE)

I. Recommendations

1. Elevate the curriculum to Advanced Technical level requiring three years secondary basic cycle for admission. The specialty of dairy production and manufacturing should be retained.
2. Hire full time high caliber farm superintendent.
3. Use the best crop management practices.
4. Grow more feed for winter supplemental feeding.
5. An entire new creamery building complete with equipment be built and equipped.
6. A meat processing room be constructed and equipped.

II. Location and Environment

This school is located five miles from the city of Tandil in the province of Buenos Aires and approximately 200 miles southwest of Buenos Aires. It serves an area of approximately six counties. The temperature in the winter drops to 14° F. and rises to 105° F. in the summer. The relative humidity is fairly high - rising to 75-80% at times. The annual rainfall is 32 inches. Beef cattle predominate with some dairying and grain growing. The soil is class I with a gentle rolling topography.

III. School - Dairy and Dairy Manufacturing - 3-Year Basic Agriculture Curriculum

A. Enrollment

Present 50
Projected 250

B. Curriculum

A three-year basic curriculum in dairy production and manufacturing is open to students who have completed primary school

education. This curriculum prepares them as technicians for dairy farming and the dairy industry.

Because no secondary school work is required for admission a considerable amount of time must be devoted to basic education subjects.

C. Staff

Administrators	3
Teachers	10
Workers	4
Service	4
Total	21

IV. Community Support

A committee of Cooperators (Cooperadora) is functioning.

V. Facilities

1. The lecture rooms are adequate, but as in other schools, cold and imporperly lighted.

2. There are no laboratories for the teaching of the chemical or physical sciences.

3. The creamery is old and obsolete. Equipment used is antiquated and the high humidity of the area creates some problems in the manufacturing and curing of cheese.

4. The farm consists of 250 acres owned and 534 acres rented adjoining the school. The following crops are grown: grains, 160 acres; forage feeds, 375 acres; fruits and vines, 7 acres; and pasture, 225 acres. A herd of close to 400 Hollanda (Holstein) cattle are maintained. Nearly 200 cows are milked. An adequate milking barn and equipment is maintained. This school is the primary dairy school in Argentina.

VICTORICA

(ESCUELA AGRICOLA)

I. Recommendations

1. Continue as a three-year basic agriculture curriculum oriented toward livestock production.

2. Revise curriculum to conform to basic agriculture pattern.

3. Provide better equipment for the science laboratory.

4. Provide new books, reference materials and teaching aids for the library.

5. Initiate a strong range management and conservation program to increase the production of beef per acre.

II. Location and Environment

Victorica is located in La Pampa province 400 miles west of Buenos Aires. The 4850 acres is mostly mountain land and the area is devoted primarily to livestock. The region is semi-arid with an average annual rainfall of 18 inches and temperatures ranging from 15° F. to 110° F.

III. School - 3 Years Basic Agriculture - Livestock and Forestry

A. Enrollment

40 students
80 projected

Low population density of the area served does not indicate a high enrollment potential.

B. Curriculum

The curriculum is 3-year basic agriculture oriented toward livestock, primarily beef cattle. Students enter directly from primary school.

C. Staff

Administrators	1
Teachers	4
Workers	3
Service	3
Total	11

IV. Community Resources

A committee of cooperators (Cooperadora) works closely with the school staff in implementing a program to meet the agricultural needs of the area.

V. Facilities

This is a relatively new school (1952) and the facilities are in good condition. The laboratory is small and needs better equipment and materials. The library needs new books and teaching aids. Water is scarce. It must be pumped from a deep well which is costly.

RANK IN IMPORTANCE OF AGRICULTURAL COMMODITIES
FOR THE ZONE OF INFLUENCE SERVED BY EACH SCHOOL

SCHOOL	CEREALS	OILS	WOOL	MILK	EGGS	CATTLE	SHEEP	HOGS	HORSES	POULTRY
BELL VILLE	2	5	10	1	4	5	11	2	2	4
BOLIVAR	3	2	3	3	5	1	3	3	4	5
CASILDA	1	1	8	2	3	3	7	1	1	2
COLON	9	7	9	7	2	8	9	10	8	3
LAS DELICIAS	7	3	6	5	1	6	8	6	3	1
MIRAMAR	6	8	4	9	8	7	4	9	9	7
OLAVARRIA	5	6	2	8	7	4	2	8	7	8
QUINES	11	9	7	10	10	9	6	7	6	9
SALTA	10	11	11	11	12	10	10	11	10	11
SAN JUAN	12	12	12	12	11	11	12	12	12	10
TANDIL	4	4	1	4	6	2	1	5	5	6
VICTORICA	8	10	5	6	9	12	5	4	11	12

CHAPTER VIII

PARTICIPANT PROGRAM

Continuing or in-service education is an important aspect of an agricultural education program. With the new developments and technological changes, it is even more important that teachers upgrade themselves through continuing education.

It is recommended that a group of selected teachers and administrators or even some selected outstanding students who plan to be teachers spend a year in study at the College in the U.S. providing the technical assistance under the contract.

The practical approach to education in agriculture should be stressed. The selected people would have an opportunity to become thoroughly acquainted with the basic skills and management practices that would benefit the program in Argentina.

Upon returning to their home country, they would be leaders in agricultural education and could adjust and adopt the new techniques and subject matter to their local school situation.

This participant program would give recognition to agricultural education and provide a significant strengthening of agricultural knowledge and its application.

It would be important that the selected participants be able to communicate readily in English. This would make the program effective for all parties concerned. Experience has shown that this is very essential.

In this type of program it would be advantageous to "tailor make" a program of studies to meet the specific needs of the selected individual based on his background and experience.

If the participant program was established at the California State Polytechnic College, for example, the participants could attend a regular school year from September 15 to June 15. It would then also be advantageous to attend part of the state-wide agricultural teacher's summer conference which is held at Cal Poly during the last two weeks in June.

During the Christmas vacation period trips to see various agricultural areas in the state could be arranged.

The costs of such a participant program includes only the U.S. costs which would be covered under the contract. The participant's home country, Argentina, would have to bear the transportation costs to and from the contracting collegiate institution.

A suggested budget for a selected group of ten participants is as follows:

Participant Budget September 15 to July 15 (304 days)

10 Participants

College Costs

Materials and service fee:

$200/year x 10 participants	$ 2,000.00
Out-of-State Fee:	
$360/year x 10 participants	3,600.00
Books and supplies:	
$300/year x 10 participants	3,000.00
Per Diem Expenses:	
$12.00/day x 304 days x 10 participants	36,480.00
Total	$45,080.00

CHAPTER IX

PEACE CORPS PROGRAM

There is a definite lack of qualified teachers of agriculture in Argentina. Teachers are one of the ingredients that would provide a real stimulus to the agricultural education program. A supply of qualified teachers made available in a short period of time should be of utmost importance.

To provide this immediate supply of capable agriculture teachers, it is recommended that consideration be given to requesting through the proper channels a contingent of Peace Corps Volunteers who would be prepared as agricultural teachers by the institution providing the technical assistance program under the contract.

Twenty to twenty-five young men adequately prepared could make quite an impact on the agricultural education program. Two to three could be assigned to assist in the schools where the need is greatest.

A Peace Corps training program could make available in a reasonably short time a group of teachers that could supply the need until the regular teacher education program became operative.

CHAPTER X

TECHNICAL ASSISTANCE STAFF

To assist in upgrading the agricultural education program it is recommended that a technical assistance staff be sent to Argentina. The experience and background of the members of such a selected technical staff could make a significant contribution to the agricultural education program of the country.

To make the most effective contribution the staff would need to spend a minimum of two and a half years in the country and preferably three.

It is essential that members of this technical assistance staff be able to speak and communicate in Spanish. To be effective this would need to be a requirement of anyone selected on the staff.

It would be advisable to have the working headquarters of the technical staff in a somewhat centrally located area. This should be at one of the schools in the system where adequate facilities could be made available.

The technical staff would work very closely with the Director General of Agricultural Education and the U.S. A.I.D. Mission to Argentina. The primary purpose of the staff would be to work towards implementing the recommendations of this report in an effort to effectuate the strengthening, improvement and upgrading of the agricultural education program in the schools which are under the direction and supervision of the Ministry of Agriculture and Livestock.

The personnel specifications and responsibilities for the technical staff would be as follows:

1. Agricultural Curriculum Advisor

   Provide guidance and leadership in the development of curricula, course materials and course outlines. This would include agricultural mechanics as well as agricultural science and the effective use of the school farm in the education program. Assist in developing instructional materials and teaching aids.

2. Teacher Education Advisor

   Provide leadership in planning and organizing a teacher education program for the preparation of teachers. Develop promotional and recruitment materials. Develop an in-service education program for practicing agriculture teachers.

3. Animal Production Advisor

Provide leadership in the initiation of efficient production and management practices in animal production including livestock, dairy and poultry. Develop instructional materials and teaching aids and work with teachers and school farm managers in upgrading the animal production program.

4. Crop Production Advisor

Promote leadership in the initiation of efficient production and management practices in plant production including vegetables, fruits and field crops. Develop instructional materials and teaching aids and work with teachers and school farm manager in upgrading the plant production program.

5. School Architect Advisor

Institute procedures for the development of master plans for the schools physical facilities. Develop procedures for taking bids and purchase of equipment. Arrange for use of local architects. Supervise the expenditure of all building and equipment funds. Work with agricultural advisors in developing appropriate facilities which reflect needs of educational program.

6. Technical Consultants

There will also be needed special technical consultation on a periodic basis. This would entail perhaps a yearly visit of some forty to sixty days. Consultation would be provided on the basis of one a year during the length of the contract in such areas as business management, farm management, guidance and counseling, teacher education and home economics.

It is recommended that a college official make one 20-30 day inspection trip annually to Argentina to evaluate progress and results of the contract program.

One of the selected technical staff would be designated as Chief of Party. Selection would depend on the qualifications of the individual personnel.

To be most effective, it will be necessary for the technical advisory staff to work directly with the individual schools. This will necessitate considerable travel. Transportation facilities are limited and expenses for travel would be difficult to finance out of the Secretary of Agriculture's education budget. Provision should be made in the contract budget for an automobile for the use of the technical advisory staff, and for travel expenses in carrying out their responsibilities.

It is recommended that the contract for the technical assistance staff be for a period of 2-½ to 3 years. It is believed such a period of time would be adequate to provide a strong start in the upgrading of the program in the schools. The technical advisors would point the direction towards the objectives and the personnel in the program in Argentina could follow through to continue the pattern set for them in this joint cooperative effort.

Consideration must be given to the most advantageous time for the technical advisors to initiate their work. It is recommended that the staff be selected and report to Argentina during the month of September. This would provide them with a 3 - 4 month period to get oriented to the program and become cognizant of the problems while the schools are still in session and before they close out the year to enter the summer vacation period. It will take time to get adjusted and organized, which this schedule would permit them to do. They could then outline their plans and approach to the problem and set the patterns of implementation during the Argentina schools summer vacation period in January, February and March. When school reconvenes at the end of March, a definite program could then be initiated at the start of a new school year. This approach has the advantage of providing a study period prior to activation of the recommendations.

If all the contract negotiations can be completed at an early date and a qualified staff selected, the assignment of the technical assistance staff could be made earlier than recommended.

PART C

FACILITIES AND EQUIPMENT

CHAPTER XI

INTRODUCTION

The recommendations in the Facilities and Equipment section of this report are based on the policy established by the educational members of the team and on the observations and inspections of the existing school facilities by the architects. Eight of the schools were visited by the study team and the architects evaluated each relative to the adequacy and conditions of its buildings to maintain the proposed educational program. Of the thirty-five days spent in Argentina one half were engaged in travel and visitation, and at least sixty-five buildings were examined. Four schools: Quines, Colon, Victorica and Las Delicias could not be reached due to bad weather, travel difficulties, and the press of time. Recommendations pertinent to the needs of these schools were arrived at through the study of their architectural plans, discussions with persons familiar with their physical conditions, and their proposed role within the overall operation of the school system. It became evident as visitations progressed through the schools that a pattern of needs existed, the similarities of which could be projected throughout the system.

This survey effort soon concluded that the facility needs of the National secondary schools of agriculture present construction problems of a complicated and highly varied nature, which range in scope from the provision of a complete new campus to the rearranging of partitions for the more efficient utilization of existing space. Remodeling occurs throughout the entire system of which some projects are of minor scope. The supplying of precise and final studies accompanied by hard cost estimates would be impossible under the circumstances of the short time accorded the survey team. If all the construction problems proposed by the twelve schools were to be approached in the manner of the conventional feasibility studies which require drawings and architectural preliminaries, at least five months should be allotted to this work. For example the new school recommended at Olavarria warrants at least two months of full time study to complete a building scheme with architectural preliminaries which could yield valid preliminary cost estimates.

At this point educational policy has been established, the existing facilities evaluated, and a budget proposed. It is just now possible to undertake studies which would provide preliminary building plans and firm cost estimates. This information must either be supplied by additional survey work or be provided by those making the loan application. It should be pointed out that still lacking will be the work of the technical assistance team who will develop the specific curricula which will in instances refine the number of rooms and amount of building space required. The question of additional survey work must be faced; however, it is our feeling that the budget framework herein supplied is sufficiently valid, and that along with the provision of controls, the project could proceed without undue delay. The purpose of this part of the study, then, is to:

1. Propose a building construction procedure which would assist with providing for financial responsibility, functional design, and establishing performance under the existing circumstances of a complicated building program and the Argentine building traditions.

2. Outline and identify the facilities and equipment necessary to the proposed educational program along with supplying preliminary cost estimates.

3. Provide an evaluation of the existing facilities.

4. Present a priority listing of facilities and equipment.

The organization of the Facilities and Equipment section of the report first presents a recommendation relative to the building program and implementation procedures, and is followed in Chapter XII by an evaluation of each school with recommended facilities and equipment. This information is summarized with cost estimates in Chapter XIII in a priority order, the sum of which items totals $3,727,000.. Though this list is constructed in a priority order of the importance of the item to the educational program, the thinking of the survey team is that the total investment would be the best design to achieve the objectives of the study.

A. General Observations

There appears to have been no master plan for the development of the physical facilities of the schools. In general it was found that many of the schools had stately and spacious shells; however, they were all uniformly poorly equipped and in many cases they did not serve the educational program. Great possibilities exist for the restudy of these structures with view toward more efficient utilization of their space. In no case was a room found which had adequate light or heat; not a single library was adequately stocked; where science laboratories did exist they had little or no equipment; when a heating system was found, it had long been out of use, though sorely needed. All schools were poorly maintained in terms of repair of leaks, painting and general upkeep. Kitchens in many instances were huge and employed methods which were extremely wasteful of labor. Great opportunity exists for the restudy of these operations with a view toward the use of such innovations as American self-service and cafeteria style equipment.

Construction technology in Argentina is well advanced with building materials and all the necessary artisans readily available. Construction surrounds the use of concrete and masonry with wood being of minor importance. Provincial codes with inspections govern building practices and there are some areas in which seismic design is required. Of the buildings unrelated to the agricultural schools which were examined in various parts of the country, many were judged outstanding. It would appear that there is little to be offered in this field and that there would be little reason to import any materials basic to construction.

The familiar practice of competitive bidding presents no unusual problems and is normal to projects other than those undertaken by the Ministry of Public Works. The only note of caution in the building construction picture is that construction proceeds slowly and about two years should be allotted to any project of average size beginning at the time money is made available.

Construction costs have been climbing along with the inflationary trend. At the present time school type construction runs about $9.00/sq. ft. in earthquake zones and about $7.50 to $8.00 per sq. ft. in other areas.

Imports are taxed heavily which would ordinarily make the use of American equipment prohibitive. It was our understanding that under the circumstances of an A.I.D. loan these penalties could be relaxed. It is suggested that the foregoing be made integral to the terms of the loan so that modern equipment could be made an aspect of the teaching program. It would be advisable, however, to use Argentine tractors for which parts are readily available. It is estimated that about 65% of the loan related to equipment would be American imports. Very little of the procurement in connection with building construction need be done outside of Argentina; however, we would recommend the consideration of American professional service for the new school recommended at Olivarria to take advantage of current thinking in school plant design.

The Ministry of Public Works (M.O.P.) is the government service which is responsible for the supplying of buildings for federal agencies. Their service includes the preparation of designs, plans and the construction of the structures. This is apparently accomplished without the benefit of fixed fees or competitive bidding. There is frequent evidence that allocated budgets do not last to complete the undertaking and as a result the project is only pursued to the extent of available funds where it remains. Especially noted in this regard was the lack of mechanical equipment, furnishings, and continuing maintenance of many of the structures visited.

Under the above circumstances of architectural and construction services, it is not unusual that the process is very slow and that the projects of M.O.P. frequently miss the important point of function. There is much evidence of the difficulty of getting the structure and the needs of the client in harmony. This would most likely be true for a vocational agricultural situation which is highly specialized and an infrequent client of the federally supplied design and building services.

B. Recommendations:

The conditions of the survey have been complicated by a facility program which is being developed simultaneously with an educational policy--normally the development of facilities would follow. Additional complexities are supplied by the variety of work to be done over such great physical distances and the number of schools involved. Rather

than make the dilatory recommendations of another more detailed survey of building needs, we feel it is possible to develop effective procedures which would jointly advance the educational and facility program. With the foregoing in mind as well as other matters specific to construction problems in Argentina the following are recommended:

1. That the upgrading of the facilities of schools of the Ministry of Agriculture and Livestock be approached in terms of a total investment and that the herein proposed budget serve as a framework to achieve the proposed educational objectives.

2. That it shall be the function of the technical service team to develop final building designs and cost data. The cost of each item is to be limited by the herein proposed budget. Savings should be transferable from one item to another with justifications.

3. That an architect be retained as a member of the team whose responsibility it will be to approve all plans and expenditures pertinent to buildings and equipment. Due to the highly complicated and fractured nature of this building program he must necessarily be the watchdog of the budget. Working with the members of the educational team, he will make decisions regarding planning, alterations and the building problems which will occur as the project progresses. He should have authority to institute procedures which would provide firm construction bids thorugh competitive bidding for all projects warranting such, and approve the functional nature and conformity of the prepared plans with the objectives of the educational program. When advisable he will employ private architects, engineers and contractors in a way which will yield the most efficient results within the framework of the herein outlined budget.

4. That up to three members of the Peace Corps contingent have architectural or construction background. They would be assigned to work with the architect in the planning and supervision of the construction program.

Important to the reasoning in the above recommendations is the fact that the educational program is presently functioning, and in a sense facilities exist sufficient to maintain a teaching program. This permits educational upgrading to begin immediately while the upgrading of facilities, taking longer, will necessarily follow under more advantageous circumstances. Further and more deliberate studies by the technical assistance team will uncover necessary adjustments and more apt solutions to many of the facility and space problems as presently visualized. It is therefore advisable to build into the procedures some opportunity for flexibility and latitude for on-the-scene improvements and changes.

CHAPTER XII

FINDINGS AND RECOMMENDATIONS

Introduction:

This chapter is divided into two parts. Part I, General Findings and Recommendations, deals with facility and equipment problems found to be common to a majority of the schools, and makes recommendations for their improvement; Part II, Individual School Analysis, discusses each individual school and the problems particular to that school with recommendations for improvements.

Part I: General Findings and Recommendations

A. Observations

1. Facilities:

Three general types of buildings exist on each campus: (1) The classrooms, laboratories, and shops, in which the student receives his formalized instruction; (2) the dormitories, kitchen-dining elements, laundries and recreation rooms in which the students live and are cared for; and (3) the administration elements, farm buildings and other structures which support the education and/or student care programs. Each facility, regardless of type, must of necessity provide the space and the "environment" so as to work efficiently and economically.

Space-wise, several schools have serious problems. As a result, enrollment limitations have had to be set administratively. Facility expansion programs will be necessary to meet student demand at some schools and specific recommendations are made later in this report.

Environment-wise, deficiencies exist which should be improved regardless of school size:

a. Lighting:

Artificial illumination levels are very poor throughout the school system. The academic-study areas in particular need to be improved. Often times, a classroom or library will be lighted by two low-wattage lamps; reading and study become strenuous tasks under such conditions.

b. Heating:

Buildings are unheated. Students and staff are obligated to wear heavy clothing, sweaters and overcoats in order to remain warm during cold weather. Such conditions reduce

the effectiveness of an instructional program; minimum comfort levels should be maintained, especially so in the classroom and study areas. Interestingly, the school at Salta has a heating system installed which is unusable because of the type of fuel available.

c. Dormitories:

For the most part dormitories are of the barracks type. Several schools have divided dormitory spaces by waist-high partitions into cubicles of 4-6 beds. Neither system appears to be satisfactory. There is a need to divide students by more positive means into small groups by age, background and interests, in order to better situate students one to another and also for discipline and control. Very important too, is the need to create a more "homelike" atmosphere.

d. Kitchen-dining

Meals are taken by all students in the school dining room. All food is prepared in the school kitchens, which for the most part are quite large, but lack modern equipment. Food is served to students seated at tables by waiters (employees) who are assisted by student monitors selected from each table. Modernization of kitchen equipment and employment of a self-service cafeteria system would appear to have long-range economic benefits as well as permitting greater utilization of dining facilities as enrollment increases.

e. Recreation:

Only the school at Bell Ville has a facility which might be called a gymnasium - however, it is small and improperly equipped. Other schools have a recreation room of some sort where students may gather for ping-pong, chess, cards and related activities. Play fields and game courts are generally in minimum fashion; the schools at Bolivar and Tandil have very small swimming pools. With modest investment, recreation facilities could be improved and would, no doubt, improve student morale considerably.

f. Maintenance:

The degree to which facilities are maintained varies from school to school; however, there is room for improvement in the maintenance programs at all schools. Minor repair work is often neglected; such repairs along with patching, painting, and general cleanup of buildings and grounds would improve the overall environment at comparatively little cost and help to stimulate pride in each school.

2. Equipment:

Equipment generally has become antiquated. Adequate funds have not been available for replacement and as a result equipment

has been overworked and is in fair to poor condition. The instructional program effectiveness is hampered by lack of classroom equipment and materials as well as breakdowns of farm machinery.

a. Teaching Aids and Library:

Some teaching aid materials exist in each school; however, equipment is minimal and resources in the form of slides and demonstration models are limited. Libraries need to be expanded--especially in the area of journals and periodicals.

b. Science Laboratories:

Science equipment likewise is minimal and antiquated. There is a need for more modern equipment and instruments in all phases of science work. Laboratory classes are extremely limited by the lack of sufficient equipment to permit all students in a class to participate in any one given area of study at the same time.

c. Farm Equipment:

For the most part, the instructional-farm program suffers for lack of sufficient amounts of farm equipment, All equipment is presently owned by the schools. Replacement and modernization proceeds at a very slow pace as a result of the relatively high cost of machinery. Consequently, equipment is overworked and breakdowns occur frequently which in turn ties up the entire program while repairs are being effected.

B. Recommendations

1. Facilities:

These recommendations derive from the preceding general observations:

a. Lighting:

Artificial illumination levels be increased in the classroom, laboratory, library and study areas of all schools; similar improvement to lighting levels in dormitories be effected as monies become available. All new buildings have lighting levels designed comensurate with modern standards for the tasks to be performed therein.

b. Heating:

Systems appropriate to the particular climatic conditions and fuel availability situations of each school be installed to improve the comfort level in all libraries, classrooms, laboratories and study areas. Conversion of the system at Salta to use an available fuel is likewise recommended. As

additional funds become available, extensions of the heating system be made into the dormitories and other sections of the schools. All new buildings should be designed with heating equipment capable of maintaining comfort levels related to the activities to be performed therein.

c. Dormitories:

Present dormitories be subdivided by means of full ceiling-height partitions into rooms capable of accommodating 4-6 students. Besides a bed, the room should contain a small table and chair for each student to be used for study and/or hobby purposes; clothes storage space is also necessary. Each room should have natural light and ventilation and should be well lighted by artifical means. Heating is desirable. The creation of a "home-like" atmosphere is very important. Room design and material selection should attempt to minimize "institutional" appearance; at the same time, durability and maintenance factors must be carefully equated in order to promote economical operation.

d. Kitchen-Dining:

Kitchens be reorganized and reequipped to work on the self-service cafeteria principal. Departmentalizing of kitchens be considered in light of future enrollment increases. Special attention should be given to the selection of materials which can be easily maintained in clean and sanitary conditions.

e. Recreation:

Modest improvements to existing recreation rooms and outdoor playing fields be made at all schools. More recreation equipment and games should be provided. To this end, a fund should be established from which allotments can be made to each school on some equitable basis which recognizes improvement costs as well as proportional student populations.

f. Maintenance:

A repair and maintenance program be undertaken to bring all facilities into good repair as quickly as possible. Thereafter a normal program of periodic maintenance should be scheduled and funded on a regular basis.

2. Equipment:

a. Teaching Aids and Library:

Materials for the improvement of teaching and expansion of libraries be made available as quickly as possible. A fund should be established from which allotments could be proportioned to each school on the basis of need.

b. Science Laboratories:

Instruments and equipment which would be immediately usable within the existing laboratories be made available at the earliest possible date. Thereafter, alterations and additions to physical facilities be made expeditiously in order to modernize and upgrade science education in all schools. Additional new equipment be provided at each school as their particular science facilities are completed.

c. Farm Equipment:

Major equipment such as tractors and combines, be obtained from farm implement manufacturers on a lease-rental basis in order to minimize cost to the schools as well as to make available the newest types of equipment for instructional purposes. A fund should also be set up to permit the purchase of miscellaneous equipment needed to supplement the lease-rent equipment. Such fund should be administered to each school on the basis of need related to the program.

PART II. Individual School Analysis

BELL VILLE

A. Observations

1. Facilities and Equipment

Observations regarding facilities and equipment made on pages 65 - 67 apply at Bell Ville.

The central facility at Bell Ville was constructed in 1920. An addition to the dormitory wing was made two years ago with provisions for future expansion to utilize central toilet facilities. The remaining central facilities are old and in poor condition. Furnishings and equipment are likewise old and antiquated. More recent facilities include: (1) a fruit production building which is substantially built, but presently not serving its intended purpose; (2) a very large and very solidly built agricultural mechanics building with adjacent shops and workers quarters (this building constructed in 1948 is also used for local farm expositions); and (3) a "chapel" which, again, is well built but currently used for storage purposes.

Older farm buildings consist of: (1) a Bull barn which is in good condition; (2) a Dairy-milking barn which is in poor condition; (3) a Creamery which is generally in poor condition, although recently painted on the inside; and (4) a Swine unit which is in fair condition. Some new cheese making equipment has been installed in the creamery, but generally equipment is old and antiquated.

B. Recommendations

1. Facilities:

a. The existing new dormitory be modified as outlined in Recommendation for Facilities, pages 67-68.

b. A master plan be prepared which will relate existing facilities with proposed new facilities to assure orderly development of the campus.

c. Present facilities be extensively modified and/or new facilities be built to provide the following:

(1) 4 general purpose classrooms.
(2) 2 science laboratories.
(3) Library.
(4) Administrative facility.
(5) Kitchen-dining facility.

d. The following new facilities be built:

(1) Dormitories to house 100.
(2) Dairy milking barn.
(3) Creamery.

e. Minor modifications be made in agricultural mechanics shop to accomodate new equipment.

2. Equipment

a. All recommendations regarding Equipment found on pages 68-69 should be implemented at Bell Ville.

b. All new buildings or those recommended for extensive modification be furnished and/or equipped with new furnishings and/or equipment as they are completed.

BOLIVAR

A. Observations

1. Facilities and Equipment

Observations regarding facilities and equipment made on pages 65-67 apply at Bolivar.

The school at Bolivar dates from 1935. The buildings are massive in the tradition of the area; excepting one building which has some major cracks apparently caused by unequal settlement, the facilities appear to be structurally sound. Of all schools visited, Bolivar appeared to be the cleanest and best maintained.

A new home economics cooking laboratory has been recently completed; however, adequate space for sewing-weaving instruction does not exist. Presently, this instruction is taking place in a corridor and in a small utility room. No science laboratories exist at Bolivar. Farm shops and buildings are commodious and substantial; however, they play a very minor role in the present home economics instructional program. Some minor space adjustments as well as modernization of equipment will be necessary when the farm program is intensified.

B. Recommendations

1. Facilities

a. All recommendations for facilities made on pages 67-68 be implemented at Bolivar.

b. A master plan be developed immediately which would relate existing buildings with proposed new buildings so as to promote and assure the development of the campus into an organized, efficient and attractive entity. Allowance should be made in the plan for the orderly growth of facilities beyond those needed to house presently projected numbers of students.

c. To serve the projected enrollment of 200 girls in home economics and 50 boys in general agriculture, the following facilities be built:

(1) 2 general purpose classrooms.
(2) 2 science laboratories.
(3) sewing-weaving laboratory.

d. Modernize farm shops and laboratories.

2. Equipment

a. Teaching aids, library materials and farm machinery be made available as outlined under Recommendations for Equipment, pages 68-69.

b. Science laboratories be completely furnished and equipped as they are completed.

c. Existing sewing-weaving equipment be supplemented with some new equipment when the new laboratory is completed.

d. Existing classroom desks be designated to classrooms devoted to use by younger students in general agriculture work, and new desks suitable for use by older girl students be obtained and designated to home economics classrooms.

e. New equipment for agricultural mechanics shop and creamery laboratory be obtained when the general agriculture program commences.

CASILDA

CASILDA AND ZAVALLA CAMPUSES

A. Observations

1. Facilities and Equipment

Observations regarding facilities and equipment made on pages 65 - 67 apply at Casilda.

The Casilda campus is located at the edge of the city of Casilda and shows above average arrangement and landscaping. The site includes a football field with bleachers - the only bleachers noted at any school.

The academic elements and dormitories are all contained in a single complex with the exception of one science laboratory and one classroom which are located above the creamery. Facilities are in fair shape; however, some refurbishing and repairing is in order. At the time the school was visited, the humidity was very high and moisture had collected on walls and floors. This condition occurring over the years had stained the walls, and most of the hardware was in a state of rust.

The general appearance of the buildings is one of much use and wear. The educational program at Casilda is considered the best of the school system and it was evident that the available resources were concentrated at this school. Here was found the only semblance of a library, two fine little museums and much space which could be turned to better use if the money were available for remodeling. The poultry unit was excellent while the shops had adequate space but were poorly equipped.

I.N.T.A., through an agreement with the school, had taken over the remodeling of one of the housing units apart from the main facility to provide accommodations for enrollees in this special agricultural program. It was gratifying to see the improvement which could be brought about in these buildings by remodeling.

The Zavalla campus contains a magnificaently landscaped 250 acre park in which academic facilities can be located. At the present time there exists on the site a large and substantially constructed agricultural mechanics shop, caretakers' residences, miscellaneous farm structures, and a primary school.

B. Recommendations

1. Facilities

a. All recommendations for facilities made on pages 67-68 be implemented at Casilda.

b. A master plan be prepared for both Casilda and Zavalla which will relate existing facilities with proposed new facilities to assure orderly development of the campuses.

The Zavalla plan should give consideration to the future development of the campus into a junior college.

c. The second floor of the creamery building be remodeled to provide 2 science laboratories, 2 classrooms and storage space: Casilda campus.

d. Convert existing guest house to dormitory to accommodate 50-60 boys: Casilda campus.

e. To serve the projected enrollment of 125 agricultural mechanics students, build at Zavalla campus:

(1) Dormitories with recreation facilities.
(2) Kitchen-dining facility.
(3) Two general purpose classrooms
(4) Agricultural mechanics shop - relate to existing agricultural mechanics facility.

f. To serve a projected enrollment of 60 girls in home economics, build at Casilda campus:

(1) Two general purpose classrooms.
(2) One science laboratory.
(3) Two home economics laboratories.

2. Equipment

a. All recommendations regarding equipment found on pages 68-69 be implemented at Casilda.

b. Modernize equipment in Dairy and Creamery.

c. All new buildings and those recommended for remodeling be furnished and/or equipped with new furnishings and/or equipment as they are completed.

COLON

A. Observations

The school at Colon was not visited. The following recommendations are based upon a study of school facility plans, photographs, and discussions with Ingeniero Arano and his staff.

1. Facilities and Equipment

The school is relatively new, and is in good shape structurally. Like the school at Salta, a science laboratory exists, but it lacks furnishings and equipment necessary to make it usable. The deficiences discussed under Observations regarding Facilities and Equipment, pages 65 - 67 apply also to Colon.

B. Recommendations

All recommendations regarding Facilities and Equipment outlined on pages 67 - 69 should be implemented at Colon.

LAS DELICIAS

A. Observations

The school at Las Delicias was not visited. The following recommendations are based upon a study of school facility plans, photographs, and discussions with Ingeniero Arano and his staff.

1. Facilities and Equipment

Las Delicias was built in 1904. All elements of the school except the farm facilities are located in one building which is poorly arranged. The facility is in poor shape and no space exists for expansion.

B. Recommendations

1. Facility

a. No improvements be made to existing central facilities.

b. A master plan be prepared immediately which would relate existing buildings with proposed new buildings so as to promote and assure the development of the campus into an organized, efficient and attractive entity.

c. The following new facilities to accommodate a projected enrollment of 200 students be built:

(1) 4 general purpose classrooms.
(2) 2 science laboratories.
(3) Library.
(4) Administration facility.
(5) Dormitories.
(6) Kitchen-dining facility.
(7) Laundry-service facility.

2. Equipment

a. Recommendations with respect to teaching aids, library materials and farm equipment outlined in Recommendation for Equipment, pages 68-69 be implemented at Las Delicias.

MIRAMAR

A. Observations

1. Facilities and Equipment

All observations regarding facilities and equipment made on pages 67-69 apply to Miramar.

The school was built in 1948 and buildings appear to be sound structurally. Dormitory facilities exist which can accommodate 60-70 students; however, dormitory space is the limiting factor as far as student capacity of the school is concerned. By means of careful scheduling, classroom, shop and dining facilities can be made to accommodate much higher student loads per day than they presently handle. No science laboratories exist at Miramar.

B. Recommendations

1. Facilities and Equipment

a. All recommendations made on pages 65-67 be implemented at Miramar.

b. New dormitories to house 100 students be built and equipped.

c. The existing agricultural mechanics shop be converted into 2 science laboratories and be fully equipped in accordance with educational recommendations that Miramar be converted from an Agricultural Mechanics specialty program to a General Agriculture Program.

OLAVARRIA

A. Observations

1. Facilities and Equipment

Observations regarding Facilities and Equipment made on pages 65-67 apply at Olavarria.

The school was founded in 1912. It occupies buildings which were originally built for a military-police post.

Buildings are old and in very, very poor condition. Dormitory capacity limits enrollment to approximately 25 students.

The town of Olavarria has expanded to the point where development is now taking place on land adjacent to the school. Acquisition of more land to care for increased enrollment to improve the efficiency of the school would now be difficult and expensive. A site containing 1200 hectares located 25 km from Olavarria is being considered as a new location for this school.

B. Recommendations

1. Facilities

a. No additional investment be made in existing facilities.

b. The school be moved from the existing site to another in the Olavarria area.

Negotiations be completed which would trade the existing site and facilities for the 1200 hectare site now under consideration. Provisions should be made for the continued use of existing facilities during the period of construction of the new.

c. A master plan be prepared for the new campus before any plans or construction of new facilities are initiated. The master plan shall contain provisions for future expansion of facilities beyond those necessary to meet current enrollment projections.

d. To serve the immediate projected enrollment of 250 students, the following facilities be built:

(1) 4 general purpose classrooms.
(2) 2 science laboratories.
(3) Administration facility.
(4) Library.
(5) Agricultural mechanics shop.
(6) Livestock barns and shelters.

(7) Feed storage buildings.
(8) Meat processing laboratory.
(9) Dormitories.
(10) Kitchen-dining facilities.
(11) Indoor and Outdoor recreation facilities.
(12) Laundry facilities.
(13) Housing for 2 staff members.
(14) All roads, utilities, appurtenant structures, and landscaping.

2. Equipment

a. Teaching aids, library materials and farm machinery be made immediately available as outlined under Recommendations for Equipment, pages 68-29.

b. All new buildings be furnished and/or equipped with new furnishings and/or equipment as they are completed.

QUINES

A. Observations

The school at Quines was not visited. The following recommendations are based upon a study of school facility plans, photographs, and discussions with Ingeniero Arano and his staff.

1. Facility and Equipment

The school at Quines is not operating as dormitories and resident facilities for a director and assistant have not been completed.

B. Recommendations

1. Facilities and Equipment

a. Dormitories be completed and equipped. Existing design should be modified to permit housing of students in rooms containing 4-6 students each.

b. Two residences be built and equipped to accommodate staff personnel and their families.

c. All buildings be adequately lighted commensurate with modern standards for the work to be performed therein.

d. All classrooms, study areas and living areas be heated.

e. All recommendations with respect to equipment made on pages 68-69 be implemented at Quines.

SALTA

A. Observations

1. Facilities and Equipment

All observations regarding facilities and equipment made on pages 65-67 apply to Salta.

The school at Salta was founded in 1952. The structures are solidly built, commodious and are adequate to serve the projected enrollment of 200 students. While the facilities at Salta are relatively new, the program is hampered by the same deficiencies in environment and equipment found in all other schools and noted above under General Observations. Two science laboratories exist, but are not usable for lack of furnishings and equipment.

B. Recommendations

1. Facilities and Equipment

All recommendations regarding facilities and equipment made on pages 67-69 be implemented at Salta.

SAN JUAN

A. Observations

The school at San Juan was founded in 1862 and presently occupies a handsome site on the edge of the city. The great earthquake of 1944 completely demolished the original school. Facilities now in use have been built since and were constructed in an expeditious manner to house students in temporary fashion until new more substantial buildings could be erected.

The school lies immediately adjacent to the temporary (although more substantially built) quarters of the Provincial government. For some time, the school entertained hopes of obtaining these facilities when the Government Center moved; these prospects appear to have faded considerably, and with enrollment increasing and the condition of the temporary buildings deteriorating, the school finds itself in a position where new facilities become a very critical need.

1. Facilities:

With the exception of a recently completed but yet unequipped and therefore unoccupied fruit processing laboratory, and a new olive oil laboratory presently under construction, substantial buildings do not exist at San Juan.

Facilities presently in use consist of 4 general classrooms; 1 science laboratory and 1 science-lecture laboratory; an olive oil laboratory; an enology factory-laboratory; a fruit

processing factory-laboratory; an open-air farm shop; a small unit containing administrative offices; toilet rooms; and miscellaneous general farm shelter structures. All students live off-campus, hence no dormitories, food facilities or other student care buildings exist.

Facilities are all of temporary nature and all are in poor condition. Without exception, lighting both by natural and artificial means is very poor. Heating is non-existant. The ability of these buildings to withstand earthquake forces is very questionable.

Renovation of one classroom component is a possibility; however, such renovations considered both in the light of economics and the need for developing a more integrated relationship of buildings on the campus could prove to be undesirable.

2. Equipment

Machinery found in the olive oil laboratory is new and modern; otherwise equipment and furnishings throughout the school--like the buildings themselves--are in poor condition. Much of the machinery is very, very old - often, equipment is belt driven from a central shaft driven by a single motor. A steam generator in fair condition exists in the fruit processing factory laboratory. Miscellaneous equipment such as science lab glassware and enology lab barrels could be reused. Farm machinery is also in poor condition.

B. Recommendations

1. Facilities

a. A master plan be immediately prepared indicating building needs and disposition of some on the site in a fashion that will promote growth in a logical manner maintaining workable relationships between various facilities and open spaces. Such master plan should recognize and utilize to the fullest possible extent existing landscape features; it should strive to eliminate traffic conflicts, minimize road and utility runs, and promote the maximum utilization of productive land.

b. Existing temporary buildings be demolished according to a schedule of demolition which will permit the orderly development of the master plan discussed above. Demolition should be related also to schedules of new construction so as to minimize interruptions of the instructional program.

c. To serve the projected enrollment of 500 students, the following new facilities be built:

(1) 6 general purpose classrooms.
(2) 3 science laboratories.
(3) 2 home economics laboratories.
(4) Library.
(5) Completion of fruit processing factory-laboratory.
(6) Agricultural mechanics shop and equipment shelter.
(7) Enology factory-laboratory.
(8) Administration facility.

d. Roads, utilities and landscaping improvements be considered a part of, and should develop simultaneously with, the building program.

2. Equipment

a. Teaching aids, library materials, science laboratories equipment and farm machinery be made available as outlined under Recommendations for Equipment, pages 68-69

b. New buildings be furnished and/or equipped with new furnishings and/or equipment as they are finished. (New science equipment placed in existing labs would be moved to new.)

c. Excepting olive oil machinery, steam generating equipment and miscellaneous fruit processing and enology equipment, new laboratories also be equipped.

TANDIL

A. Observations

1. Facilities and Equipment

Observations regarding facilities and equipment made on pages 65-67 apply at Tandil.

The school at Tandil was founded in 1927. Administration offices, classrooms, recreation room, and dormitories are all contained in one two-story building with quarters for 6 bachelor instructors existing on the attic floor. A small adjacent building houses the library and a small kitchen-dining facility is, likewise, adjacent to the main building. The buildings have been maintained in better than average fashion; however, they are old, poorly equipped and incapable of caring for the present student demand.

Farm shops and structures appear structurally sound and indicate care. Expansion or rennovation does not appear necessary except for the creamery building and a small meat laboratory. The dairy building is old and equipment is antiquated.

Additional study is necessary to determine the adaptability of the existing building to new creamery equipment and processing methods. A small room in the agricultural mechanics shop is presently used for a meat laboratory. Location with respect to animal facilities is poor. Slaughtering and meat handling facilities are make-shift.

Except for a small analysis laboratory in the dairy building, no science laboratories exist at Tandil.

The campus is situated on gently rolling land which has been nicely landscaped; many fine, mature trees exist throughout the campus.

B. Recommendations

1. Facilities

a. A master plan be prepared immediately which would relate existing buildings with proposed new buildings so as to promote and assure the development of the campus into an organized, efficient and attractive entity.

b. To serve the projected enrollment of 250 students, the following new facilities be built:

(1) 4 general purpose classrooms.
(2) 2 science laboratories.
(3) Library.
(4) Administration facility.
(5) Kitchen-dining facility.
(6) Meat processing laboratory.

c. Remodel existing facilities as follows:

(1) Existing classroom-administrative-dorm facility into an all-dormitory facility with recreation room integrated.

d. Completely rehabilitate creamery facility.

e. Extension of necessary roads and utilities, plus landscaping improvements be carried on simultaneously with the new building program.

2. Equipment

a. Teaching aids, library materials and farm machinery be made available as outlined under Recommendations regarding Equipment, Pages 68-69.

b. All new and remodeled buildings be furnished and/or equipped with new furnishings and/or equipment as they are completed.

VICTORICA

A. Observations

The school at Victorica was not visited. The following recommendations are based upon a study of school facility plans, photographs, and discussions with Ingeniero Arano and his staff.

1. Facilities and Equipment

Victorica appears to be adequate structurally. Facility-wise, the school lacks a science laboratory and has the same problems with respect to lighting, heating, dormitory arrangement, kitchen and equipment as do the other schools.

B. Recommendations

1. Facilities and Equipment

a. One new general purpose science laboratory be built and equipped.

b. All recommendations for facilities and equipment discussed on pages 67-69 be implemented at Victorica.

CHAPTER XIII

FACILITY AND EQUIPMENT COST ESTIMATES

Cost estimates are herein submitted in sub-total and totalized form. For facilities, costs were derived by multiplying square footage estimates by current square footage construction costs obtained in the locale of each school for buildings similar to proposed work. (This basic figure averaged about 12,000 Argentine pesos per square meter or approximately $8.50 per square foot at current exchange rates).

A 10% allowance for architects and/or engineers fees as well as a contingency factor of 10% was also interjected. For work involving remodeling, square foot cost adjustments were made on the basis of conditions present which would simplify or complicate work.

Furnishings and equipment costs were likewise derived from estimates substantiated in the field wherever possible.

No allowances have been made for cost changes which might occur due to inflation.

The following chart lists the additions and/or modifications to Physical facilities plus furnishings and equipment deemed necessary to carry out recommendations which the survey team believes to be basic to the improvement of agricultural education in the 12 national schools. The team realizes that further elaboration of this list is possible, but is perhaps unwarranted economically at this time.

Items are listed in priority fashion in order to indicate a logical step by step means of instituting the investment which this program recommends.

RECOMMENDED ADDITIONS AND/OR MODIFICATIONS TO PHYSICAL FACILITIES AND FURNISHINGS AND EQUIPMENT LISTED IN PRIORITY ORDER

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
1. Equip all schools with new books, audio-visual equipment and teaching aids. Allotment to be proportioned to needs of each school.	All Schools	------	30,000	36,000
2. Furnish and equip 2 existing science laboratories	Salta	------	16,000	52,000
3. Furnish and equip 1 existing science laboratory	Colon	------	8,000	60,000
4. Remodel southern-most half of agricultural mechanics shop into two science laboratories. Equip.	Miramar	25,000	8,000	93,000
5. a. Remodel existing laboratory classroom building to provide 2 science labs, 2 classrooms and storage rooms. Equip science labs.	Casilda	20,000	8,000	121,000
b. Remodel and equip existing guest house to accommodate 50-60 boys.		30,000	6,000	157,000
6. Build and equip new:	San Juan			
a. 6 classrooms	Note: Costs	54,000	15,000	226,000
b. 3 science labs	slightly	42,000	24,000	292,000
c. 2 home economics labs	higher due to earth-	12,500	4,000	308,500
d. Library	quake	18,000	10,000	336,500
e. Toilet Rooms, halls, etc.	factor	16,000	------	352,500
7. a. Build and equip new:	Tandil			
1. 4 classrooms		34,000	10,000	396,500
2. 2 science labs		27,000	8,000	431,500
3. Library		12,000	4,000	447,500
4. Administrative element		20,000	4,000	471,500
5 Halls, service elements, etc.		5,000	------	476,500

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
b. Remodel existing main building; convert administration-classroom portions into dormitories. Modernize recreation element, install heating.		35,000	10,000	521,500
8. Modify existing and/or build and equip new:	Bell Ville			
a. 4 classrooms		34,000	10,000	565,500
b. 2 science labs		27,000	8,000	600,500
c. Library		12,000	4,000	616,500
d. Administration element		20,000	4,000	640,500
e. Kitchen-dining facility		40,000	20,000	700,500
f. Recreation facility		8,000	2,000	710,500
g. Halls, service elements, etc.		6,500	------	717,000
9. Supplement farm machinery at all schools. Allotment to be proportioned to meet needs of each school	All Schools	------	120,000	837,000
10. Build and equip a complete new campus consisting of:	Olavarria			
a. Administration unit		20,000	4,000	861,000
b. 4 classrooms		34,000	10,000	905,000
c. 2 science laboratories		27,000	8,000	940,000
d. Library		12,000	4,000	956,000
e. Dormitories for 250 boys		250,000	25,000	1,231,000
f. Kitchen-dining facility		40,000	20,000	1,291,000
g. Multi-purpose room: Auditorium-gym		60,000	8,000	1,359,000
h. Laundry		10,000	6,000	1,375,000
i. Agricultural mechanics shop		17,000	8,000	1,400,000
j. Meat processing lab		12,000	3,000	1,415,000
k. Livestock barns		24,000	4,000	1,443,000
l. Feed storage bldgs.		8,000	2,000	1,453,000
m. Misc. shelter bldgs.		5,000	------	1,458,000
n. Allowances for halls, service elements, etc.		8,000	------	1,466,000
o. 2 staff residences		16,000	4,000	1,486,000
p. Site development, roads, utilities, fences, etc.		30,000	------	1,516,000

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
11. Build and equip new:	Bolivar			
a. General Science lab		12,000	4,000	1,532,000
b. Sewing-weaving lab		8,500	3,000	1,543,500
c. Connection halls		2,500	-----	1,546,000
12. Build and equip new General Science lab	Victorica	12,000	4,000	1,562,000
13. Complete new fruit processing lab:	San Juan			
a. Build new boiler room and storage elements (Moving existing boiler)		9,000	2,000	1,573,000
b. Complete internal space divisions for lab, office and toilet rooms		9,000	3,000	1,585,000
c. Food processing equipment and installation		-----	40,000	1,625,000
14. Remodel existing creamery and completely re-equip	Tandil	20,000	70,000	1,715,000
15. Make minor building modifications and re-equip agricultural mechanics shop	Bell Ville	3,000	7,000	1,725,000
16. Build and equip:	Casilda:			
a. Agricultural mechanics shop to connect with existing shop facility	Zavalla Campus	15,000	3,000	1,743,000
b. 2 Classrooms		17,000	5,000	1,770,000
c. Dormitories for 125 boys with recreation room and study room		140,000	15,000	1,925,000
d. Kitchen-dining facility		40,000	20,000	1,985,000
17. Modernize agricultural mechanics shop equipment	Salta	------	3,000	1,988,000
18. a. Build and equip new agricultural mechanics shop	San Juan	15,000	8,000	2,011,000
b. Build new equipment shelter		2,000	-----	2,013,000

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
19. a. Build and equip new kitchen-dining facility	Tandil	40,000	20,000	2,073,000
b. Convert existing kitchen-dining into faculty apartments		18,000	7,000	2,098,000
c. Connecting Corridors		7,000	------	2,105,000
20. Build and equip new:	Las Delicias			
a. 4 Classrooms		34,000	10,000	2,149,000
b. 2 science labs		27,000	8,000	2,184,000
c. Library		12,000	4,000	2,200,000
d. Administrative unit		20,000	4,000	2,224,000
e. Dormitories for 200 boys		200,000	20,000	2,444,000
f. Recreation room		8,000	2,000	2,454,000
g. Kitchen-dining facilities		40,000	20,000	2,514,000
h. Halls, service elements, etc.		6,000	------	2,520,000
21. Build and equip new:	Bell Ville			
a. Dairy milking facility		8,000	10,000	2,538,000
b. Creamery		20,000	70,000	2,628,000
22. Modernize dairy and creamery equipment	Casilda	------	40,000	2,668,000
23. Modernize dairy and creamery equipment	Salta	------	10,000	2,678,000
24. Build and equip new:	Casilda			
a. 2 classrooms		17,000	5,000	2,700,000
b. 1 science lab		13,500	4,000	2,717,500
25. Build and equip new enology lab (Barrels be salvaged from existing lab)	San Juan	80,000	70,000	2,867,500
26. Build and equip new dormitory for 100 boys	Miramar	100,000	10,000	2,977,500
27. Build and equip new dormitory addition for 100 boys	Bell Ville	100,000	10,000	3,087,500
28. Build and equip new meat processing room	Tandil	9,000	3,000	3,099,500

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
29. Build and equip new administration unit	San Juan	21,000	4,000	3,124,500
30. a. **Build and equip** new:	Bolivar			
1. 2 classrooms		17,000	5,000	3,146,500
2. 1 science lab		13,500	4,000	3,164,000
b. Remodel agricultural mechanics, dairy and creamery facilities and re-equip		8,000	20,000	3,192,000
31. a. Complete dormitories and furnish (Construction of new dorms was halted by lack of funds)	Quines	75,000	15,000	3,282,000
b. Build 2 new residences for teachers		16,000	4,000	3,302,000
32. Improve artificial lighting level in all libraries, classrooms, labs and study areas	Bolivar Casilda Miramar Colon Quines Salta Victorica	50,000	------	3,352,000
33. Remodel and equip kitchen facilities to operate cafeteria style	Bolivar Casilda Colon Miramar Salta Victorica	50,000	90,000	3,492,000
34. Remodel dormitories; subdivide and create more efficient space utilization as well as more home-like atmosphere	Bell Ville Bolivar Casilda Colon Miramar Salta Victorica	125,000	------	3,617,000

ITEM	SCHOOL	FACILITY U $ S	FURNISHINGS-EQUIPMENT U $ S	RUNNING TOTAL U $ S
		$	$	$
35. Improve existing and/or provide new heating elements to increase comfort level in all libraries, classrooms, labs and study areas	Bolivar Casilda Colon Miramar Quines Salta Victorica	50,000	------	3,667,000
36. Improve existing and/or provide new indoor and/or outdoor recreational facilities	All Schools	60,000	------	3,727,000
TOTALS		$2,621,000	$1,106,000	$3,727,000

PART D

TECHNICAL ASSISTANCE

BUDGET

CHAPTER XIV

ESTIMATED TECHNICAL ASSISTANCE BUDGET

3 YEAR PERIOD

ITEMS	1st Year	2nd Year	3rd Year	TOTAL
	$	$	$	$
I. Salaries				
A. Field Staff				
1. Agricultural Curriculum Adv. B-12 Voc 5th Step Prin. $1306 - $1371 - $1440	15,672	16,455	17,278	49,405
2. Teacher Education Advisor B-12 Voc 3rd Step Senior $936 - $983 - $1085	11,232	11,796	13,020	36,048
3. Animal Production Advisor B-12 Voc 3rd Step Senior $936 - $983 - $1085	11,232	11,796	13,020	36,048
4. Crop Production Advisor B-12 Voc 3rd Step Senior $936 - $983 - $1085	11,232	11,796	13,020	36,048
5. School Architect Advisor B-12 Voc 3rd Step Senior $936 - $983 - $1085	11,232	11,796	13,020	36,048
Total Field Salaries	60,600	63,639	69,358	193,597
B. Campus Staff				
1. Campus Coordinator (½ Time) B-12 Voc 5th Step Prin. $1306 - $1371 - $1440	7,836	8,228	8,639	24,703
2. Accountant (½ Time) $486 - $510 - $536	2,916	3,060	3,216	9,192
3. Stenographer (½ Time) $440 - $463 - $486	2,640	2,778	2,916	8,334
Total Campus Salaries	13,392	14,066	14,771	42,229
TOTAL SALARIES	$73,992	$77,705	$84,129	$235,826

ITEMS	1st Year	2nd Year	3rd Year	Total
	$	$	$	$
II. Allowances				
A. Temporary Housing				
1. Five Advisors 90 da. at $12 x 5	5,400	--	--	5,400
B. Housing				
1. Five Advisors	13,500	18,000	18,000	49,500
C. Educational				
1. $1000/year	1,000	1,000	1,000	3,000
D. Cost of Living				
1. Five Advisors 10% of salary	6,100	6,400	7,000	19,500
TOTAL ALLOWANCES	26,000	25,400	26,000	77,400
III. Travel and Transportation				
A. U.S. Travel and Allowances				
1. Campus Coordinator	500	--	200	700
2. Advisors 5 at $100	500	--	--	500
3. Staff Orientation	500	--	--	500
Total	1,500	--	200	1,700
B. International Travel and Allowances				
1. Advisors Wife and 3 children Fare - $450x5x5 adv. Allow.-$13x3 daysx5x5	11,250	--	11,250	22,500
2. Short Term Consultants 1 per year at 60 days				
Fare - $875	875	875	875	2,625
Allow.-60 da. x 19	1,140	1,140	1,140	3,420
3. Officials Inspection Trips 1 per year at 30 days				
Fare - $875	875	875	875	2,625
Allow. 30 da. x 19	570	570	570	1,710
4. Emergency trip Fare - $450	450	450	450	1,350
Total	$15,160	$3,910	$15,160	$34,230

ITEMS	1st Year	2nd Year	3rd Year	Total
	$	$	$	$
C. Household Effects and Auto				
1. Advisors				
Ship household effects 5 at 2500	12,500	--	12,500	25,000
Store household effects 5 at 600/yr.	3,000	3,000	3,000	9,000
Ship Auto 5 at 1300	6,500	--	6,500	13,000
Total	22,000	3,000	22,000	47,000
D. Unaccompanied Air Baggage				
1. Advisors 5 at 600	3,000	--	3,000	6,000
Total	3,000	--	3,000	6,000
E. Local Travel (Argentina)				
1. Advisors 5 at $1500/yr.	7,500	7,500	7,500	22,500
2. Auto Expenses 2000 mi/mo.	1,000	1,000	1,000	3,000
3. Short Term Consultant	300	300	300	900
Total	8,800	8,800	8,800	26,400
TOTAL TRAVEL AND TRANSPORTATION	$50,460	$15,710	$49,160	$115,330
IV. Other Direct Costs				
A. Retirement Contribution $8/100	5,920	6,220	6,730	18,870
B. Health and Welfare 1%.	740	780	840	2,360
C. Workmen's Compensation $2/100	1,480	1,560	1,680	4,720
D. Out-of-pocket Expenses Passports - Medical Shots, Telephone, Supplies	1,500	200	200	1,900
Total	9,640	8,760	9,450	27,850
V. Overhead				
A. 25% of field salaries	15,150	15,910	17,340	48,400
B. 25% of campus salaries	3,350	3,520	3,700	10,570
Total	$18,500	$19,430	$21,040	$58,970

ITEMS	1st Year	2nd Year	3rd Year	Total
	$	$	$	$
VI. Equipment				
A. Teaching Aids Films - Supplies	1,000	1,000	1,000	3,000
B. Other Rexograph - Projector - Postage, Supplies - Shop Tools - Telephone	3,000	3,000	3,000	9,000
C. Motor Vehicle	3,500	--	700	4,200
Total	7,500	4,000	4,700	16,200
VII. Participant Cost				
A. College costs and subsistence for 10				
1. Materials and service fee $200/yr x 10		2,000		2,000
2. Out-of-state Fees $360/yr x 10		3,600		3,600
3. Books and supplies $300/yr x 10		3,000		3,000
4. Per diem $12/day x 304 da. x 10		36,480		36,480
Total		45,080		45,080
TOTAL TECHNICAL ASSISTANCE BUDGET	$ 136,092	$ 196,085	$ 194,479	$ 576,656

TOTAL FACILITIES AND EQUIPMENT	$ 3,727,000
TOTAL TECHNICAL ASSISTANCE BUDGET	576,656
GRAND TOTAL - Facilities and Equipment Technical Assistance Budget	$ 4,303,656

PART E

SUMMARY

CHAPTER XV

SUMMARY OF RECOMMENDATIONS

This chapter includes a summary of the recommendations that are made throughout the report. The recommendations are separated into two categories -- major policy and those general in nature. Specific recommendations on the schools are listed in the discussion of each school in Chapters VII and XIV.

In light of its study and observations, the precontract survey team feels that the recommendations outlined in the report and summarized in this chapter will contribute immeasurably to the upgrading of the agricultural education program in the twelve schools within the province of this study.

I. Major Policy Recommendations

A. A technical assistance contract be developed with the California State Polytechnic College for a 2½ to 3 year period to provide the technical assistance necessary to carry out the recommendations proposed by the survey team.

B. That the upgrading of the schools be approached in terms of a total investment. The herein proposed budget serves as a framework to achieve the proposed educational objectives and every effort be made to secure a maximum loan of $4,303,656 to implement the recommendations outlined in the report.

C. The educational program and curriculum at each school be revised in accordance with the following:

1. Bell Ville

a. Concentration of studies would be in agricultural mechanics and machinery and in dairy production and dairy manufacturing.

b. The curriculum would comprise a three year advanced technical program in each of these areas. A one to two year farm practice program in each of the areas would also be included.

2. Bolivar

a. Concentration of studies would be in home economics and general agriculture.

b. The curriculum would comprise a two year professional program in home economics and a three year basic program in general agriculture and in home economics.

3. Casilda - Zavalla

   a. Concentration of studies would be in general agriculture, teacher education and in home economics.

   b. The curriculum would comprise a three year advanced technical program in general agriculture. It would also include a one year professional teacher education program in agriculture and home economics. A one to two year farm practice program in agriculture would be included.

   c. The land at Zavalla should be planned for the development of an educational facility of post-secondary level for a program of practical agriculture, agricultural mechanics, farm machinery and home economics education.

4. Colon

   a. Concentration of studies would be in general agriculture.

   b. The curriculum would comprise a three year basic program in agriculture oriented towards poultry.

5. Las Delicias

   a. Concentration of studies would be in basic agriculture.

   b. The curriculum would comprise a three year basic program in agriculture oriented towards dairy production and livestock production.

6. Miramar

   a. Concentration of studies would be in general agriculture.

   b. The curriculum would include a three year basic program in general agriculture.

7. Olavarria

   a. Concentration of studies would be in livestock production.

   b. The curriculum would comprise a three year advanced technical program. A one to two year farm practice program would also be included.

8. Quines

   a. Concentration of studies would be in basic agriculture.

   b. The curriculum would comprise a three year basic program in agriculture oriented to vegetable and fruit crop production.

9. Salta

   a. Concentration of studies would be in general agriculture.

   b. The curriculum would comprise a three year basic program in general agriculture.

10. San Juan

   a. Concentration of studies be in enology, olives and olive oil, food processing and home economics.

   b. The curriculum would comprise a four year advanced technical program in enology, olives and food processing, and a 3 year program in home economics. A one to two year farm practice program in agriculture would also be included.

11. Tandil

   a. Concentration of studies would be in dairy production and dairy manufacturing.

   b. The curriculum would comprise a three year advanced technical program in these areas. A one to two year farm practice program in each of these areas would also be included.

12. Victorica

   a. Concentration of studies would be in basic agriculture.

   b. The curriculum would comprise a three year basic program in agriculture oriented to livestock production.

D. Carefully scrutinize the factors affecting costs of education per student in the schools and take such measures as are necessary to reduce these costs.

E. Incorporate modern efficient production and management practices in the school farm operation so that maximum educational and financial benefits will be realized.

F. Funds derived from the school farm operations should be used to meet operating expenses of the school and not be returned to the national treasury.

G. Every possible means be explored through legislative and budgetary provisions to provide adequate financing for the operation of the schools and to raise the teachers salaries to a level equal to that of other professional people with comparable preparation, experience, and responsibility.

H. Utilize students to work on the school farm and school plant in order to gain additional educational experience and to earn a portion of their school costs and thereby reduce the number of permanent employees.

I. Every effort be made to provide adequate classrooms, laboratories, library facilities and materials and instructional materials in each school in order to strengthen and offer an effective educational program.

J. With increased enrollments adjust the class laboratory and dining schedules to more effectively utilize the facilities.

K. Develop and incorporate a basic course pattern for all schools offering a basic agricultural program and also a basic course pattern for all schools offering the advanced technical program and the professional program.

L. Establish a strong teacher education program for the preparation of teachers of agriculture and home economics at Casilda.

M. Fees be established to cover the costs of board and room. Where hardship cases are involved scholarships should be provided and the student encouraged to earn at least part of his costs through work on the school farm or school plant.

N. Develop a preventive maintenance program for all buildings and equipment.

O. Initiate a vigorous student recruitment program to attract more rural young people into agricultural education programs.

P. Establish programs of home economics in two agricultural schools best adapted to co-education, namely: Casilda and San Juan, and basic agricultural program in the home economics school at Bolivar.

Q. Tractors and agricultural equipment should be leased rather than purchased whenever possible and lease agreement programs can be initiated.

R. The organization of "Cooperators" become recognized as an auxiliary service with definite organizational relationships established in each school.

II. General Recommendations

A. Develop a strong agricultural teacher's organization on a zone and national basis with zonal and national conferences being held regularly.

B. The assignment of schools supervised by a Technical Inspector be on a geographic zone or regional basis. When adequate facilities are available the Inspectors have their offices in one of the schools centrally located in each of the zones.

C. Horizontal coordination between all secondary agricultural schools and vertical coordination between primary, secondary, university, and other post secondary schools be implemented.

D. The selection of new school Directors and other personnel in positions of leadership should be based on adequate preparation and experience in agriculture and agricultural education with work in, or equivalent experience in school administration.

E. A strong agriculturally prepared farm manager be selected to manage each of the school farm operations and that he be paid a salary commensurate with his preparation, experience, background and responsibility.

F. A pilot program be set up at one school to provide an opportunity for student owned or shared projects under a recognized project program.

G. A similar organization patterned after the Future Farmers of America be established in Argentina.

H. The school farm should become an efficient educational laboratory and production unit through utilization of modern machinery and equipment; providing better facilities for storing feed, shelter against the elements and a winter corral and supplemental feeding system; follow recommended practices in irrigation, drainage and soil conservation; number and identify fields and keep yield and production records.

I. Provide a team of special advisors under a technical assistance contract to assist and advise on the upgrading of the total program of agricultural education. The advisory team to be composed of the following:

1. Agricultural curriculum advisor
2. Teacher education advisor
3. Animal production advisor
4. Crops production advisor
5. School architect advisor
6. Consultants as needed.

J. Provide a participant program for selected personnel to study for a year in the United States at the institution providing the technical assistance program.

K. A request be made through the proper channels for a contingent of Peace Corps Volunteers who would be prepared as agricultural teaching assistants.

PART F

CONCLUSIONS

CHAPTER XVI

REPORT CONCLUSIONS

The survey team recognizes an excellent opportunity for agricultural education to provide leadership in the expansion of agriculture in Argentina. The young people of the country through a vigorous program of education in agriculture can become the future leaders. New technology can be brought to the farms and to agriculturally related business and industry through the upgrading and expansion of the existing program.

This report makes many recommendations that in the opinion of the survey team would lead to the improvement and upgrading of the twelve schools that were included in the survey.

Time did not permit an exhaustive study of each school but there was enough of a pattern established in the survey to feel reasonably sure of the analysis of each school which led to the several recommendations.

Time did not permit the team to visit areas of the country where interested parties contacted the team and asked them to visit and make recommendations on the establishment of new schools. Three of these special requests were made. One was in the Corrientes area in northern Argentina. This is a specialized tree crop area. The second was in the Rio Negro valley which is the center of the fruit growing industry. The third was in the southern Mendoza Province area which is the center of grape growing and wine making for Argentina. It is suggested that the regular technical assistance staff follow through on these requests and make concrete recommendations on the feasibility of establishing new programs of agricultural education in these and perhaps other areas.

This survey team deemed it a privilege to make this study and report. In the opinion of the team there is a great potential for agricultural education in the future of Argentina. It is urged that consideration be given to the full implementation of the recommendations submitted in this report.

A P P E N D I X

EXHIBIT A

SCHOOL PROGRAM SURVEY FORM

School_____Location_____Director_____

Specializations_____

I. Agriculture of the area

Enterprises in order of importance
Size of farms
Cultural and husbandry practices
Land management and conservation practices
Irrigation and drainage
Mechanization
Markets
Transportation
Utilities
Climatic conditions
Comments

II. The School

Enrollment
Teachers
- Subjects taught
- Qualifications
- Salaries
- Other jobs held

Area served
Enrollment breakdown. Total graduates last five years_____
- Year 1____2____3____4____5____
- Rural_____Urban_____From other areas_____
- Living at home_____Living on farms_____
- Extracurricular duties and activities

Comments
Classrooms
- Number_____Capacity_____
- Functional adequacy
- Comments

Laboratories
- Number_____Type_____Capacity_____
- Functional adequacy
- Equipment
- Comments

School Farm
- Type of soil
- Hectares
- Livestock
- Crops
- Machinery and Equipment
- Adequacy of facilities
- Utilities

Irrigation
Management practices
Student participation
Comments
Housing and feeding
Capacity
Adequacy
Management
Staff housing
Comments
Other facilities

III. Curriculum

Number of years_____School days/yr_____Hours/day_____
Periods_____

Outline curriculum for each year
Variations
Relationship of agricultural courses to general education
% agricultural courses_____% lecture-laboratory_____
% field experience
Provisions for farming practice
Quality of instruction
Placement and success of alumni
Comments

IV. Community Acceptance

Interest and enthusiasm
Financial help
Comments

V. Potential

Need for graduates
Number and type of employment opportunities
Need for increased efficiency in agricultural production and marketing
Need for technically trained men in agriculturally related industries
Comments

EXHIBIT B

FACILITIES AND EQUIPMENT SURVEY FORM

FACILITY DEVELOPMENT_____

SCHOOL NAME:_____

ROOM, LABORATORY OR SHOP NAME:_____

DESCRIPTION OF ROOM USE:

NUMBER OF ROOMS OF THIS TYPE REQUIRED FOR THIS SCHOOL:_____

NUMBER OF STUDENT STATIONS REQUIRED (MAXIMUM)_____

RECOMMENDED ROOM SIZE:_____ft. x _____ft.

SPECIAL ROOM REQUIREMENTS:

1. STRUCTURAL:_____
2. LIGHTING:_____
3. ELECTRICAL:_____
4. HEAT OR VENTILATION:_____
5. OTHER:_____

ROOM FURNITURE AND/OR EQUIPMENT

1. STUDENT FURNITURE:_____
2. TEACHER FURNITURE:_____
3. LABORATORY EQUIPMENT:_____
4. AUDIO-VISUAL:_____
5. SHELVING:_____
6. CABINETS:_____
7. CHALKBOARD:_____
8. TACKBOARD:_____
9. OTHER:_____

EXHIBIT C

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U.S. Department of Agriculture. Foreign Agricultural Service Bulletin M-149. July 1963.

8. La Enseñanza Agricola En La Republica Argentina

Secretaria de Estado de Agricultura and Ganaderia. Buenos Aires. 1963.

EXHIBIT D

LOG OF ACTIVITIES OF THE SURVEY TEAM

August 2 - Survey team departed from Paso Robles late afternoon and stayed overnight in Los Angeles.

August 3 - Survey team flew from Los Angeles to Panama City for an overnight stop.

August 4 - Survey team flew from Panama City to Buenos Aires. Team was met at the airport by Ing. Roberto E. Arano, Director General of the Agricultural Education Department in the Ministry of Agriculture and Livestock, and Dr. John McKigney, Assistant to Freeman Smith, Food/Agriculture Officer for the U.S. A.I.D. Mission to Argentina.

August 5 - Orientation meetings at the Embassy and the Secretariat of Agriculture. Met Robert McClintock, U.S. Ambassador to Argentina, at the Embassy. Freeman Smith reviewed the program. Also spent some time with William Lowenthal, A.I.D. Mission Program Officer, and Terry Sanders, Director of the U.S. A.I.D. Mission to Argentina. At the Ministry of Agriculture and Livestock met with Ing. Arano to review the program.

August 6 - The morning was spent at the Embassy in reviewing previous reports. The afternoon was spent in conference with Director Arano discussing program objectives, philosophy, and procedures.

August 7 - Entire day was devoted to planning and organizing the procedures and methods of approach to the assignment. Hasslein and Schwartz reviewed architectural problems with Arano.

August 8 - The team worked during the day at the Secretariat on background material and information. Gibson spent some time with Freeman Smith at the Embassy in the afternoon.

August 9 - Team flew to San Juan accompanied by Arano, McKigney and Sarmiento (Interpreter). Met by city officials, School Director Mira, faculty students and reporters. Evening developed plans following reception.

August 10 - Team held private audience with the Governor of the province Pedro Avalia. Visited several farms in area and talked to farmers. Reception in evening with agricultural leaders.

August 11 (Sunday) - Team visited irrigation and power plant. Visited winery. Lunch at a student's home. Afternoon devoted to working on report. Reception in evening with agricultural leaders.

August 12 - Spent entire day visiting school. Sat in on lectures and labs. Talked with Director, staff instructors, and students. Reception in evening.

August 13 - Visited world's largest vermouth factory in San Juan then drove to Mendoza. In the late afternoon and evening the team worked on report.

August 14 - Visited agricultural activities and leaders in Mendoza area. Possibility of establishing a new school in province. Spent afternoon on report.

August 15 - Worked on report in morning. Flew to Cordoba in afternoon. Stayed overnight to catch plane to Salta.

August 16 - Flew to Salta in northwest section of Argentina. 1000 miles from Buenos Aires. Spent afternoon visiting the school. Audience with the Governor of the province.

August 17 - Spent the day visiting the school and talking with the director and staff. Barbecue lunch at the school. Visited farm of a progressive farmer. Worked on report in late afternoon and evening.

August 18 (Sunday) - Flew back to Buenos Aires.

August 19 - Met with Freeman Smith in morning and with Ing. Arano in afternoon to review and discuss observations of trip. Worked on report.

August 20 - Drove into area southwest of Buenos Aires, accompanied by Ing. Arano and Dureni (Interpreter from Embassy). Visited school at Miramar afternoon and evening. Overnight at Mar Del Plata.

August 21 - Drove to Tandil and spent day visiting school. Observed labs. Met with Director and Staff. Overnight at Tandil.

August 22 - Drove to Olivarria. Visited school. Met with Director and staff. Observed classes. Drove to Bolivar. Stayed overnight.

August 23 - Visited the home economics school at Bolivar. Visited classes. Met with Director and staff. Had lunch with students. Due to rain the road to the Salecian Fathers school was impossible so team could not visit the school at Del Valle. This school does not come under the Secondary Agricultural Education Program of Ing. Arano. Returned to Buenos Aires in evening.

August 24 - Team conference and work on report.

August 25 (Sunday) - Worked on report.

August 26 - Worked on report in morning. Conference in afternoon with Ing. Arano to discuss observations.

August 27 - Team divided into two groups in order to cover the four remaining schools. Rains prevented the one group from flying. The other went by car to Bell Ville.

August 28 - One group visited Bell Ville and drove to Casilda to meet the delayed group who drove to Casilda.

August 29 - Visited Casilda in morning and early afternoon and then drove back to Buenos Aires.

August 30 - Worked on report. Conference with Ing. Arano to discuss observations and findings. Conference with McKigney of Embassy.

August 31 - Team discussion of observations and findings. Devoted most of time to working out facilities and equipment priority listings. LaSalle had to leave to return to U.S. for the opening of his school.

September 1 (Sunday) - Team discussion and formulation of basic policy recommendations.

September 2 - In the morning the team met with representatives of the Salecian Fathers who have a program of agricultural education in fourteen schools and one in which the team was particularly interested, Del Valle. The group included Father Grehen, Father Paciaroni (Director of the school) and Father Wade (Spent a year in U.S.). The afternoon was devoted to a conference with Ing. Arano and working on report.

September 3 - The team worked on the report. Gibson met with Smith and McKigney of the A.I.D. Mission to discuss budgeting procedures and proposed recommendations.

September 4 - The team worked on the report. Gibson and Hasslein met with Harry Wilhelm of the Ford Foundation to review and discuss the program of the survey team. Ing. Arano held reception for team in the evening.

September 5 - The team worked on the report. In the afternoon met with Terry Sanders, Director of the A.I.D. Mission and Freeman Smith to discuss the observation and recommendations of the survey.

September 6 - Finished report. Delivered three copies of a preliminary rough copy of the survey report to Freeman Smith. Discussed observations and recommendations with Ing. Arano.

September 7 - Team left for San Luis Obispo in complete agreement that there is an excellent opportunity for the development of a strong program in agricultural education in Argentina.