6210092 (3)
PD-AAG-061-D1

6210092001502

UNITED STATES GOVERNMENT

memorandum

DATE: February 1[illegible], 1980

REPLY TO ATTN OF: Robert E. [illegible]lson, Eval. Officer
USAID/Tanzania

SUBJECT: Seed Multiplication Evaluation - 621-0092

TO: AFR/DP/Eval.
AID/W

1. Enclosed are evaluation materials related to the subject project which perhaps require a little background information if they are to make sense to the reader.

2. A PES was conducted on this project in April of 1978 and concluded that within the limited scope of project activities, focusing on the establishment of seed multiplication farms, the project was on target. Additionally, this PES recommended that the project be expanded to include two new farms, which would mean a PP revision, project extension and increase of funds. These were requested and incorporated into the FY 79 CP, on the assumption that the PP revision would be submitted and approved in FY 79.

3. On a larger scale, this same PES brought to the Mission's and TanGov's attention the fact that emphasis was being given to a single component (the farms) in the seed development chain when, in fact, the entire industry should have been considered from the outset. Mission and TanGov realization and concern over the above subsequently lead to a request for a review of the entire seed industry and the functions of each component for the purpose of identifying the bottlenecks in the system. This review when completed was to serve as the basis for the PP revision and was expected to reinforce the PES recommendations.

4. The review, as it turned out, developed into a very comprehensive full scale, two stage seed industry survey (copy is enclosed) which was carried out over a much longer than expected period (six months). The findings and recommendations of the survey however, which we consider to be very sound and well documented, were quite different than those of the 1978 PES, i.e. instead of recommending additional farms they strongly recommended the closing out of one of the existing farms-among other things.

5. Therefore, the primary purpose of the PES finally conducted in early FY 80 was to get qualified personnel out here to research the literature available on the project, particularly [illegible] conflicting PES and survey reports, to validate and update the findings to [illegible] extent feasible and then to pull everything together into a comprehensi[illegible] plan which would manifest itself in a new PP revision, project phase-out plan or whatever.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-76)
GSA FPMR (41 CFR) 101-11.6
5010-112

6. This has been done. The new PES recommendations have been reviewed and accepted by the Mission, resulting in a clear-cut Mission position on how to proceed with this project.

Enclosures: a/s

6210092001502

1. PROJECT TITLE: SEED IMPROVEMENT

2. PROJECT NUMBER: [illegible]

3. MISSION/AID/W OFFICE: USAID/Tanzania

(Reporting Country or AID/W Administrative Code, Fiscal Year, Quarter beginning with New Month FY)

☐ PERIODIC EVALUATION ☐ SPECIAL EVALUATION

4. KEY PROJECT IMPLEMENTATION DATES

A. First PRO AG or Equivalent FY 70 | B. First Obligation FY 81 | C. First Delivery FY 81

5. [illegible] 6,929

6. PERIOD COVERED BY EVALUATION: From (month/yr.) May 1978 To (month/yr.) Dec 1979

Date of Evaluation Review: November 1979

8. MISSION DECISIONS — SIGNATURE OF AID/W OFFICE DIRECTOR

A. [illegible] (NOTE: Mission decisions which require AID/W approval should specify type of document, e.g., Airgram, SPAR, PIO, etc. and [illegible])	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. ACTION TO BE COMPLETED
(See attachment A for detailed recommendations for Phase-out of this project. These recommendations have been reviewed and approved by the Mission and are being followed up on.)		

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9. INVENTORY OF DOCUMENTS TO BE REVISED FOR ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☒ Project Agreement
- ☒ Implementation Plan e.g., CPI Network
- ☒ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. ☐ Continue Project Without Change

B. ☐ Change Project Design and/or ☒ Change Implementation Plan

C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

R. Jackson - RS/AGR AID/W
A. Boyd - Seed Tech. Miss. State Univ.
B. Behrens - Project Officer/USAID/T
P. Shirk - Dep. Agr./USAID/T
R. Gilson - Evaluation Officer/USAID/T

12. Mission/AID/W Office Director Approval

Signature

Typed Name: Howard L. Stevenson

Date: February 6, 1980

13. Summary

This report covers the period April 1977 - September 1979.

A. Positive Aspects

-- Plans to phase in farm mechanization management has proved to be satisfactory at Arusha and Msimba.

-- Agro-mechanics are still [illegible] and will be phased out in 1980.

--Housing for the Agro-mechanics at [illegible] is almost complete and he should be on station in early 1980.

-- Participants trained for the project include 19 agronomists and 13 agro-mechanics returned from the U.S. Status of participant training is as follows:

a) BSc - 14
b) MSc - 2
c) Non-degree - 28

Participants in Training:

BSc - 6

TOTAL 50

Most of the agronomists are working in responsible positions in the project or closely related work.

-- The expatriate farm managers and mechanics have done a very competent job.

B. Negative Aspects

-- The agro-mechanics who returned from the U.S. have not been assigned to the seed project but returned to the regions from which they came. MinAg has assured that eight (2 per farm) will be reassigned immediately.

-- Inventory control procedures recommended in 1977 have not yet been implemented by MinAg.

-- The Kibaha farm has proved to have inadequate soil resources for a productive seed farm. USAID is supplying only minimum managerial assistance to this farm for the rest of the project and has recommended that it be phased into use for crops such as cashew, cassava, seed potato, etc.

-- The seed certification program continues to lag with a lack of trained field inspectors and seed analysts.

-- Coordination of production/distribution has been difficult. TanSeed is charged with production and distribution of certified seed, therefore, they contract with the seed farms for that part of their production. For that reason the farms have only minimum control of their acreage. There should be closer coordination with MinAg and TanSeed.

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C. Conclusion

The project has succeeded [illegible] two seed farms [illegible] and Mbimba) and has partially developed a third [illegible] the scope of the project, i.e. [illegible] produce foundation seed [illegible] the farm at Mabuga should be fully operational by the end of the project. [illegible] is likely to be an effective seed farm but the other three should be able [illegible] seed.

-- Currently the seed farms are producing about 30% of the certified seed required by TanSeed. They are not yet producing hybrid maize inbred lines but should begin soon.

-- In view of the many external factors affecting the project the ultimate impact of the project will be difficult to assess except in that it removes non-availability of good seed (a basic input) as a limiting factor in development.

- It is recommended that AID consider all aspects very carefully before embarking on development of more seed farms to replace contract growers.

14. Evaluation Methodology

Information used in this evaluation was obtained through field visits to each of the four seed farms and the Morogoro laboratory, discussions with all Experience Incorporate in-country personnel, Mr. Ken Holt and Mr. Duane Eriksmoen from the Experience Incorporated home office, USAID personnel, TanSeed personnel, Morogoro seed laboratory personnel and available technical reports. This team was requested by USAID/Dar es Salaam to assist in plans and documentation for phase out of this project. They were asked to utilize the information gained during this three-week period to complete this project evaluation summary.

15. External Factors

There are several variables which directly affect the seed production project.

(a) Role of Research -- Since the purpose of a seed production program is to multiply seeds of improved varieties for distribution to farmers it is basically dependent on the research programs in the country to supply the improved materials. The Canadian wheat program is supplying new varieties of wheat for the system. The USAID supported program has tested and released some introduced varieties of corn (Tumpeno), sorghum (Bossier) and green gram, but to date no locally developed varieties have been released. There is no research in Tanzania to our knowledge on development of maize hybrids. All hybrids in production now were developed in Kenya and are adapted to high altitudes. There is a need for development of lines adapted to the lower altitudes in Tanzania.

(b) Seed demand and distribution -- Seed demand for the country is estimated by projections from the regions, the national maize program and by advance orders from a very few farms. TanSeed is charged with the responsibility for producing under contract, and distribution of, the certified seed the regions require. To our knowledge there is no program or plans for creative marketing to expand distribution beyond that indicated by more or less firm commitments prior to planting the seed crop. The most obvious growing demand is for hybrid maize seed which is currently at about 2,500 tons per year and growing at about 10% per year.

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(c) Tr[illegible] -- Since [illegible] which is a parastatal [illegible] joint, [illegible] Tanzania [illegible] development corporation is charged with certified seed production [illegible] foundation seed needs from the seed farms and [illegible] certified seed needs with the seed farms. In its posi[illegible] Tanzania [illegible] as a major voice in production plans of the seed farms and [illegible] utilization of the seeds produced.

(d) Regional seed farms -- [illegible] of the regions have been [illegible] seeds on their farms and dis[illegible] the region. They are not a [illegible] of the national seed multiplica[illegible] and do not produce certified seed. It is difficult to assess the impact on the farm output of these programs but they [illegible] a potential problem since they [illegible] operate with little or no supervision in quality control.

16. Inputs

a. Training:

- There have been 13 agro-mechanics trained in the U.S. who are now back in country. At this writing only two have been assigned to seed farms. USAID/Dar es Salaam has, however, been assured that six more will be assigned so there will be two at each seed farm.

- Of the 19 agronomists trained under the project most hold positions in the project or in closely allied fields. However, they are in positions of farm manager or higher, leaving the farms without assigned field agronomists.

b. Commodities:

Field operations were hampered at the farms due to shortages in certain machinery spare parts. The shortage of spares resulted initially from a joint USAID/T, Chief-of-Party, host government decision to use project funds for participant training expenses (Thirteen Agro-Mechanics) rather than for procurement of spares as originally programmed.

That decision was made in the second quarter of CY-1978 to accomodate what was and is considered to be a critical requirement for a machinery maintenance capability at each of the seed farms. Procurement of the spare parts was to be deferred until FY-1979 funds became available in October or November 1978.

The list of spare parts to be ordered was not received by USAID/T from the Ministry of Agriculture until the third week in March of this CY-1979. Subsequent delays resulted when it was determined that pricing information on the specification list was obsolete. The procurement documents were sent to Nairobi to obtain current pricing information.

It soon became apparent that equipment needed for farm operations would not be available if spare parts were shipped via the usual means, i.e., surface freight. The Mission then initiated measures to have spare parts (identified by the personnel at the seed farms as critically important items) transported to Dar es Salaam via air shipment.

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ission is [illegible] that orders specifying air transport have been placed [illegible] U.S. [illegible] USAID is continuing to supply the spare parts necessary to keep the equipment operational.

- USAID plans to further [illegible] at least until the end of this contract.

c. Technical Services

- The Experience Incorporated [illegible] and farm managers are competent and have done a good job under the difficult conditions encountered.

- The E.I. project coordinator recently departed his post without advance notice. They are currently recruiting his replacement.

17. Outputs

- As an output of the project a primary objective of a foundation seed farm is to produce adequate supplies of foundation seed to meet the demand. This is accomplished in the case of inbreds and single crosses for hybrids. It is expected that this capability will be a fact by the end of the project.

- The project is contributing to the growing demand for seed by eliminating supply of foundation seed as a limiting factor in production, however, external factors mentioned above have a major impact on demand.

- One of the major outputs of the project has been development of the capability of Tanzanians to take over the management of the project. The project may fail after U.S. support is completed due to lack of TanGov financial support or foreign exchange for spares, but there are many technically competent agronomists and mechanics who were trained in the U.S. who are capable of managing the seed farms.

18. Project Purpose

The purpose of this project is to assist Tanzania in developing a system which can produce the quantities of improved high quality food crop seeds necessary to satisfy national demands.

End of Project Indicators	Status
a. TanGov has established and developed its technical and managerial skills and is budgeting support sufficient to produce foundation and certified seeds and to encourage seed distribution.	This indicator is partially on target. The government does have the technical and managerial skills to assume responsibility for two of the seed farms. It is unclear whether adequate TanGov financial support is being budgeted to carry on the work of the farms. Over the reporting period, the TanGov has relied heavily on proceeds from PL 480 Title I for farm development. Although the Government is encouraging seed distribution, there are many problems yet to be resolved with the Tanzanian Seed Company which handles the multiplication and distribution of foundation and certified seed.

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End of Project Indicators	Status
b. Large food crop acreage planted for certified seed, mainly by small farmers.	Seed sales by TanSeed do indicate some progress.
c. All foundation seed produced is being used for multiplication.	This target is being fully met at this time.
d. Growing volume of certified seed required annually by farmers.	With no solid date regarding demand, it is difficult to determine the full volume of seed required. However, based on a review of sales by the Tanzania Seed Company, it might be concluded that demand is now being met for these farmers who are in a position to purchase improved seed and that an increase of about 10% per year is indicated for the next five years.

19. The Project Goal

The seed multiplication project is one element supporting an overall sector goal "to assist Tanzania achieve self-sufficiency in the food crops subsector." Since this project focuses on a limited (nonetheless important) component in the food crop subsector, the goal is not achievable through this project only. At this stage, however, the project has furnished the infrastructure for three farms, a positive action toward meeting the goal objective of self-sufficiency. As the farms are developed, the Tanzanian Government should move even closer to meeting this goal, assuming that essential financial, manpower and policy actions are taken to stimulate increased food production. Also, the goal is dependent upon the necessary research, extension, credit, storage and marketing programs to support the food crop subsector.

20. Beneficiaries

The project is focused on production. The advantage to small scale farmers is difficult to assess but the fact that good seeds are becoming available in greater quantities should have an impact on this part of agriculture. By promoting better production there should be a benefit to all the population in increased supplies and lower food costs.

21. Unplanned Effects (The 1970 PES "Unplanned Effects" are cited below for reconfirmation)

There are several unplanned effects of this project that were not fully realized in the original design. As alluded to throughout this paper, one (now) obvious effect has been the pressure put on the research system and other components of the seed industry to develop in parallel with the seed multiplication program. The lack of proven seed varieties except wheat, maize and sorghum, is a detriment to rapid multiplication of adaptable, economic seed for distribution to farmers. In the case of maize and sorghum the "early release" program carries the risk of multiplying and promoting a variety which proves to be ultimately unsuitable and could therefore seriously set back research and farmers' willingness to use seed grown on the certified farms.

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Sta[illegible] distrib[illegible] utilized [illegible] by these [illegible] component in the seed [illegible] have been [illegible]

The TanGov, [illegible] resources to devote to the [illegible] the entire [illegible] yet the [illegible]

22. Lessons Learned (The 10 "Lessons Learned" are cited below for reconfirmation)

As this project is one of the longest running, most visible and perhaps more successful activities, and since USAID inputs are being phased out on two of the farms, there are some useful lessons gained. Many of the points have been mentioned to support other sections of this document. A few deserve reiteration:

a) In the agricultural sector, the aim in Tanzania is delivery of a service or product to small farmers. Projects have to be designed which consider (but not necessarily include) all the facets in reaching the intended clientele. In the case of this project, seed production was the point of focus. But this project alone cannot assure proper seed reaching the farmer. Ultimate success is dependent upon other projects and other donors. Another USAID activity focuses on the research component, except for wheat which is a Canadian input. Certified seed production and distribution is the responsibility of the Tanzanian Seed Corporation, a British-aided (and partially owned) parastatal. The IBRD supported and guided National Maize Program is the mechanism for stimulating farmer production. A failure or faltering in any of these critical components impacts on the effectiveness of this project. Thus, a project that limits itself to a single component in our overall agriculture system is at the mercy of circumstances and forces beyond project control.

b) USAID should be very cautious in over-investing in a project such as this. Granting, of course, that heavy equipment, machinery and processing facilities are necessary for production of good seed, governments like Tanzania can quickly get overwhelmed with spare parts and replacement equipment needs, and the management and maintenance required by machinery and highly technical physical plants. Extreme care must be given to designing projects with minimum equipment requirements and allowing a sufficient phase-in period for host country personnel to manage and maintain equipment inventories and facilities. Whether or not the TanGov has the skill and resources to keep the farms operational remains to be seen.

c) Following the point made in paragraph b) above, a fulcrum upon which rests success or failure of the seed project is the mechanic capability to keep things running. Perhaps the weakest aspect of this project was lack of sufficient mechanic training from inception of the project. There are, only now in late 1979, trained mechanics to replace the expatriate agro-mechanics at the farms. All USAID projects involving machinery should have heavy emphasis on training of mechanics and maintenance of the machines used to accomplish project objectives.

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d) The [illegible] for [illegible] seed [illegible] (perhaps [illegible] for development of [illegible] equipment is ordered and arrives [illegible] expatriates become [illegible] and preparations are made to begin full operations. To [illegible] USAID and the host government feel pressured and are impatient to show results [illegible] within the first year. This is, of course, largely a [illegible] AID projects time limitations and the interest of the part of all parties to [illegible] possible. Serious consideration should be given to designing projects which require no targets for the first year, other than the completion of all actions necessary to begin implementation.

As a corollary point, project design should include adequate time after completion of U.S. technical assistance for monitoring of host country management. For USAID to, in effect, "pack up and leave" a project without follow-up monitoring and oversight is doing a disservice to the host country and to the U.S. investment in the project. Some mechanism for monitoring should be built into most projects. Also, a procedure of declining U.S. input into the project should be considered in which USAID financing decreases over time as host country budgetary support increases to the point that the project is fully funded by the host country at completion of USAID assistance.

e) Because of the high visibility of this project and its direct impact on the country's critical need for improved seeds, the Ministry of Agriculture has pressed for additional farms to accelerate seed production and to expand the geographic area by dispersing seed farms throughout the country. Realizing that a wide geographic spread helps "cover up" other problems related to organization of the seed industry (i.e. source of production closer to seed users thus reducing the distribution and storage requirements), USAID nonetheless must resist pressure for quick action in order to assure that any further investment in seed farms is preceded by sound and thorough technical and economic surveys of the new sites. USAID should also insist that the sites selected for establishment of the new farms have clear potential to fulfill the functions for which they are intended, otherwise alternate locations should be sought.

23. Special Comments

This project is now in the phase out stage. Therefore, several detailed recommendations have been made to help complete the project and leave it in the most viable condition possible. These comments in the form of recommendations to USAID/Dar es Salaam are included as an attachment to this paper.

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ATTACHMENT A

RECOMMENDATIONS TO USAID/TANZANIA [illegible] OF STUDY TEAM
Mr. A.H. LOYD - [illegible]
MR. R.I. JACKSON - [illegible]

The Seed Production Project is scheduled to terminate on December 31, 1981. To make optimum use of the resources available during this remaining time, the Team makes the following recommendations:

A. Msimba

1. The TanGov should complete the building for the processing plant and seed dryer.

2. USAID should purchase required spare parts to make the farm machinery operational through the life of the project.

3. The TanGov should station two of the agro-mechanics trained under this project at the Seed Farm.

4. An expatriate agro-mechanic should be provided under contract to the Farm until the expiration of the current expatriates contract which is about October 1, 1980.

5. USAID should purchase four short conveyors for the processing plant to move seed from the bins to the seed cleaner and a bag conveyor for use in seed storage.

6. The TanGov should transfer the long horizontal belt conveyor now in storage at the old sisal warehouse to Arusha to be used outside the seed dryer.

7. TanGov should employ the services of a contractor to install the equipment/machinery in the processing plant. The U.S. contractor may be requested to provide the services of a short term consultant to advise in the installation and initial operation of this equipment/machinery.

8. USAID will provide technical assistance in weed control from the centrally funded Oregon State University contract.

B. Arusha

1. Points 2, 3, 4, 5, 6, and 8 noted above under the Msimba Farm are also recommended for Arusha.

C. Kibaha

The recommendation contained in the evaluation report by the Missouri team is that in view of the technical and economic problems mainly in rainfall, soil fertility and cost of inputs, efforts to further develop the Kibaha seed farm be terminated. We recognize these problems however, in view of the tremendous efforts put forth by the Ministry and the considerable investment by USAID, the team feels that complete abandonment of this farm at this time is not acceptable. The team does feel that there is adequate equipment and spares either on hand or on order to support the farm for the life of the project.

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The team [illegible] should be [illegible] dependent [illegible] mechanics to the farm. USAID [illegible] expatriate agro-[illegible] manager as second priority. The team feels that one [illegible] sufficient.

D. Dabaga

1. There appears to be a personality [illegible] between the local and expatriate farm managers. It is assumed that steps will be taken to resolve this problem and should be one of the bases for continued technical assistance support to the farm.

2. USAID should, on the basis of resolution of No. 1 above, supply through the contractor, an expatriate farm manager and an agro-mechanic.

3. USAID should provide a small storage/drying facility.

4. The existing seed cleaner is adequate for the immediate future with the exception of additional screens which should be supplied by USAID.

5. USAID should provide an adequate supply of spare parts.

6. The attached list of equipment and prices will be up-dated by Mr. A.H. Boyd and specifications for equipment will be supplied to USAID.

E. Seed Laboratory - Morogoro

1. Through the contractor, USAID should provide the services of a seed specialist for a period of three to six months. This specialist should not be posted even on a consulting basis until adequate housing is secured.

2. USAID should request Mississippi State to set up a three week short course on seed certification/analysis and seed program development. This should be scheduled in October/November, 1980 or later and only after the contractor's seed specialist has the laboratory operational.

F. Role of Ministry of Agriculture in Seed Production

1. To assure the most efficient and effective operations as well as a smooth transfer of operations and responsibilities, the team feels that the Ministry take a more active role in policy decisions, especially concerning production of inbred lines and single crosses for hybrid maize production, foundation seed of other varieties and certified seed production by contract growers.

2. At least one Tanzanian field agronomist trained under the project should be stationed at each seed farm to ensure production of high quality foundation seed.

3. Permanence and stability of personnel is essential to the development of a good seed program. The ministry should insure that adequate promotion, job satisfaction and financial security is available for a career in seeds instead of necessitating that he move to other projects.

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G. [illegible]

1. [illegible] by [illegible] that [illegible] corn production [illegible] support to [illegible]

The team has serious [illegible] the probable accomplishment [illegible] agronomist for the following [illegible]

a. There is serious [illegible] fied agronomist with specialized experience in seed [illegible] hybrid maize can be recruited and brought in within the necessary [illegible]

b. The team has been informed that the 19 agronomists trained by this project are employed either in the project or other closely related activities. Therefore it is doubtful that within the next two years that TanGov can provide trained field agronomists as recommended in F.2.

c. The logical station for this agronomist would be Dabaga. There is no housing available at that location.

2. Inventory Specialist. It is agreed in principle that there should be a central spare parts depot and inventory control system. This was recommended by qualified specialists in 1977 but it was never implemented. MinAg is currently preparing storage facilities in a warehouse in anticipation of receiving spare parts shipments now on order or to be placed in the immediate future.

In view of the time delays associated with procurement and other difficulties the team recommends that short time consulting assistance of 2-4 months be given to this program. It is felt that a full-time specialist is not justified.

3. Team Coordinator. In view of the numerous problems and administrative details associated with phase out of a project of this size and longevity and the need for one person to be answerable to USAID and TanGov, it is recommended that an expatriate project coordinator be employed as soon as possible.

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NEW EQUIPMENT ESTIMATE

ITEM	ARUSHA	MSIMBA	DABAGA	Est. Cost ea.($)	No.	Est. Cost FOB U.S.A. ($)
Horiz. Conveyor	4	4		650	8	5200
Flatbelt Bag Conveyor 15 ft. long	1	1	1	2500	3	7500
Grain bin. Steel Silo type, with perforated drying floor, 2[illegible] dia X 14' sidewall			4	6000	4	24000
Jacks for erection of bins			3	300	3	900
Inclined ear corn conveyor			1	2000	1	2000
Steel building pre-engineer, type 40' X 60' X 12'			1	26000	1	26000
Dryer unit, complete with fan motor and oil fired heater, 10 hp. heater 350,000 BTU/hr.			2	7000	2	14000
Screen for existing seed cleaner			1 lot	400	1	400
						80,000

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