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1. 調査日程

日順	月　日	曜日	時刻	調査活動内容	
				コンサルタント団員	官　団　員
1	9月10日	水		成田(JL 17:20)→ロサンゼルス(11:15) ロサンゼルス(MX 13:10)→メキシコシティ(18:50)	
2	9月11日	木		質問票回収後の不明瞭点の確認 (関係者、C／Pからの聞き取り調査)	
3	9月12日	金		評価グリッドに即した資料入手、情報分析 専門家との打合せ	
4	9月13日	土		調査結果取りまとめ	
5	9月14日	日		調査結果取りまとめ	
6	9月15日	月	午前 午後	専門家からの聞き取り調査 協議用資料作成	
7	9月16日	火		協議用資料作成	成田(JL 17:20)→ ロサンゼルス(11:15) ロサンゼルス(MX 13:10)→ メキシコシティ(18:50)
8	9月17日	水	9:30 11:45 13:00	JICAメキシコ事務所打合せ 外務省表敬(IMEXIE) 第1回合同評価委員会	
9	9月18日	木	9:00 15:00	第2回合同評価委員会 小規模農家視察(チャピンゴ周辺)	
10	9月19日	金	6:35 10:00 15:00	メキシコシティ(MX 6:35)→サルティーヨ(7:55) 検査実施予定機関視察(アントニオナロー大学) 農業機械メーカー視察(ジョンディア社トラクター工場)	
11	9月20日	土	8:30 16:55	中規模農家視察 モンテレー(MX 16:55)→メキシコシティ(18:20)	
12	9月21日	日		資料分析、取りまとめ、ミニッツ(案)作成	
13	9月22日	月	9:00	第3回合同評価委員会 5項目評価に関する協議	
14	9月23日	火	10:00 15:00	第4回合同評価委員会 プロジェクト終了後の対応に係る協議、評価報告書合意 全国製造業者評議会視察	
15	9月24日	水	10:00 17:00 19:00	合同調整委員会 合同評価報告書説明 プロジェクト終了後の対応に係る最終検討・合意 ミニッツ署名・交換 レセプション	
16	9月25日	木	9:30 11:00 13:00 15:00	JICAメキシコ事務所報告 在メキシコ日本国大使館表敬 SAGARPA、INIFAP、CENEMA、調査団打合せ レセプション(第3回農業機械エキスポ)	
17	9月26日	金		メキシコシティ(JL 10:20)→	
18	9月27日	土		→成田(16:50)	

2. 主要面談者

＜日本側＞

所　属　先	氏　　名	職　　位
在メキシコ日本国大使館	佐々山　拓　也	参事官
〃	石　川　　浩	二等書記官
JICA メキシコ事務所	河　合　恒　二	所　長
〃	安　藤　孝　之	次　長
〃	中　根　　卓	担　当
〃	Jorge Luis Diaz Arambula	ローカルスタッフ
プロジェクト関係者	鷹　尾　宏之進	チーフアドバイザー
〃	山　際　秀　雄	業務調整
〃	樫　元　正　一	評価試験（耐久性）
〃	清　水　一　史	評価試験（性能）
〃	松　井　章　房	評価システム

＜メキシコ側関係者＞

所　属　先	氏　　名	職　　位
外務省	Efrain del Angel Ramirez	科学技術協力局課長
〃	Veronica Zamora Aguilar	計画コーディネーター
SAGARPA	Francisco López Tostado	次　官
〃	Víctor M. Villalobos Arámbula	国際協力担当局長
INIFAP	Jesus Moncada de la Fuente	長　官
アントニオナロー大学	Jesús R.Valenzuela Garcia	農業機械工学部長
農業機械メーカー JohnDeere 社	Jose Manuel Rodriguez V.	総務部長
〃	Manuel A. Vazquez	マーケティング部長
小規模農家	Jose Antonio Terraza	
〃	Mauricio Ronero	
中規模農家グループ	Santa Fe del Progreso	
〃	Gregorio Palacios Castillo	委員長
プロジェクトマネージャー	Ramón Jimenéz Ragalado	CENEMA 所長

3. ミニッツ

THE MINUTES OF MEETING BETWEEN THE JAPANESE EVALUATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF MEXICO ON THE JAPANESE TECHNICAL COOPERATION FOR THE AGRICULTURAL MACHINERY TEST AND EVALUATION PROJECT IN MEXICO

The Japanese Evaluation Team (hereinafter referred to as "the Japanese Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Hiroyuki ARAI, visited Mexico from September 10 to September 27, 2003 for the purpose of final evaluation of the Project Type Technical Cooperation for the Agricultural Machinery Test and Evaluation Project (hereinafter referred to as "the Project") as well as discussing the major issues related to the implementation of the Project.

During its stay in Mexico, the Japanese Team and the Mexican Team as the Joint Evaluation Team (hereinafter referred to as "the Team") conducted interviews with the persons concerned including the members of "Centro Nacional de Estandarización de Maquinaria Agrícola" and the Japanese experts, had a series of discussions with the authorities concerned of the Government of Mexico, made the project site surveys and exchanged views among themselves.

As a result of the evaluation, the Japanese Team and the Mexican authorities concerned agreed to recommend to their respective Governments the matters referred to in the Joint Evaluation Report attached hereto.

Done in duplicate in Mexico City on September 24, 2003 in the English and Spanish languages, each text is equally authentic. In case of any divergence of interpretation, the English text shall be prevail.

Mexico City, September 24, 2003

Mr. Hiroyuki ARAI
Mission Leader,
Japanese Evaluation Team,
Japan International Cooperation Agency

Ing. Francisco López Tostado
Undersecretary of Agriculture,
Secretariat of Agriculture, Livestock,
Rural Development, Fishery and Foods

Dr. Jesús Moncada de la Fuente
General Director, National Research Institute
of Forestry, Agriculture and Livestock

Dr. Víctor M. Villalobos Arámbula
Coordinator for International Affairs
Secretariat of Agriculture, Livestock,
Rural Development, Fishery and Foods

Mr. Gerardo Lozano
General Director,
Scientific Technical Cooperation,
Secretariat of Foreign Affairs

(Attachment)

1. The Joint Evaluation Team has presented the Evaluation Report to the Joint Coordinating Committee.

2. The Joint Coordinating Committee has accepted the Report and taken notes of the recommendations aimed for successfully sustaining and extending the achievement of the Project.

3. The authority concerned of the Government of Mexico (the Mexican side) has requested to Japan further assistance in the field of tractor. And Japanese Team understands its necessity.

4. The Japanese Team is going to report the results of the joint evaluation and request from the Mexican side to the Japanese government.

Attached Document

THE JOINT EVALUATION REPORT ON THE JAPANESE TECHNICAL COOPERATION FOR THE AGRICULTURAL MACHINERY TEST AND EVALUATION PROJECT IN MEXICO

Mexico City, September 24, 2003

Mr. Hiroyuki ARAI
Leade
Japanese Evaluation Team,
Japan International Cooperation Agency

Ing. Eduardo Benítez Paulín
Leader
Mexican Evaluation Team
Secretariat of Agriculture, Livestock,
Rural Development, Fishery and Foods

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1. INTRODUCTION

The modernizing farm management and improvement of social and economic welfare in rural areas, through the mechanization of small and medium scale farmers and the improvement of their productivity, is important within the context of overall Mexican agricultural policy. However, progress in agricultural mechanization has been sluggish, among other things, because of the lack of active government agency participation in creating uniform standards for testing and evaluating agricultural machinery. This is essential in guaranteeing the quality and performance of agricultural machinery. Therefore the Mexican Government, through SAGARPA (formerly SAGAR), has decided to introduce a testing and evaluation system for agricultural machinery performance. To implement this important effort, the Mexican Government has requested to Japan a project-type technical cooperation for the purposes of establishing the requisite testing methods and evaluation standards, and training of technical personnel.

In response to the above-mentioned proposal, JICA dispatched a Preliminary Study Team to confirm the need for assistance and to discuss details of the Project in August, 1997. The Implementation Study Team signed the Record of Discussions for the Agricultural Machinery Test and Evaluation Project in Mexico on September 9, 1998. This Project started in March 1999 for a five-year period that will end in February, 2004.

2. OUTLINE OF THE PROJECT

The design of the Project is stipulated as follows.

2-1 Objectives of the Project

The purpose of the project is to strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.

2-2 Project Activities and Outputs

The Project encompasses three major fields of activity, namely (i) evaluation testing (durability), (ii) evaluation testing (performance), and (iii) evaluation system. The Project is designed to achieve the following:

1. The types of machinery to be dealt with under the Project are selected based on preliminary survey.
2. Techniques for evaluation testing are improved.
3. Evaluation standards are drafted.
4. Technical personnel to carry out evaluation testing are trained.

5. The overall evaluation testing system is significantly strengthened.

3. OBJECTIVES AND METHODS OF EVALUATION

3-1 Objectives of Evaluation

Evaluation activities are performed with the purposes of:

1) Evaluating the overall achievement of the Project based on R/D, PO, and PDM,
2) Identifying remaining problems and recommending necessary measures to be taken after the termination of the Project to the respective governments, and
3) Review of the lessons learned under the Project in order to reflect these in future projects to render them more effective and efficient.

3-2 Evaluation Method

Evaluation activities are conducted by the Joint Evaluation Team, comprising the Japanese Evaluation Team and the Mexican Team in accordance with R/D, PO, and the Project design matrix (PDM). These activities included report analysis, field survey, and discussions with concerned officials/staff members based on the five evaluation criteria listed below:

(1) Relevance:

The extent to which the objectives of the Project are consistent with beneficiary requirements, country needs, global priorities; as well as Mexican and Japanese policies.

(2) Effectiveness:

The extent to which the Project's objectives will be achieved, or are expected to be achieved, taking into account the importance of the respective targets under each Project component.

(3) Efficiency:

A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results/outputs. Efficiency of Project implementation is analyzed with particular focus on the relationship between inputs and outputs in terms of timing, quantity and quality.

(4) Impact:

Project effect on the surrounding environment, in terms of: technical, socio-economic, cultural, institutional, and environmental factors. Project impacts are cross-

tallied according to positive or negative effects.

(5) Sustainability

Project sustainability is assessed from the standpoint of organizational, financial and technical aspects, with salient focus on the extent to which performance under the Project can be sustained or expanded after the assistance is completed.

3-3 Members and Schedule of the Joint Evaluation Team

3-3-1 Japanese Evaluation Team

	Name	Title/Field	Present Job
1	Mr. Hiroyuki ARAI	Mission leader	Deputy Managing Director, Agricultural Development Cooperation Department, JICA
2	Dr. Akihiko ONODA	Agricultural machinery	Director, Testing and Evaluation Department, Bio-oriented Technology Research Advancement Institution
3	Mr. Isao DOJUN	Evaluation and analysis	International Project Department, Chuo Kaihatsu Corporation
4	Ms. Miho SASAKI	Planning evaluation	Staff, Agricultural Technical Cooperation Division, JICA
5	Ms. Yuko YAGI	Interpreter	Interpreter

3-3-2 Mexican Evaluation Team

	Name	Title/Field	Present Job
1	Ing. Eduardo Benítez Paulín	Ingeniero	Director General Vinculación y Desarrollo Tecnológico de la SAGARPA
2	Ing. Joaquín A. Castro Bautista	Ingeniero	Director de Programas de Fomento a la Producción de la SAGARPA
3	Biol. Francisco Sánchez Vicente	Biología	Subdirector de Programación y Seguimiento Agrícola de la SAGARPA
4	Dr. Sebastián Acosta Núñez	Ingeniero	Director General de Investigación Agrícola del INIFAP
5	Dr. René Camacho Castro	Ingeniero	Director de Cultivos de Abasto Nacional del INIFAP

6	Dr. David Moreno Rico	Maq. Agric.	Director General de Administración del INIFAP
7	Dr. Santos G. Campos Magaña	Maq. Agric	Investigador de Mecanización Agrícola del Campo Experimental Cotaxtla del INIFAP
8	Lic. Alicia Lugo Rivera	Licenciada	Presidenta de la Sección 113 Maquinaria Agrícola, CANACINTRA
9	Ing. César Duarte Martínez	Ingeniero	Asésor Técnico, CANACINTRA
10	Ing. Blanca Elizabeth de la Peña Casas	Maq. Agric.	Profesor Investigador de la UAAAN

3-3-3 Evaluation Schedule

The Evaluation schedule is as follows.

	Date		
1	Sep. 10	Wed	JICA team member in charge of Evaluation Analysis arrived at Mexico City
2	11	Thu	Discussion with counterparts and data collection
3	12	Fri	Discussion with counterparts and data collection
4	13	Sat	Data analysis
5	14	Sun	Data analysis
6	15	Mon	• Discussion with Japanese experts and collection of additional information • Data Analysis
7	16	Tue	(Mexican Holiday) Core members of JICA evaluation team arrived at Mexico City
8	17	Wed	• Visit to JICA Office, courtesy calls to IMEXCI, SAGARPA • First meeting of the Joint Evaluation Members
9	18	Thu	• Joint Evaluation Team Meeting: confirmation of the contents for evaluation, presentation of Project activities by the Project staff • Visit and interview to small farmer in Chapingo area
10	19	Fri	Travel to Saltillo; • Visit to University of Antonio Narro (testing laboratory) • Visit manufacturer of agricultural machinery (tractor, John Deere)
11	20	Sat	• Site survey on medium farmer in the area • Travel to Mexico City
12	21	Sun	Analysis of collected data; preparation of draft Minutes of Meeting
13	22	Mon	• Joint Evaluation Team Meeting: Discussion regarding five evaluation criteria

14	23	Tue	· Joint Evaluation Team Meeting: Discussion regarding five evaluation criteria, and consensus on content of Evaluation Report · Visit to the CANACINTRA
15	24	Wed	· Joint Evaluation Team Meeting Explanation of the content of the Joint Evaluation Report; affixing signatures to the Report; and final discussion on measures to be taken after the completion of the Project. · Signing of Minutes of Meeting
16	25	Thu	· Report to JICA office in Mexico City · Site survey of the test and evaluation field (seeder equipment)
17	26	Fri	Depart Mexico City

4. RESULTS OF EVALUATION

4-1 Relevance

4-1-1 Relevance of the Project Purpose to development policy of Mexican government

Mexican policy on mechanization in agriculture is mentioned in the Sector Program on Agriculture, Livestock, Rural Development and Food 2001-2006. And Mexican government has been executing a program called "Alliance for Rural (Alianza para el Campo/ Alianza Contigo)" from 1996. Within this program, there is subsidy program for purchase or repair agricultural machinery to promote agricultural mechanization.

4-1-2 Relevance to the needs of farmers

Due to the inexistence of official standards on quality and safety of agricultural machinery, farmers could not purchase agricultural machinery that is certified based on quality and safety. In case manufacturers of agricultural machinery accept the NMX standards and produce more durable and effective machinery, farmers will be benefited in respect on selection and use of agricultural machinery. So the Overall Goal of the Project is consistent with the needs of farmers.

4-1-3 Conformity with Japanese policy of official development aid to Mexico.

Because of the overall goal of the Project "Agricultural machinery with appropriate performance and safety for small and medium farmers are developed and extended" is aiming to benefit to small and medium farmers, there is conformity with one of the priority field of Japanese assistance policy "reduction of regional disparity and poverty reduction".

4-1-4 Relevance to Japanese technical knowledge and know-how in this cooperation field.

Japan has very appropriate knowledge and experience in the filed of test and evaluation of agricultural machinery. So it is very appropriate to execute this kind of technical cooperation.

Conclusion:

The Project Purpose and Overall Goal are relevant to the development program of Mexico and needs of farmers, Japan's policy of official development and Japanese technical knowledge.

4-2 Effectiveness

4-2-1 Effectiveness in terms of Project Purpose

Project Purpose is "Strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test".

It is necessary to accomplish several steps of the Project activities mentioned below to achieve fully the Project Purpose. It is assessed that fourth step "Testing and evaluation standards are enforced as official standards according to legal procedure" is almost achieved. Fifth step and sixth step are achieving by the range that the Project can control. However, it is difficult to achieve the target from seventh step due to no function of CENAPEMEA. "Function CENAPEMEA and great cooperation by CENAPEMEA" is pre-condition of the Project prescribed in PDM.

1) Selection of kinds of agricultural machinery to make evaluation standards by CENEMA.
2) CENEMA prepare manuals on testing and drafts of evaluation standards for selected agricultural machinery.
3) Drafts of evaluation standards are discussed at COTENNMAEA smoothly.
4) Testing and evaluation standards are enforced as official standards according to legal procedure.
5) Organizations related testing and evaluation of agricultural machinery have appropriate facilities for testing and evaluation, and also acquire enough techniques

for testing and evaluation.

6) Those organizations mentioned above acquire enough knowledge regarding testing & evaluation and certification system.
7) Testing & evaluation and certification system is established.
8) Testing & evaluation and certification system is started.
9) Testing & evaluation and certification system is well recognized by the manufacturers of agricultural machinery, importing companies and farmers.
10) Testing & evaluation and certification system contributes quality improvement of agricultural machines manufacturers and to refer for selection of agricultural machinery by farmers.

As a reference achievement of the Project Purpose in comparison with indicators in PDM is as follows.

<table>
<tr><th>Project Purpose</th><th>Objectively Verifiable Indicators</th><th>Achievements</th></tr>
<tr><td rowspan="3">The purpose of the Project is to strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.</td><td>1. Seven (7) draft standards submitted to COTENNMAEA</td><td>Eleven (11) draft standards already submitted to COTENNMAEA. (Seeder (Mechanical type and Precision type), Sprayer, Tractor (PTO, ROPS, Traction and Hydraulic lift), Disk plow, Disk harrow and Sheller/threshing machine (corn and beans))</td></tr>
<tr><td>2. No. of NMX standards enacted</td><td>6 standards enacted already as NMX standards officially. 5 standards are under discussion at COTENNMAEA.</td></tr>
<tr><td>3. No. of training course and participant</td><td>Training course and number of participants are as follows
<table>
<tr><th></th><th>Type</th><th>Date of training</th><th>Number of participants</th><th>Number of organizations</th></tr>
<tr><td>1</td><td>Mechanical seeder</td><td>Nov. 2001</td><td>3</td><td>3</td></tr>
<tr><td>2</td><td>Precision seeder</td><td>Sep. 2003</td><td>5 (planned)</td><td>5 (planned)</td></tr>
<tr><td>3</td><td>Sprayer</td><td>Jul. 2003</td><td>5</td><td>5</td></tr>
<tr><td rowspan="4">4</td><td>Tractor PTO</td><td>- - -</td><td>- - -</td><td>- - -</td></tr>
<tr><td>Tractor ROPS</td><td>- - -</td><td>- - -</td><td>- - -</td></tr>
<tr><td>Tractor Hydraulic</td><td>- - -</td><td>- - -</td><td>- - -</td></tr>
<tr><td>Tractor traction</td><td>- - -</td><td>- - -</td><td>- - -</td></tr>
<tr><td>5</td><td>Disk plow</td><td>Feb. 2003</td><td>5</td><td>5</td></tr>
<tr><td>6</td><td>Disk harrow</td><td>Feb. 2003</td><td>5</td><td>5</td></tr>
<tr><td rowspan="3">7</td><td colspan="4">Sheller/ threshing machine</td></tr>
<tr><td>Corn Sheller</td><td>Nov. 2003 (planned)</td><td>5 (planned)</td><td>5 (planned)</td></tr>
<tr><td>Beans threshing</td><td>Nov. 2003 (planned)</td><td>5 (planned)</td><td>5 (planned)</td></tr>
<tr><td></td><td></td><td>Total</td><td>33</td><td>33</td></tr>
</table></td></tr>
</table>

4-2-2 Major obstacles to achieving Project Purpose and specific targeted Outputs

Main obstacle was non-function of CENAPEMEA. It should not include uncertain and uncontrollable matters as pre-conditions and assumption in the project framework.

This is the main factor hampered for achievement of the Project Purpose. However, Mexican side designated INIFAP as an Organization for Certification.

Conclusion:

Effectiveness of the Project is not high. However, it is foreseen that once INIFAP is established as the Organization for Certification, project effectiveness will be achieved.

4-3 Efficiency

4-3-1 Inputs by both governments

Inputs by both governments indicated in Annexes 1 to 7. (Assignment of Japanese experts, Acceptance of Mexican counterparts for training in Japan, List of provided equipment, Allocated budget by Japanese side, Assignment of Mexican counterparts, List of facilities and equipment provided by Mexican side and Allocated budget by Mexican side). Technical transfer regarding test and evaluation of tractor was not sufficiently executed.

4-3-2 Appropriateness of Inputs

Dispatch of Japanese experts (long-term and short-term), acceptance of Mexican counterparts for training in Japan, provision of equipment and allocated budget by Japanese side were almost appropriate in term of quantity, quality and timing.

Provision of land and facilities and assignment of Mexican counterparts are almost appropriate at present. But at the beginning from the start of the Project, it took time or delayed in assigning enough number of counterparts and improving facilities. These delays influenced the Project activities negatively. Moreover, delays of disbursement of budget of Mexican side in several months from the start of the new fiscal year, also influenced negatively (planned project activities could not executed timely).

Monthly meetings were held from the beginning of the Project, these contributed to understanding of progress of the Project and problems facing the Project among person related to the Project in SAGARPA, INIFAP and CENEMA. But frequent change of executive officer in SAGARPA and INIFAP also influenced to the project efficiency, because whenever the change of officers happened, it was necessary to explain to them about the Project.

4-3-3 Major Outputs achieved by the Project

Still there is room to improve technical skills of staff of CENEMA regarding testing

and evaluation on ROPS etc. for tractor. Because technical transfer on tractor started after the Mid-term evaluation study in 2001. There was delay of allocation of budget for procurement of testing equipment by Mexican government.

<table>
<tr><th>Outputs</th><th>Objectively Verifiable Indicators</th><th>Achievements</th></tr>
<tr><td>1. The types of machinery to be dealt with in the Project are selected on the results of preliminary surveys.</td><td>1. 1st year's survey report</td><td>Preliminary survey (baseline survey) was carried out and selected following seven types of agricultural machinery.
(1) Seeder (plate type), (2) Seeder (precision type), (3) Sprayer, (4) Tractor (PTO and ROPS), (5) Disk plow, (6) Disk harrow, (7) Sheller-threshing machine.
Achievement is as planed.</td></tr>
<tr><td>2. Techniques for evaluation tests are improved.</td><td>2. Manual of how to test</td><td>Except tractor, manuals for evaluation testing were made. Regarding tractor, OECD Test Codes were translated in Spanish.
Achievement is as planned.
(Evaluation manuals for tractor are not made.)</td></tr>
<tr><td>3. Evaluation standards are drafted.</td><td>3. No. of standardized machinery</td><td>Eleven (11) draft standards were prepared and submitted to COTENNMAEA. (Seeder (Mechanical type and Precision type), Sprayer, Tractor (PTO, ROPS, Traction and Hydraulic lift), Disk plow, Disk harrow and Sheller/threshing machine (corn and beans))
Achievement is more than planed.</td></tr>
<tr><td>4. Experts for evaluation tests are fostered.</td><td>4. No. of participants in training activities</td><td>Same as indicated in the table above regarding training course.
Achievement is almost satisfactory considering the situation of inexistence of certified laboratory for testing on agricultural machinery.
But staff development or training for evaluation testing on tractor is not sufficient.</td></tr>
<tr><td rowspan="2">5. Evaluation test system is strengthened.</td><td>5-1. Publicity to administrator about test system</td><td>Seminars regarding evaluation system in Mexico were held several times targeted persons in charge in CENEMA, INIFAP, SAGARPA-DGFA and potential laboratory for testing. Subjects and number of participants are as follows.
<table>
<tr><th>Date</th><th>Subject</th><th>Number of participants</th></tr>
<tr><td>7-8 May 2003</td><td>Quality management system</td><td>25</td></tr>
<tr><td>19-20 May 2003</td><td>ISO Guide No.65</td><td>25</td></tr>
<tr><td>19-20 Jun 2003</td><td>Mapping of process and documentation necessary to obtain certification by EMA (National Agency for Accreditation)</td><td>24</td></tr>
<tr><td>10-11.Jul 2003</td><td>Statistical method for quality control</td><td>25</td></tr>
<tr><td>9-10 Sep 2003</td><td>Inspection on quality</td><td>18</td></tr>
</table></td></tr>
<tr><td>5-2. Publicity to farmers about standardization</td><td>The article about the activities of CENEMA was appeared in magazines "AGROINTESIS (private publication)" and "CLARIDADES (official magazine)". Many farmers subscribe AGROSINTESIS and CLARIDADES distributed every regional offices of SAGARPA. So probable, publicity to farmers about standardization is extended in some extent.</td></tr>
</table>

	5-3. Publicity to manufacturers about standardization	Probably manufacturers participating to the working group in CONTENNMAEA understand well about contents of standards (NMX). Also other manufacturers could have information about standardization because a article related standardization appeared in the magazine "AGROSINTESIS".

Conclusion:

There are some circumstances that influenced negatively on efficiency of the Project. But, in the range that the Project can control, it is assessed that efficiency is high. There is room to improve CENEMA's technical skills on tractor.

4-4 Impacts

(1) Impact on quality improvement of products of manufacturers of agricultural machinery

Manufacturers donated agricultural machine for testing to make draft standards. CENEMA discovered several weaknesses in durability, performance and accuracy of machines through testing and evaluation at CENEMA. Results of testing and evaluation were fed back to the manufacturers. Manufacturers are improving quality and performance of their products based on the testing and evaluation results by CENEMA.

(2) Universities introduced the subject about the evaluation of agricultural machinery in curriculum.

Universities of Chapingo, Antonio Narro and Guanajuato, members of CENAPEMEA, introduced the subject about the evaluation of agricultural machinery in curriculum of bachelor's degree and master degree of department of agricultural machinery. This subject includes general knowledge, bench test, field test and trial manufacture of indoor testing facilities. Purpose introducing this subject is to educate and train students becoming teacher of universities, engineer at research institutes and engineer at private company by reason that there will be needed engineers at research institutes, testing organizations and private companies in case national testing and evaluation standards were made.

One of another impact is that University of Antonio Narro, Chapingo, UNAM-FES Cuautitlan and Campo Experimental Cotaxtla of INIFAP decided their intension to become a laboratory of testing.

(3) CENEMA has instructed students of Chapingo University.

CENEMA accepted students of Chapingo University for practical exercise outside the university, and staff of CENEMA as instructor educated for students about

mechanism, structure, quality, testing method and testing standards etc. of agricultural machinery. More than 20 students obtained credits of the subject. CENEMA contributed for education in the University.

(4) Information diffusion about CENEMA's activities through participation for meeting of agricultural society, etc.

CENEMA sponsored the forum on standardization of agricultural machinery and presented about the testing and evaluation method for seeder at the meeting of the Agricultural Society. Also CENEMA held the exposition on agricultural machinery and made presentation about NMX standards and demonstration of agricultural machinery. These activities are making impacts on participants.

(5) There was no impact toward the achievement of Overall Goal

There was no impact toward the achievement of Overall Goal of the Project "Agricultural machinery with appropriate performance and safety for small and medium farmers are developed and extended". Several standards are already enacted, but due to inexistence of accredited testing laboratory and accredited organization for certification, there is no agricultural machinery manufactured based on the standards NMX. There is no reliable perspective yet for manufacturing agricultural machinery with appropriate performance and safety and spread it to small and medium scale farmers.

Conclusion:

There are several positive impacts for the quality improvement of products of manufacturers, education in universities and information diffusion about standardization of agricultural machinery. And also, this Project had made contribution toward grade up of the agricultural mechanical engineering in Mexico. There is no impact toward the achievement of Overall Goal of the Project.

4-5 Sustainability

4-5-1 Organizational aspects

(1) SAGARPA decided to establish a Organization for Certification in INIFAP instead of CENAPEMEA and started to organize it. This is a great progress toward improvement of sustainability of the evaluation test system.

(2) SAGARPA is allocating budget for preparation of equipment and facilities for testing

and evaluation of tractor to become CENEMA as Laboratory of Testing, and for establish a organization of certification in INIFAP (total 22,200,000 pesos in 2003 and 10,000,000 pesos in 2004). This is a measure to highly contribute sustainability of CENEMA and evaluation test system.

(3) University of Antonio Narro had high interest on the Project from the beginning of the Project and cooperated to the Project understanding importance of test and evaluation of agricultural machinery. And now University of Antonio Narro prepared necessary facilities, equipment and human resources for testing and evaluation of mechanical seeders for becoming a laboratory of testing. The University of Antonio Narro decided to become a laboratory of testing. This will contribute to establish evaluation and test system and its sustainability.

(4) CENEMA functions as a National Research Center and is expected to be a National Research Disciplinary Center (CENID) in a short term, with its own budget and administrative support.

(5) CENEMA has acquired equipment and facilities necessary for testing and evaluation of agricultural machinery and staff with appropriate level of knowledge, techniques and experiences. There are enough facilities and technical staff for becoming a laboratory for testing about agricultural machinery like mechanical seeder, precision seeder, sprayer, disk plow, disk harrow, corn sheller and beans threshing machine. Also CENEMA has acquired capability to conduct training courses regarding testing and evaluation of agricultural machinery. So it can be said that CENEMA has sustainability as a laboratory for testing about above mentioned machinery and as a organization conducting training on testing and evaluation

(6) There is a subsidy program for purchase of agricultural machinery in the "Alianza" program of Federal Government of Mexico. This is a important program for mechanization of agriculture. This program is likely to continue. One of the roles of CENEMA's activity is to contribute agricultural mechanization. So that political priority in mechanization is important for the organizational sustainability of CENEMA.

4-5-2 Financial aspects

INIFAP is a decentralized Research Public Organism, coordinated by SAGARPA

with own assets and autonomous administration. This status makes easier the CENEMA operation. It is necessary to allocate continuously appropriate budget for CENEMA by the Mexican government, other than resource from self income.

4-5-3 Technical aspects

Counterpart personnel acquired capability for making testing method and draft standards and conducting training courses on agricultural machinery that this Project dealt with except tractor. There is high sustainability on this regard on condition that counterpart personnel will not transfer another position or resign.

5. Conclusions

5-1 Conclusions

There are great achievement or outputs of the Project complying the Plan of Operation and PDM of the Project. 11 standards for 7 types of agricultural machinery were made and some standards are already enacted and others will be enacted in near future, in despite of condition negatively influenced to the Project. But regarding tractor, degree of achievement is not sufficient.

Due to no function of CENAPEMEA, Project Purpose "Strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test" will not be achieved sufficiently within 5 year cooperation period.

And there is bright perspective on strengthen evaluation test system, because SAGARPA decided to make an organization of certificate in INIFAP instead of CENAPEMEA. SAGARPA has important role to take initiative for strengthen evaluation test system.

5-2 Recommendations

(1) Alianza Program

Alianza Program that was started from 1996, is a very appropriate program for promoting agricultural mechanization of small and medium scale farmers by means of subsidy for purchase of agricultural machinery. Agricultural machinery certified based on NMX standards will be target for subsidy. It is necessary to continue execution of this Alianza program for sustainability of the Project.

According to opinions of farmers that were obtained at the field survey by the

evaluation team, it is not easy to get assistance by Alianza Program because of very complicated application procedure and many document. It is necessary to simplify them.

(2) Establishment of evaluation test system (Organization for Certificate and Laboratory of Testing)

There was very large negative impact to the Project due to non functioning of CENAPEMEA as a organization of certificate. But we can appreciate very much that SAGARPA has approved that the INIFAP is becoming a organization for certificate as alternative. In order to create and strengthen the organization for certificate, SAGARPA has approved disbursement of the budget (amount: 2,200,000 pesos) in August 2003.

It is necessary to establish promptly a structure or organization as an organization of certification in INIFAP. Therefore, recruitment of necessary staff, assignment of responsible person and setup of structure should be done as soon as possible. Furthermore, there are many things should be resolved such like accreditation of ISO, testing fee, accreditation by EMA, set up of evaluation committee and explanation to manufacturers etc.

It is also necessary to make a concrete and reliable work schedule for establishing an organization of certification in INIFAP, and to ensure the execution of its activities based on the work schedule. This work schedule should be noticed to related persons by INIFAP. Reactivation schedule of CENAPEMEA was made at the Mid-term evaluation in August 2001. But this plan has ended in failure. Same kind of failure should be avoided. And coordination between the organization of certificate and laboratories of testing will be necessary.

(3) There are CENEMA's staff who acquired very appropriate knowledge and experience. Grade up of its capability and technical transfer to staff of other organization is necessary.

(4) In order to further strengthen CENEMA's skills, it is recommended to participate in regular training courses of JICA related the agricultural machinery.

(5) Assistant to the field of testing and evaluation of tractor by Mexican side and Japanese side

It is assessed that performance and achievement of activities by CENEMA are excellent. Still there is room to improve technical skills of staff of CENEMA regarding testing and evaluation on ROPS etc. for tractor. Because technical transfer on tractor

started after the Mid-term evaluation study in 2001. There was delay of allocation of budget for procurement of testing equipment by Mexican government. However, Mexican government has approved disbursement of that budget (amount: 20,000,000 pesos) in August 2003.

Joint Evaluation Team appreciates very much this effort made by Mexican government. The Evaluation Team recommend to both side to take necessary actions and measures mentioned below.

a) Mexico: Mexican side should make precisely a schedule on procurement of necessary equipment and preparation of necessary facilities related testing and evaluation of ROPS etc. of tractor.

b) Japan: Appropriate assistance from Japan synchronizing with progress of Mexican side activities mentioned above is necessary.

5-3 Lessons learned from the Project

In order to ensure the sustainability of the project, it is necessary to analyze the sustainability issues carefully at the planning stage in terms of institutional and financial aspects.

Annex 1 Assignment of Japanese Experts

(1) Long-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment		1999	2000	2001	2002	2003	2004
			From	To						
1	Mr. YAGI Shigeru	Chief advisor	01-Mar-99	30-Sep-01						
2	Mr. TAKAO Hironoshin	Chief advisor	17-Sep-01	29-Feb-04						
3	Mr. KOBAYASHI Ken	Expert, Performance	08-Mar-99	30-Jun-01						
4	Mr. SHIMIZU Kazufumi	Expert, Performance	18-Jun-01	29-Feb-04						
5	Mr. ITO Tateo	Expert, Durability	01-Mar-99	28-Feb-01						
6	Mr. KASHIMOTO Masakazu	Expert, Durability	01-Mar-01	29-Feb-04						
7	Mr. NOGUCHI Takehito	Expert, Evaluation system	20-May-99	19-May-02						
8	Mr. MATSUI Akifusa	Expert, Evaluation system	09-May-02	29-Feb-04						
9	Mr. MASUBUCHI Kiyoshi	Coordinator	04-Mar-99	03-Mar-02						
10	Mr. YAMAGIWA Hideo	Coordinator	11-Feb-02	29-Feb-04						

(2) Short-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment		1999	2000	2001	2002	2003	2004
			From	To						
1	Mr. KASHIMOTO Masakazu	Evaluation test	8-Apr-00	6-May-00		=				
2	Mr. MORISHITA Akira	Mechanization policy	8-Apr-00	15-Apr-00		=				
3	Mr. KANAI Keikichi	Mechanical seeder	8-May-00	22-Jul-00		==				
4	Mr. TOZAKI Koichi	Sprayer	4-Oct-00	1-Nov-00		=				
5	Mr. KOIKE Keinosuke	Evaluation system	18-Mar-01	15-Apr-01			=			
6	Mr. KASAHARA Katsuo	Training	25-Jul-01	23-Aug-01			=			
7	Mr. NISHIZAKI Kunio	Plow	16-Aug-01	14-Sep-01			=			
8	Mr. OSHITA Yasuo	Hallow	21-Feb-02	22-Mar-02				=		
9	Mr. CHIBA Hiroyuki	Pneumatic seeder	25-Feb-02	10-Apr-02				==		
10	Mr. MORIMOTO Kunio	Tractor ROPS	29-Jul-02	6-Aug-02				=		
11	Mr. YAMANAKA Hideki	Corn Sheller	26-Sep-02	24-Oct-02				=		
12	Mr. TOMITA Muneki	Bean thresher	21-Oct-02	18-Nov-02				=		
13	Mr. SEKI Ei	Tractor PTO	28-Jul-03	23-Aug-03					=	
14	Mr. (planned)	Tractor Hydraulic lift	Oct-03	Nov-03					=	
15	Mr. (planned)	Tractor Traction	Feb-04	Feb-04						=

Annex 2 Acceptance of Mexican Counterparts for training in Japan

No.	Name of Counterpart	Field	Present Post	Post at assignment time	Period of Training								Name of Training Course
					From	To	Duration	1999	2000	2001	2002	2003	
1	Mr. José L.Plaza Sánchez	Project Management		G. Director, DGA	22-Aug-99	04-Sept.-99	14 days	-					Agr. Mechanization Plan and Test and Evaluation System
2	Mr. Ramón Jimenéz Regalado	Project Operation	Director, CENEMA		18-Mar.-00	17-Jun.-00	92 days		—				Group Training of Test and Evaluation of Agr. Machinery
3	Mr. Marco Antonio Caballero	Coordination	Sub Director, DGVDT		18-Mar.-00	17-Apr.-00	31days		-				Test and Evaluation of Agr. Machinery
4	Mr. Roberto Chacón Martínez	Evaluation system	Director, Investigation Center, INIFAP		02-Oct.-00	24-Oct.-00	23 days		-				Test and Evaluation System
5	Mr. David Moreno Rico	Project Operation	Director G., INIFAP	Director G., INIFAP	15-Oct.-00	02-Nov.-00	19 days		-				Agr. Mechanization Plan and Test and Evaluation System
6	Mr. Gabriela L. Hoyos F.	Evaluation system	Staff, CENEMA	Staff, CENEMA	15-Mar.-01	14-Apr.-01	31 days			-			Agr. Mechanization Plan and Test and Evaluation System
7	Mr. Juan G. Ochoa B.	Test & Evaluation	Staff, CENEMA	Staff, CENEMA	19-Mar.-01	24-Jun.-01	98 days			—			Group Training of Test and Evaluation of Agr. Machinery
8	Mr. Francisco Sánchez V.	Coordination	Sub Director, DGFA	Chief, DGA	19-Sept.-01	12-Oct.-01	24 days			-			Agr. Mechanization Plan and Test and Evaluation System
9	Mr. Alejandro Trueba C.	Project management	Government Staff, State of Mexico	G. Director, DGFA	05-Nov.-01	15-Nov.-01	11 days			-			Agr. Mechanization Plan and Test and Evaluation System
10	Mr. Julio Torres S.	Test & Evaluation	Staff, CENEMA	Staff, CENEMA	19-Mar.-02	21-Jun.-02	95 days				—		Group Training of Test and Evaluation of Agr. Machinery
11	Mr. Jesús Moncada dela Fuente	Project management	G. Manager, INIFAP	G. Manager, INIFAP	30-Aug.-02	07-Sept.-02	8 days				-		Agr. Mechanization Plan and Test and Evaluation System
12	Mr. Sebastián Acosta	Project operation	Director G., INIFAP	G. Director, INIFAP	20-Feb.-03	07-Mar.-03	16 days					-	Agr. Mechanization Plan and Test and Evaluation System
13	Mr. René Camacho Castro	Project operation	Director, INIFAP	Director, INIFAP	20-Feb.-03	07-Mar.-03	16 days					-	Agr. Mechanization Plan and Test and Evaluation System
14	Mr. Marco A. Audelo B.	Test & Evaluation	Staff, CENEMA	Staff, CENEMA	25-Mar.-03	22-Jun.-03	90 days					—	Group Training of Test and Evaluation of Agr. Machinery

Annex 3 List of Equipment Provided

Provision/Procurement/Maintenance of the Equipment (1998)

Note: **R/P:Route of Procurement** : (J: From Japan,L: Local,E: With Expert)
Frequency of Use : (A: Always - B: Often - C: Sometimes)
Condition : (A: Good - B: Fair - C: Bad)

¥:JapaneseYen
US$:Doller
$: Peso mexicano

No.	Date of Arrival	Description				Q'ty	Unit Price	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number	R/P		Currency					
1	26-Mar-99	Automobile	General Motors	SUBURBAN	L	1	$ 367,263	$ 367,263.00	Nave#2	A	A	
2	08-Apr-99	Personal Computer etc.	COMPAQ	DESKPRO633C	E	1	¥ 311,800	¥ 311,800.00	Adm.Off	A	A	
3	08-Apr-99	StrainGaugeMeter	KYOWA	DPM-601A	E	1	¥ 220,200	¥ 220,200.00	Nave#1	C	A	
4	08-Apr-99	Recorder for avobe	GRAPHIC	SR651-1	E	1	¥ 144,500	¥ 144,500.00	Nave#1	C	A	
5	08-Apr-99	Slip Ring	NATIONAL	SRB-5	E	1	¥ 227,000	¥ 227,000.00	Nave#1	C	A	
6	08-Apr-99	PersonalComputer	TOSHIBA	DYNABOOKSAT ELITE2520	E	1	¥ 263,000	¥ 263,000.00	Adm.Off	A	A	
7	08-Apr-99	Printer	CANON	LPB-740	E	1	¥ 108,000	¥ 108,000.00	Adm.Off	A	A	
8	01-Mar-99	GaugeTool Kit	KYOWA	GTK-77	E	1	¥ 122,700	¥ 122,700.00	Adm.Off	B	A	
9	01-Mar-99	Video Camera	VICTOR	GR-DVL7	E	1	¥ 200,000	¥ 200,000.00	Adm.Off	A	A	
10	01-Mar-99	FaxPrinter	XEROX	LASERWINDOF FICE204W	E	1	¥ 235,000	¥ 235,000.00	Adm.Off	A	A	
11	01-Mar-99	Personal Computer etc.	IBM	THINKPAD390-20J	E	1	¥ 323,500	¥ 323,500.00	Adm.Off	A	A	
12	08-Apr-99	Computer soft	LOTUS	LOTUSSUPEROF FICE98	E	1	¥ 20,800	¥ 20,800.00	Adm.Off	A	A	
13	08-Apr-99	Computer soft	JustSystem	ICHITARO-9,HANAKO-9	E	1	¥ 24,050	¥ 24,050.00	Adm.Off	A	A	
14	08-Apr-99	Computer soft	Adobe	ADOBESYSTEM	E	1	¥ 12,700	¥ 12,700.00	Adm.Off	A	A	
15	08-Apr-99	U.P.S.	ANKENN	SANKENN	E	1	¥ 24,000	¥ 24,000.00	Nave#1	A	A	
16	08-Apr-99	Bridge box	KYOWA	DB-120P	E	2	¥ 19,800X2	¥ 19,800X2	Nave#1	B	A	
17	08-Apr-99	Micro meter set	MITSUTOYO	OMST-150	E	1	¥ 74,000	¥ 74,000.00	Nave#1	B	A	
18	08-Apr-99	Micro meter set	MITSUTOYO	IMST-150	E	1	¥ 43,800	¥ 43,800.00	Nave#1	B	A	
19	08-Apr-99	Telescope gauge	MITSUTOYO	GTST	E	1	¥ 23,500	¥ 23,500.00	Nave#1	B	A	
20	08-Apr-99	Micro meter	MITSUTOYO	PDM-25	E	1	¥ 27,500.00	¥ 27,500.00	Nave#1	B	A	
21	08-Apr-99	Micro meter	MITSUTOYO	PDM-50	E	1	¥ 31,000.00	¥ 31,000.00	Nave#1	B	A	
22	08-Apr-99	Dial gauge	MITSUTOYO	TI-133S	E	1	¥ 13,900.00	¥ 13,900.00	Nave#1	B	A	
23	08-Apr-99	Height gauge	MITSUTOYO	H425	E	1	¥ 31,500.00	¥ 31,500.00	Nave#1	B	A	
24	08-Apr-99	Tool set	TONE)220	700A	E	1	¥ 67,500.00	¥ 67,500.00	Nave#1	B	A	
25	08-Apr-99	PortablePowerSupplyer	NATIONAL	ERV715-H	E	1	¥ 31,000.00	¥ 31,000.00	Nave#1	B	A	
26	08-Apr-99	Computer soft	Justsystem	ICHITARO-9	E	1	¥ 17,500.00	¥ 17,500.00	Adm.Off	B	A	
27	08-Apr-99	Computer soft	MicoSoft	MS-OFFICE97	E	1	¥ 61,000.00	¥ 61,000.00	Adm.Off	B	A	
28	08-Apr-99	Printer	HP	HPDeskJet895Cxi	E	1	¥ 49,900.00	¥ 49,900.00	Adm.Off	B	A	
29	08-Apr-99	Scanner	HP	HPPHOTOSMAR TC5100A	E	1	¥ 65,300.00	¥ 65,300.00	Adm.Off	B	A	
30	08-Apr-99	Digital Camera	OLYMPUS	C-830L	E	1	¥ 55,100.00	¥ 55,100.00	Adm.Off	B	A	

Provision/Procurement/Maintenance of the Equipment (1998)

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No.	Date of Arrival	Description			R/P	Q'ty	Unit Price Currency	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number								
31	08-Apr-99	Transformer	TOYODEN	110/100V	E	3	¥ 13,000X3	¥ 13,000X3	Nave#1	B	A	
32	08-Apr-99	Tool set	SANKI	HT-2100	E	1	¥ 24,000.00	¥ 24,000.00	NAVE#1	B	A	
33	08-Apr-99	Tool set	HOZAN	S-22	E	1	¥ 24,000.00	¥ 24,000.00	NAVE#1	B	A	
34	08-Apr-99	Transformer	TOYOZUMI	CD110-06	E	1	¥ 8,000.00	¥ 8,000.00	NAVE#1	B	A	
35	08-Apr-99	String Gauges	KYOWA	KFG-5-120-C1-11L30C3R, & others(6 in 1 set)	E	1	¥ 46,600.00	¥ 46,600.00	NAVE#1	B	A	
35	08-Apr-99	Strain Gauges	KYOWA	KFG-5-120-C1-11L30C3R, & others(6 in 1 set)	E	1	¥ 46,600.00	¥ 46,600.00	NAVE#1	B	A	
36	08-Apr-99	Caliper	MITSUTOYO	N15W	E	1	¥ 8,200.00	¥ 8,200.00	NAVE#1	B	A	
37	08-Apr-99	Small Hole Gauge	MITSUTOYO	SGST	E	1	¥ 9,200.00	¥ 9,200.00	NAVE#1	B	A	
38	08-Apr-99	Dial gauge	MITSUTOYO	2046F	E	1	¥ 4,400.00	¥ 4,400.00	NAVE#1	B	A	
39	08-Apr-99	Magnetic Stand	Mitsutoyo	"7010"	E	1	¥ 8,400.00	¥ 8,400.00	NAVE#1	B	A	
40	08-Apr-99	Micrometer	MITSUTOYO	7010	E	1	¥ 5,000.00	¥ 5,000.00	NAVE#1	B	A	
41	08-Apr-99	Stopwatach	SEIKO	SEIKOSBCQ-003	E	1	¥ 8,100.00	¥ 8,100.00	NAVE#1	B	A	
42	08-Apr-99	Tool (kashime)			E	1	¥ 7,200.00	¥ 7,200.00	Nave#1	B	A	
43	25-Mar-99	Office desk	PM STEEL	EJECUTIVOMOD.600PN	L	1	$ 3,091.00	$ 3,091.00	Adm.Off	B	A	
44	25-Mar-99	Office desk	PM STEEL	EJECUTIVOMOD.600PN	L	1	$ 3,091.00	$ 3,091.00	Adm.Off	B	A	
45	25-Mar-99	Office desk	PM STEEL	EJECUTIVOMOD.600PN	L	1	$ 3,091.00	$ 3,091.00	Adm.Off	B	A	
46	25-Mar-99	Office desk	PM STEEL	EJECUTIVOMOD.600PN	L	1	$ 3,091.00	$ 3,091.00	Adm.Off	B	A	
47	25-Mar-99	Office desk	PM STEEL	EJECUTIVOMOD.600PN	L	1	$ 3,091.00	$ 3,091.00	Adm.Off	B	A	
48	25-Mar-99	Office chair	PM STEEL	ALTO.MOD.2604 ATG	L	1	$ 1,544.00	$ 1,544.00	Adm.Off	B	A	
49	25-Mar-99	Office chair	PM STEEL	ALTO.MOD.2604 ATG	L	1	$ 1,544.00	$ 1,544.00	Adm.Off	A	A	
50	25-Mar-99	Office chair	PM STEEL	ALTO.MOD.2604 ATG	L	1	$ 1,544.00	$ 1,544.00	Adm.Off	A	A	
51	25-Mar-99	Office chair	PM STEEL	ALTO.MOD.2604 ATG	L	1	$ 1,544.00	$ 1,544.00	Adm.Off	A	A	
52	25-Mar-99	Office chair	PM STEEL	ALTO.MOD.2604 ATG	L	1	$ 1,544.00	$ 1,544.00	Adm.Off	A	A	
53	25-Mar-99	Cabinet	PM STEEL	UNIVERSALMOD.451R	L	1	$ 2,170.00	$ 2,170.00	Adm.Off	A	A	
54	25-Mar-99	Cabinet	PM STEEL	UNIVERSALMOD.451R	L	1	$ 2,170.00	$ 2,170.00	Adm.Off	A	A	

Provision/Procurement/Maintenance of the Equipment (1998)

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No.	Date of Arrival	Description				Q'ty	Unit Price	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number	R/P		Currency					
55	25-Mar-99	Cabinet	PM STEEL	UNIVERSALMOD.451R	L	1	$ 2,170.00	$ 2,170.00	Adm.Off	A	A	
56	25-Mar-99	Cabinet	PM STEEL	UNIVERSALMOD.451R	L	1	$ 2,170.00	$ 2,170.00	Adm.Off	A	A	
57	25-Mar-99	Cabinet	PM STEEL	UNIVERSALMOD.451R	L	1	$ 2,170.00	$ 2,170.00	Adm.Off	A	A	
58	25-Mar-99	Safety box	PM STEEL	MOD.40GR	L	1	$ 4,297.00	$ 4,297.00	Adm.Off	C	A	

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¥:JapaneseYen
US$:Doller
$: Peso

No.	Date of Arrival	Description			R/P	Q'ty	Unit Price	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number			Currrency					
119	03-Mar-00	Digital video camera	SONY	DCR-TVR900Num.SERIE:1085463	L	1	$ 34,300.00	$ 34,300.00	ADM.OFF	A	A	
120	03-Mar-00	Video recorder	SONY	DSR-30Num.SERIE:8012055	L	1	$ 5,159.00	$ 5,159.00	ADM.OFF	B	A	
121	03-Mar-00	Electric Chain block	APOLLO	APOLLO	L	1	$ 78,379.23	$ 78,379.23	NAVE#1	C	A	
122	29-Mar-00	Reduction motor	U.S.	MOTOREDUCTOR:TipoCbn,Mca.U.S.	L	1	$ 12,682.00	$ 12,682.00	NAVE#1	B	A	
123	27-Feb-00	Plow	JOHNDEER	3645	L	1	$ 24,723.00	$ 24,723.00	NAVE#2	B	A	
124	20002/27	Harrow	JOHNDEER	660(20DISCOS)	L	1	$ 18,758.00	$ 18,758.00	NAVE#2	B	A	
125	29-Mar-00	Personal Computer	COMPAQ	PRESARIO7973	L	1	$ 25,445.00	$ 25,445.00	ADM.OFF	A	A	
126	29-Mar-00	Personal Computer	COMPAQ	PRESARIO7973	L	1	$ 25,445.00	$ 25,445.00	ADM.OFF	A	A	
127	29-Mar-00	Personal Computer	COMPAQ	PRESARIO7973	L	1	$ 25,445.00	$ 25,445.00	ADM.OFF	A	A	
128	09-May-00	Garage Jack	OMEGA	#GA205	L	1	$ 12,530.95	$ 12,530.95	NAVE#1	A	A	
129	09-May-00	Personal Computer	Sharp	PC-FJ120M	E	1	¥ 266,000.00	¥ 266,000.00	NAVE#1	A	A	
130	09-May-00	Digital video camera	SONY	DCR-PC100	E	1	¥ 183,000.00	¥ 183,000.00	NAVE#1	A	A	
131	09-May-00	FuelConsumptionMeter	Mitsutoyo	FR2140H,DF-210A	J	1	¥ 656,500.00	¥ 656,500.00	NAVE#1	C	A	
132	09-May-00	Cone Penetrometer	DAIKI	DIK-5500	J	1	¥ 310,800.00	¥ 310,800.00	NAVE#1	B	A	
133	09-May-00	Cone Penetrometer	DAIKI	DIK-5521	J	1	¥ 212,300.00	¥ 212,300.00	NAVE#1	B	A	
134	09-May-00	Load Cell	Kyowa Dengyou	LUH-100KF,RJ-5	J	1	¥ 223,200.00	¥ 223,200.00	NAVE#1	C	A	
135	09-May-00	Load Cell	Kyowa Dengyou	LUH-500KF,RJ-2	J	1	¥ 243,000.00	¥ 243,000.00	NAVE#1	C	A	
136	09-May-00	Load Cell	Kyowa Dengyou	LUH-1TF,RJ-2	J	1	¥ 236,700.00	¥ 236,700.00	NAVE#1	C	A	
137	09-May-00	Load Cell	Kyowa Dengyou	LUH-5TFA	J	1	¥ 282,000.00	¥ 282,000.00	NAVE#1	C	A	
138	09-May-00	Surface Plate	Yuniseiki	uj105	J	1	¥ 189,000.00	¥ 189,000.00	NAVE#1	C	A	
139	09-May-00	LoadCell Indicator	Kyowa Dengyou	SDB-410CS	J	1	¥ 170,100.00	¥ 170,100.00	NAVE#1	C	A	
140	09-May-00	LoadCell Indicator	Kyowa Dengyou	SLW-220PC,SLE-10H	J	1	¥ 250,200.00	¥ 250,200.00	NAVE#1	C	A	
141	09-May-00	LoadCell Indicator	Kyowa Dengyou	WGA-710A-0	J	1	¥ 107,900.00	¥ 107,900.00	NAVE#1	C	A	

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No.	Date of Arrival	Description: Item	Manufacture	Model Number	R/P	Q'ty	Unit Price: Currency		S-total		Place of Storage	Frequency of Use	Condition	Remarks
142	09-May-00	Strain Amplifier	Kyowa Dengyou	DPM-711B,DB-120S3-8,DB120L	J	12	¥	247,125.00	¥	2,965,500.00	NAVE#1	C	A	
143	09-May-00	Steam Washer	Banzai	SHW-700-60	J	1	¥	600,000.00	¥	600,000.00	NAVE#1	A	A	
144	09-May-00	Rockwell HardnessTester	Mitsutoyo	FR-3E,HRC30-35他	J	1	¥	631,300.00	¥	631,300.00	NAVE#2	C	A	
145	09-May-00	Vickers HardnessTester	Mitsutoyo	FV-7E,HV-700	J	1	¥	1,344,000.00	¥	1,344,000.00	NAVE#2	C	A	
146	09-May-00	PartsWasher's Stand	Vickers	WS-15F	J	1	¥	106,600.00	¥	106,600.00	NAVE#1	B	A	
147	09-May-00	DigitalStillCamera	Nikkon	COOLPIX195	J	1	¥	191,300.00	¥	191,300.00	ADM.OFF	B	A	
148	09-May-00	DigitalStillCamera	Nikkon	COOLPIX195	J	1	¥	191,300.00	¥	191,300.00	ADM.OFF	B	A	
149	09-May-00	Incubator	ku	DN-600	J	1	¥	295,200.00	¥	295,200.00	NAVE#1	A	A	
150	09-May-00	Metal Hardness tester	Akashi	SH-5ARV	J	1	¥	279,000.00	¥	279,000.00	NAVE#2	C	A	
151	09-May-00	Metal Polisher	Maruto	ML-110N	J	1	¥	310,700.00	¥	310,700.00	NAVE#2	C	A	
152	09-May-00	Water flowmeter	Flo-Tec	SW50C-N	J	1	¥	207,000.00	¥	207,000.00	NAVE#1	C	A	
153	09-May-00	Water flowmeter	Flo-Tec	SW100C-N	J	1	¥	270,000.00	¥	270,000.00	NAVE#1	C	A	
154	09-May-00	Axle load meter	KyoeiGihan	SR-10M	J	1	¥	270,000.00	¥	270,000.00	NAVE#1	C	A	
155	09-May-00	Dividing head	YukiwaSeiko	DMB-75-24	J	1	¥	108,000.00	¥	108,000.00	ADM.OFF	C	A	
156	09-May-00	Camera w/zoom lenz	NIKON	F70	J	1	¥	144,000.00	¥	144,000.00	NAVE#1	C	A	
157	09-May-00	Torque meter	Kyowa Dengyou	TP-20KMCB	J	1	¥	350,000.00	¥	350,000.00	NAVE#1	C	A	
158	09-May-00	Torque meter	Kyowa Dengyou	TP-100KMCB	J	1	¥	480,000.00	¥	480,000.00	NAVE#1	C	A	
159	09-May-00	Flow meter	Flo-Tec	FSC-500	J	1	¥	245,000.00	¥	245,000.00	NAVE#1	C	A	
160	09-May-00	Flow meter	Flo-Tec	TDP-3321-E	J	1	¥	395,000.00	¥	395,000.00	NAVE#1	C	A	
161	09-May-00	Data logger	Keyence	L810B	J	1	¥	568,000.00	¥	568,000.00	NAVE#1	C	A	
162	09-May-00	Data logger	Keyence	L840	J	1	¥	499,000.00	¥	499,000.00	NAVE#1	C	A	
163	09-May-00	Data logger	Keyence	PD-30	J	1	¥	771,000.00	¥	771,000.00	NAVE#1	C	A	
164	09-May-00	Data logger	Keyence	PD-30	J	1	¥	771,000.00	¥	771,000.00	NAVE#1	C	A	
165	09-May-00	Standard Manometer	NaganoKeiki	PD23-M11-5MPa-Esp	J	1	¥	1,015,000.00	¥	1,015,000.00	NAVE#1	C	A	
166	09-May-00	Metallographical Microscope	Olimpus	BX60-31E31MB,PM10S P-355	J	1	¥	1,558,400.00	¥	1,558,400.00	NAVE#2	C	A	
167	09-May-00	Printer	EPSON	PM770C	E	1	¥	50,800.00	¥	50,800.00	ADM.OFF	A	A	
168	09-May-00	Computer Soft	JustSystem	ICHITARO-9	E	1	¥	17,800.00	¥	17,800.00	ADM.OFF	A	A	
169	09-May-00	Computer Soft	M.S.	MSOFFICE97	E	1	¥	59,000.00	¥	59,000.00	ADM.OFF	A	A	

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		Item	Manufacture	Model Number			Currency					
170	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
171	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
172	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
173	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
174	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
175	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
176	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
177	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
178	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
179	10-Feb-00	U.P.S.	OMNIPRO	OMNIPROSMART675VA	L	1	$ 2,421.00	$ 2,421.00	ADM.OFF	A	A	
180	10-Feb-00	Printer	HP	HPLASERJET1100	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
181	10-Feb-00	Printer	HP	HPLASERJET1100	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
182	10-Feb-00	Printer	HP	HPLASERJET1100	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
183	10-Feb-00	Printer	HP	HPLASERJET1100	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
184	10-Feb-00	Printer	HP	HPLASERJET1100	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
185	10-Feb-00	Scanner	HP	0	L	1	$ 5,430.00	$ 5,430.00	ADM.OFF	A	A	
186	29-Feb-00	Portable Generator	Evans	2.2KWEVANS4.5HP	L	1	$ 5,430.00	$ 5,430.00	NAVE#1	B	A	
187	29-Feb-00	Portable Generator	Evans	2.2KWEVANS4.5HP	L	1	$ 5,430.00	$ 5,430.00	NAVE#1	B	A	
188	16-Feb-00	Precision scale (600G)	Saltorius	BL600	L	1	US$ 539.00	US$ 539.00	NAVE#1	B	A	
189	29-Feb-00	Height gauge	MITSUTOYO	192-130	L	1	US$ 723.67	US$ 723.67	NAVE#2	B	A	
190	29-Feb-00	Height gauge	MITSUTOYO	192-130	L	1	US$ 723.67	US$ 723.67	NAVE#2	B	A	
191	29-Feb-00	Height gauge	MITSUTOYO	192-130	L	1	US$ 723.67	US$ 723.67	NAVE#2	B	A	
192	02-Mar-00	Slide Projector	KODAK	III-A	L	1	$ 5,985.00	$ 5,985.00	ADM.OFF	C	A	

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193	02-Mar-00	Drafting ruler	LINEMASTER		L	1	$	6,040.00	$	6,040.00	ADM.OFF	C	A	
194	25-Feb-00	Sieve	LeonWeill	A.INOX(4-20)9PZ	L	1	$	2,776.50	$	2,776.50	NAVE#1	C	A	
195	29-Mar-00	Voltmeter	AMPROBE	AC/DC-610	L	1	$	3,816.52	$	3,816.52	NAVE#1	B	A	
196	29-Mar-00	Cirquit tester	AMPROBE	AM-1280	L	1	$	2,163.47	$	2,163.47	NAVE#1	B	A	
197	29-Mar-00	Battery charger	BOSTER	LR-6080	L	1	$	2,495.69	$	2,495.69	NAVE#1	B	A	
198	29-Mar-00	Metal ruler(609X31.7MM)	STARRETT	C404R-24	L	1	$	1,166.14	$	1,166.14	NAVE#1	A	A	
199	29-Mar-00	Metal ruler(609X31.7MM)	STARRETT	C404R-24	L	1	$	1,166.14	$	1,166.14	NAVE#1	A	A	
200	29-Mar-00	Metal ruler(1000X31.7MM)	STARRETT	C636-1000	L	1	$	1,489.53	$	1,489.53	NAVE#1	A	A	
201	29-Mar-00	Metal ruler(1000X31.7MM)	STARRETT	C636-1000	L	1	$	1,489.53	$	1,489.53	NAVE#1	A	A	
202	29-Mar-00	Gas welding set	LeonWeill	MOVI-ALEARE	L	1	$	7,155.09	$	7,155.09	NAVE#1	A	A	
203	29-Mar-00	Squarz	STARRETT	#20-12DE304MM	L	1	$	5,041.63	$	5,041.63	NAVE#1	A	A	
204	29-Mar-00	Metal ruler1829X38	STARRETT	MMC404R	L	1	$	3,785.85	$	3,785.85	NAVE#1	A	A	
205	29-Mar-00	Metal ruler 1829X38	STARRETT	MMC404R	L	1	$	3,785.85	$	3,785.85	NAVE#1	A	A	
206	29-Mar-00	Metal ruler 1829X38	STARRETT	MMC404R	L	1	$	3,785.85	$	3,785.85	NAVE#1	A	A	
207	29-Mar-00	Universal ruler	LeonWeill	434ME0300DE300MM	L	1	$	1,797.45	$	1,797.45	NAVE#1	A	A	
208	29-Mar-00	Universal ruler	LeonWeill	434ME0300DE300MM	L	1	$	1,797.45	$	1,797.45	NAVE#1	A	A	
209	29-Mar-00	Index machine	LeonWeill	#2341TIPOCC-6	L	1	$	4,460.18	$	4,460.18	NAVE#1	A	A	
210	29-Mar-00	Knurling	ARMSTRONG	#83-697	L	1	$	3,969.74	$	3,969.74	NAVE#1	A	A	
211	29-Mar-00	Livecenter	CLASSICARDI	CM-3	L	1	$	1,319.75	$	1,319.75	NAVE#1	A	A	
212	29-Mar-00	Drill vice 152MM	PALMGREN	#60-B	L	1	$	7,404.57	$	7,404.57	NAVE#1	A	A	
213	29-Mar-00	Metal case	LeonWeill	#9968-CLW	L	1	$	3,022.31	$	3,022.31	NAVE#1	A	A	
214	29-Mar-00	Metal case	LeonWeill	#9968-CLW	L	1	$	3,022.31	$	3,022.31	NAVE#1	A	A	
215	29-Mar-00	Metal case	LeonWeill	#9968-CLW	L	1	$	3,022.31	$	3,022.31	NAVE#1	A	A	
216	29-Mar-00	V-BLOCK table (VERT.YHORZONTAL)	STARRETT	#HV-6	L	1	$	2,174.25	$	2,174.25	NAVE#1	A	A	
217	29-Mar-00	V-BLOCK BASESMAGINETICOSP.TRUSQUIN	STARRETT	#657-TW	L	1	$	1,842.61	$	1,842.61	NAVE#1	A	A	
218	29-Mar-00	V-BLOCK TRUSQUINESC/MAGNET	STARRETT	#657-EZ	L	1	$	2,674.58	$	2,674.58	NAVE#1	A	A	
219	29-Mar-00	PortableDrill tool Set	BOSCH	#1135-677	L	1	$	844.48	$	844.48	NAVE#1	A	A	

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220	29-Mar-00	Sander tool set	METABO	#EW7115S	L	1	$	1,434.66	$	1,434.66	NAVE#1	A	A	
221	29-Mar-00	BenchViceTool set	RECORD	#3-120MM	L	1	$	1,189.25	$	1,189.25	NAVE#1	A	A	
222	29-Mar-00	BenchViceTool set	RECORD	#8-235MM	L	1	$	1,948.62	$	1,948.62	NAVE#1	A	A	
223	29-Mar-00	Disk cutter Supporter	MILWAUKEE	#6176-20	L	1	$	2,418.58	$	2,418.58	NAVE#1	A	A	
224	29-Mar-00	PortableElect.Saw set	MILWAUKEE	#6230	L	1	$	3,000.23	$	3,000.23	NAVE#1	A	A	
225	29-Mar-00	ShearingMachine set	COR-MEX	#16	L	1	$	2,923.28	$	2,923.28	NAVE#1	A	A	
226	29-Mar-00	Dise sander	METABO	#DSW3150	L	1	$	2,292.59	$	2,292.59	NAVE#1	A	A	
227	29-Mar-00	ShearingMachine set	MILWAUKEE	#6850,	L	1	$	1,998.19	$	1,998.19	NAVE#1	A	A	
228	29-Mar-00	Impact wrench	MASTERPOWER	#2292M	L	1	$	6,666.46	$	6,666.46	NAVE#1	B	A	
229	29-Mar-00	Torque wrench	PROTO	#6020A	L	1	$	6,627.86	$	6,627.86	NAVE#1	B	A	
230	29-Mar-00	Reamer	T&J	#474	L	1	$	7,624.12	$	7,624.12	NAVE#1	B	A	
231	29-Mar-00	ShearingMachine	COR-MEX	#4	L	1	$	5,319.42	$	5,319.42	NAVE#1	A	A	
232	29-Mar-00	Elect.WeldingMachine	ECLIPSE	#E-202,DE152.4MM	L	1	$	1,683.12	$	1,683.12	NAVE#1	A	A	
233	29-Mar-00	Garage jack(1.5ton)	BLACKHAWK	#SJH1.5B	L	1	$	3,181.97	$	3,181.97	NAVE#1	A	A	
234	29-Mar-00	Garage jack(1.5ton)	BLACKHAWK	#SJH1.5B	L	1	$	3,181.97	$	3,181.97	NAVE#1	A	A	
235	29-Mar-00	HydraulicCrane	BLACKHAWK	#ECF1BCAP.1TON	L	1	$	4,652.91	$	4,652.91	NAVE#1	A	A	
236	29-Mar-00	Grinder	PARAMOUNT	#EHE-2143	L	1	$	7,189.33	$	7,189.33	NAVE#1	A	A	
237	29-Mar-00	Cultivator	BISON	NVH240	L	1	$	6,270.00	$	6,270.00	NAVE#2	B	A	
238	29-Mar-00	Ridger	AMMSA	3 ridges	L	1	$	3,814.00	$	3,814.00	NAVE#2	B	A	
239	29-Mar-00	Printer	HP	HPLASERJET1100	L	1	$	5,200.00	$	5,200.00	NAVE#2	A	A	
240	29-Mar-00	Printer	HP	HPLASERJET1100	L	1	$	5,200.00	$	5,200.00	NAVE#2	A	A	
241	29-Mar-00	Printer	HP	HPLASERJET1100	L	1	$	5,200.00	$	5,200.00	NAVE#2	A	A	
242	29-Mar-00	Printer	HP	HPLASERJET1100	L	1	$	5,200.00	$	5,200.00	NAVE#2	A	A	
243	29-Mar-00	Printer	HP	HPLASERJET1100	L	1	$	5,200.00	$	5,200.00	NAVE#2	A	A	
244	29-Mar-00	U.P.S.	OMNIPRO	5	L	1	$	1,875.00	$	1,875.00	ADM.OFF	A	A	
245	29-Mar-00	U.P.S.	OMNIPRO	5	L	1	$	1,875.00	$	1,875.00	ADM.OFF	A	A	
246	29-Mar-00	U.P.S.	OMNIPRO	5	L	1	$	1,875.00	$	1,875.00	ADM.OFF	A	A	

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247	29-Mar-00	Seeder	YANMER	TP-10RA	E	1	¥ 45,000.00	¥ 45,000.00	NAVE#1	C	A	
248	29-Mar-00	Seeder	YANMER	HS-120	E	1	¥ 36,000.00	¥ 36,000.00	NAVE#1	C	A	
249	29-Mar-00	Wet'nDryBulb Thermometer	ISUZU	NO-3-4090-01AC/DC	E	1	¥ 52,000.00	¥ 52,000.00	NAVE#1	A	A	
250	29-Mar-00	Wet'nDryBulb Thermometer	ISUZU	NO-3-4090-01AC/DC	E	1	¥ 52,000.00	¥ 52,000.00	NAVE#1	A	A	
251	29-Mar-00	Printer	CANON	BJC-50V	E	1	¥ 47,600.00	¥ 47,600.00	ADM.OFF	A	A	
252	29-Mar-00	DigitalCameraAccessory	SONY	IFT-R10	E	1	¥ 14,400.00	¥ 14,400.00	ADM.OFF	A	A	
253	29-Mar-00	Soil sampler	DAIKI	DIK-1600	J	1	¥ 61,200.00	¥ 61,200.00	NAVE#1	A	A	
254	29-Mar-00	Soil sampler	DAIKI	DIK-1600	J	1	¥ 61,200.00	¥ 61,200.00	NAVE#1	A	A	
255	29-Mar-00	Noncontact tachometer	Ono Sokki	HT-5100	J	1	¥ 64,900.00	¥ 64,900.00	NAVE#1	A	A	
256	29-Mar-00	Noncontact tachometer	Ono Sokki	HT-5100	J	1	¥ 64,900.00	¥ 64,900.00	NAVE#1	A	A	
257	29-Mar-00	Noncontact tachometer	Ono Sokki	HT-5100	J	1	¥ 64,900.00	¥ 64,900.00	NAVE#1	A	B	
258	29-Mar-00	Noncontact tachometer	Ono Sokki	HT-5100	J	1	¥ 25,700.00	¥ 25,700.00	NAVE#1	A	B	
259	29-Mar-00	Noncontact tachometer	Ono Sokki	HT-5100	J	1	¥ 25,700.00	¥ 25,700.00	NAVE#1	A	B	
260	29-Mar-00	Tool set(strain gauge)	KyowaDengyo	GTK-77	J	1	¥ 99,000.00	¥ 99,000.00	NAVE#1	B	A	
261	29-Mar-00	Caliper	Mitsutoyo	500-152	J	1	¥ 11,700.00	¥ 11,700.00	NAVE#1	B	A	
262	29-Mar-00	Caliper	Mitsutoyo	500-500-110	J	1	¥ 54,000.00	¥ 54,000.00	NAVE#1	B	A	
263	29-Mar-00	Micrometer	Mitsutoyo	259-521-30	J	1	¥ 20,600.00	¥ 20,600.00	NAVE#2	B	A	
264	29-Mar-00	Micrometer	Mitsutoyo	293-522-30	J	1	¥ 18,000.00	¥ 18,000.00	NAVE#2	B	A	
265	29-Mar-00	Micrometer	Mitsutoyo	293-523-30	J	1	¥ 20,700.00	¥ 20,700.00	NAVE#2	B	A	
266	29-Mar-00	Pressure gauge	Mitsutoyo	PG-50KU	J	1	¥ 42,300.00	¥ 42,300.00	NAVE#1	B	A	
267	29-Mar-00	Pressure gauge	Mitsutoyo	PG-50KU	J	1	¥ 42,300.00	¥ 42,300.00	NAVE#1	B	A	
268	29-Mar-00	Pressure gauge	Mitsutoyo	PG-100KU	J	1	¥ 84,600.00	¥ 84,600.00	NAVE#1	B	A	
269	29-Mar-00	ManualOpe.Pump	Mitsutoyo	TR-50	J	1	¥ 15,300.00	¥ 15,300.00	NAVE#1	B	A	
270	29-Mar-00	Camera	MINOLTA	ESPIO160	J	1	¥ 63,000.00	¥ 63,000.00	ADM.OFF	B	C	
271	29-Mar-00	Camera	MINOLTA	ESPIO160	J	1	¥ 63,000.00	¥ 63,000.00	ADM.OFF	B	C	
272	29-Mar-00	Height Gauge	MITSUTOYO	192-130	J	1	¥ 40,500.00	¥ 40,500.00	NAVE#2	B	A	
273	29-Mar-00	PortableThermometer	Tabaiespec	RT11	J	1	¥ 69,000.00	¥ 69,000.00	NAVE#1	B	A	
274	29-Mar-00	PortableThermometer	Tabaiespec	RS11	J	1	¥ 66,000.00	¥ 66,000.00	NAVE#1	B	A	
275	29-Mar-00	PortableThermometer	YokokawaDenki	530-04	J	1	¥ 55,100.00	¥ 55,100.00	NAVE#1	B	A	
276	29-Mar-00	PortableThermometer	YokokawaDenki	2541/1/1	J	1	¥ 42,500.00	¥ 42,500.00	NAVE#1	B	A	
277	29-Mar-00	InterfaceCard	NipponNational	777438-02PCMCIA-GPIP	J	1	¥ 110,000.00	¥ 110,000.00	NAVE#1	B	A	

Provision/Procurement/Maintenance of the Equipment (1999)

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No.	Date of Arrival	Description			R/P	Q'ty	Unit Price	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number			Currency					
278	29-Mar-00	InterfaceCard	NipponNational	DAQCARD-500	J	1	¥ 90,000.00	¥ 90,000.00	NAVE#1	B	A	
279	29-Mar-00	V-BLOCK COMPASP/INTERIORDEG OLPE	STARRETT	#39DE152.3MM(6)	L	1	$ 642.88	$ 642.88	NAVE#1	B	A	
280	29-Mar-00	V-BLOCK COMPASPRINTERIORDE GOLPE	STARRETT	#77ADE152.3MM(6)	L	1	$ 424.30	$ 424.30	NAVE#1	B	A	
281	29-Mar-00	Pitch gauge	Mitsutoyo	#6DE4A42HILOS	L	1	$ 304.88	$ 304.88	NAVE#1	B	A	
282	29-Mar-00	Pitch gauge	Mitsutoyo	#156MDE0.25-250MM	L	1	$ 266.86	$ 266.86	NAVE#1	B	A	
283	29-Mar-00	Welding station	WELLER	#WLC100-25W	L	1	$ 482.76	$ 482.76	NAVE#1	B	A	
284	29-Mar-00	Chain wrench	DIAMOND	cw12 102mm	L	1	$ 445.66	$ 445.66	NAVE#1	B	A	
285	29-Mar-00	Stillson wrench	SUPER-EGO	600mm	L	1	$ 594.77	$ 594.77	NAVE#1	B	A	
286	29-Mar-00	Grease injector	ERKCO	#101	L	1	$ 877.57	$ 877.57	NAVE#1	A	A	
287	29-Mar-00	Chuck	H.D.YAMA	#2011-0801,80MM	L	1	$ 671.68	$ 671.68	NAVE#1	A	A	
288	29-Mar-00	Drill chuck	JACOBS	#34-06	L	1	$ 664.91	$ 664.91	NAVE#1	A	A	
289	29-Mar-00	Bundle machine	MINIMULE	#MM-5014	L	1	$ 476.52	$ 476.52	NAVE#1	A	A	
290	29-Mar-00	Bundle machine	MINIMULE	#MM-5014	L	1	$ 476.52	$ 476.52	NAVE#1	A	A	
291	29-Mar-00	Bundle machine	MINIMULE	#MM-112-DD	L	1	$ 608.39	$ 608.39	NAVE#1	A	A	
292	29-Mar-00	Bundle machine	MINIMULE	#MM-112-DD	L	1	$ 608.39	$ 608.39	NAVE#1	A	A	
293	29-Mar-00	Bundle machine	MINIMULE	#MM-112-DD	L	1	$ 608.39	$ 608.39	NAVE#1	A	A	
294	29-Mar-00	Metal ruler	STARRETT	#C636-300X25.4MM	L	1	$ 269.42	$ 269.42	NAVE#1	A	A	
295	29-Mar-00	Metal ruler	STARRETT	#C636-300X25.4MM	L	1	$ 269.42	$ 269.42	NAVE#1	A	A	
296	29-Mar-00	Electric tool set	PAGSA	#25	L	1	$ 645.27	$ 645.27	NAVE#1	A	A	
297	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
298	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
299	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
300	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
301	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
302	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
303	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
304	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	

Provision/Procurement/Maintenance of the Equipment (1999)

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		Item	Manufacture	Model Number	R/P		Currency					
305	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
306	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
307	02-May-00	Transformer 1 KVA	TOEI	TC-10	E	1	¥ 6,300.00	¥ 6,300.00	ADM.OFF	A	A	
308	03-May-00	Book KagakuGijutu 35Manngo	Alphabeta.	Japanese-English	E	1	¥ 60,000.00	¥ 60,000.00	ADM.OFF	B	A	
309	04-May-00	Book KagakuGijutu 35Manngo	Alphabeta.	English- Japanese	E	1	¥ 60,000.00	¥ 60,000.00	ADM.OFF	B	A	
310	05-May-00	Book Shinnhann Nousagyoubinran	NorinTokeiAssoc.		E	1	¥ 4,500.00	¥ 4,500.00	ADM.OFF	B	A	
311	06-May-00	Book Nousagyou shikenhou	NorinTokeiAssoc		E	1	¥ 2,796.00	¥ 2,796.00	ADM.OFF	B	A	
312	07-May-00	Book JIS Handbook Hinshitsukanri	JIS Assoc.		E	1	¥ 21,000.00	¥ 21,000.00	ADM.OFF	B	A	
313	08-May-00	Kikaiyouso	JIS Assoc.		E	1	¥ 17,000.00	¥ 17,000.00	ADM.OFF	B	A	
314	09-May-00	Book JIS Handbook Hinshitsukanri	JIS Assoc.		E	1	¥ 16,500.00	¥ 16,500.00	ADM.OFF	B	A	
315	10-May-00	Kikaiyouso	JIS Assoc.		E	1	¥ 6,200.00	¥ 6,200.00	ADM.OFF	B	A	
316	11-May-00	Book JIS Handbook Keisokukiji	JIS Assoc.		E	1	¥ 4,400.00	¥ 4,400.00	ADM.OFF	B	A	
317	12-May-00	Pocketbook	Ohm Co.		E	1	¥ 14,563.00	¥ 14,563.00	ADM.OFF	B	A	
318	13-May-00	Book kikai koushikikatsuyou	Ohm Co.		E	1	¥ 1,942.00	¥ 1,942.00	ADM.OFF	B	A	
319	14-May-00	Catalogue ISO	ISO		E	1	¥ 8,880.00	¥ 8,880.00	ADM.OFF	B	A	
320	15-May-00	Manual	JIS Assoc.		E	1	¥ 3,502.00	¥ 3,502.00	ADM.OFF	B	A	
321	28-Mar-00	Sofa set	SALAVERS ALLES	3-2-1PBA	L	1	$ 3,659.00	$ 3,659.00	ADM.OFF	A	A	
322	28-Mar-00	Refragerator	Westing House	IEM-RH10N2PTAS-SEMI	L	1	$ 3,449.00	$ 3,449.00	ADM.OFF	A	A	
323	28-Mar-00	HUB Net card	TRICOM	3COMPCCARD2	L	1	$ 5,577.50	$ 5,577.50	ADM.OFF	A	A	
324	28-Mar-00	Office chair	PM Steel	MILLAN972FPN G	L	1	$ 1,122.00	$ 1,122.00	ADM.OFF	A	A	
325	28-Mar-00	Computer desk	PM Steel	S-308N	L	1	$ 1,127.00	$ 1,127.00	ADM.OFF	A	A	
326	28-Mar-00	Office chair	PM Steel	G	L	1	$ 1,484.00	$ 1,484.00	ADM.OFF	A	A	
327	28-Mar-00	Book shelf	PM Steel	ESTANTEMETA LICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
328	28-Mar-00	Book shelf	PM Steel	ESTANTEMETA LICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
329	28-Mar-00	Office chair	PM Steel	MILAN	L	1	$ 1,350.10	$ 1,350.10	ADM.OFF	A	A	
330	28-Mar-00	Office chair	PM Steel	MILAN	L	1	$ 1,350.10	$ 1,350.10	ADM.OFF	A	A	

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		Item	Manufacture	Model Number			Currency					
331	28-Mar-00	Working table	PM Steel	8980	L	1	$ 2,825.55	$ 2,825.55	NAVE#1	A	A	
332	28-Mar-00	Working table	PM Steel	8980	L	1	$ 2,825.55	$ 2,825.55	NAVE#1	A	A	
333	28-Mar-00	Working table	PM Steel	8980	L	1	$ 2,825.55	$ 2,825.55	NAVE#1	A	A	
334	28-Mar-00	Working table	PM Steel	8980	L	1	$ 2,825.55	$ 2,825.55	NAVE#1	A	A	
335	28-Mar-00	Small table	PM Steel	12120E	L	1	$ 2,190.18	$ 2,190.18	NAVE#1	A	A	
336	28-Mar-00	AssembliedComputer		PENT-III3.2GB	L	1	$ 7,000.05	$ 7,000.05	ADM.OFF	A	A	
337	28-Mar-00	Book shelf	PM Steel	ESTANTEMETALICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
338	28-Mar-00	Book shelf	PM Steel	ESTANTEMETALICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
339	28-Mar-00	Book shelf	PM Steel	ESTANTEMETALICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
340	28-Mar-00	Book shelf	PM Steel	ESTANTEMETALICO	L	1	$ 1,460.50	$ 1,460.50	ADM.OFF	A	A	
341	28-Mar-00	Office chair	PM Steel	MILAN	L	1	$ 1,311.00	$ 1,311.00	ADM.OFF	A	A	
342	28-Mar-00	Office chair	PM Steel	MILAN	L	1	$ 1,311.00	$ 1,311.00	ADM.OFF	A	A	
343	28-Mar-00	Office chair	PM Steel	MILAN	L	1	$ 1,311.00	$ 1,311.00	ADM.OFF	A	A	
344	28-Mar-00	White board	PM Steel	PLB240120ESCOMAX	L	1	$ 1,009.18	$ 1,009.18	ADM.OFF	A	A	
345	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR12	L	1	$ 1,895.00	$ 1,895.00	ADM.OFF	A	A	
346	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR12	L	1	$ 1,895.00	$ 1,895.00	ADM.OFF	A	A	
347	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR12	L	1	$ 1,895.00	$ 1,895.00	ADM.OFF	A	A	
348	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR12	L	1	$ 1,895.00	$ 1,895.00	ADM.OFF	A	A	
349	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR12	L	1	$ 1,895.00	$ 1,895.00	ADM.OFF	A	A	
350	28-Mar-00	A.V.R. 2KVA	VOGAR	VOGAR13	L	1	$ 2,715.00	$ 2,715.00	ADM.OFF	A	A	
351	28-Mar-00	Working Desk	PM Steel	1.50x0.75x0.75	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
352	28-Mar-00	Working Desk	PM Steel	1.50x0.75x0.75	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
353	28-Mar-00	Office chair	PM Steel	STILLON	L	1	$ 1,900.00	$ 1,900.00	ADM.OFF	A	A	
354	28-Mar-00	Office chair	PM Steel	STILLON	L	1	$ 1,900.00	$ 1,900.00	ADM.OFF	A	A	
355	28-Mar-00	Office chair	PM Steel	RECIBIDOR	L	1	$ 1,450.00	$ 1,450.00	ADM.OFF	A	A	
356	28-Mar-00	Office chair	PM Steel	RECIBIDOR	L	1	$ 1,450.00	$ 1,450.00	ADM.OFF	A	A	
357	28-Mar-00	CD REWRITABLE	Hewlett Packard	CDRWINTERNOHP	L	1	$ 3,000.00	$ 3,000.00	ADM.OFF	A	A	
358	28-Mar-00	CDREWRITABLE	Hewlett Packard	CDRWEXTERNOHP	L	1	$ 3,500.00	$ 3,500.00	ADM.OFF	A	A	
359	28-Mar-00	Shelf	PM Steel	16EPL	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	

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		Item	Manufacture	Model Number			Currency					
360	28-Mar-00	Shelf	PM Steel	16EPL	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
361	28-Mar-00	Shelf	PM Steel	16EPL	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
362	28-Mar-00	Shelf	PM Steel	16EPL	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
363	28-Mar-00	Shelf	PM Steel	16EPL	L	1	$ 2,000.00	$ 2,000.00	ADM.OFF	A	A	
364	28-Mar-00	Office chair	PM Steel	EX3900PE	L	1	$ 2,939.53	$ 2,939.53	ADM.OFF	A	A	
365	28-Mar-00	Office chair	PM Steel	EX3905PE	L	1	$ 2,253.58	$ 2,253.58	ADM.OFF	A	A	
366	28-Mar-00	Office chair	PM Steel	EX3905PE	L	1	$ 2,253.58	$ 2,253.58	ADM.OFF	A	A	
367	28-Mar-00	Office chair	PM Steel	2704ATGE	L	1	$ 1,527.58	$ 1,527.58	ADM.OFF	A	A	
368	28-Mar-00	Office chair	PM Steel	2704ATGE	L	1	$ 1,527.58	$ 1,527.58	ADM.OFF	A	A	
369	28-Mar-00	Office chair	PM Steel	2704ATGE	L	1	$ 1,527.58	$ 1,527.58	ADM.OFF	A	A	
370	28-Mar-00	Office chair	PM Steel	2705TSE	L	1	$ 1,085.56	$ 1,085.56	ADM.OFF	A	A	
371	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,162.96	$ 2,162.96	ADM.OFF	A	A	
372	28-Mar-00	Working Desk	PM Steel	501PNAR	L	1	$ 2,192.96	$ 2,192.96	ADM.OFF	A	A	
373	28-Mar-00	Working Desk	PM Steel	501PNAR	L	1	$ 2,192.96	$ 2,192.96	ADM.OFF	A	A	
374	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
375	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
376	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
377	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
378	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
379	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
380	28-Mar-00	Cabinet	PM Steel	451AR	L	1	$ 2,204.96	$ 2,204.96	ADM.OFF	A	A	
381	28-Mar-00	Docum.Cabinet	PM Steel	529AR	L	1	$ 1,114.03	$ 1,114.03	ADM.OFF	A	A	
382	28-Mar-00	Docum.Cabinet	PM Steel	529AR	L	1	$ 1,114.03	$ 1,114.03	ADM.OFF	A	A	
383	28-Mar-00	Working Desk	PM Steel	501PNAR	L	1	$ 2,192.96	$ 2,192.96	ADM.OFF	A	A	
384	28-Mar-00	Working Desk	PM Steel	501PNAR	L	1	$ 2,192.96	$ 2,192.96	ADM.OFF	A	A	
385	28-Mar-00	Working Desk	PM Steel	501PNAR	L	1	$ 2,192.96	$ 2,192.96	ADM.OFF	A	A	
386	28-Mar-00	Office chair	PM Steel	LT11ATGE	L	1	$ 1,545.41	$ 1,545.41	ADM.OFF	A	A	
387	28-Mar-00	Office chair	PM Steel	LT11ATGE	L	1	$ 1,545.41	$ 1,545.41	ADM.OFF	A	A	
388	28-Mar-00	Office chair	PM Steel	LT11ATGE	L	1	$ 1,545.41	$ 1,545.41	ADM.OFF	A	A	
389	28-Mar-00	Computer desk	PM Steel	S208N	L	1	$ 1,230.00	$ 1,230.00	ADM.OFF	A	A	
390	28-Mar-00	Tripod	VANTA	70X80	L	1	$ 756.52	$ 756.52	ADM.OFF	A	A	
391	28-Mar-00	Incubator	A	EC33	L	1	$ 5,043.00	$ 5,043.00	NAVE#1	A	A	

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		Item	Manufacture	Model Number			Currency							
392	02-Apr-01	ChemicalResidual MeasureEquipment	COSMOGIKEN	RORM-98,DSS-RS,ToshibaSatelite4340,SW-11	J	1	¥	2,710.00	¥	2,710.00	NAVE#1	A	A	
393	15-Nov-00	Tractor	NewHolland	3010DobleTrac.	L	1	$	168,043.00	$	168,043.00	NAVE#1	B	A	
394	02-Apr-01	FuelConsumptionMeter	ONOSOKKI	Fx1110,FX3400,FX0021	J	1	¥	1,668.60	¥	1,668.60	NAVE#1	B	A	
395	02-Apr-01	Data recorder	KyowaDengyo	RTP-772	J	1	¥	3,270.00	¥	3,270,000.00	NAVE#1	B	A	
396	15-Nov-01	AC Reactor	Fujitec	LR2-15	E	1	¥	1,495,000.00	¥	149,500.00	NAVE#1	B	A	
397	02-Apr-01	Data Recorder	TEAC	RD-135T	J	1	¥	1,502.00	¥	1,502.00	NAVE#1	B	A	
398	20-Dec-00	Personal Computer soft	Labview	Labview5.1FullDevelopmentCD/window2000,NTx9S/LNo:	L	1	¥	3,795.00	¥	3,795.00	ADM.OFF	B	A	
399	15-Nov-01	PWM Converter	KyowaDengyo	RHC15-2A	E	1	¥	2,785,000.00	¥	278,500.00	NAVE#1	B	A	
400	02-Apr-01	Vibrometer	Rion	PV-62,XV-20CI,VM52,LR06	J	1	¥	1,464.80	¥	1,464.80	NAVE#1	B	A	
401	08-Jan-01	Personal Computer soft	AutodeskCAD	h	L	1	US$	862.50	US$	862.50	NAVE#1	A	A	
402	02-Apr-01	Sound meter	Rion	NA27,NC94,AA38-222,CC24,LR06	J	1	¥	1,165.60	¥	1,165.60	NAVE#1	B	A	
403	13-Dec-00	Water Destiller	BARNSTEAD	D4641	L	1	$	34,419.15	$	34,419.15	NAVE#1	B	A	
404	02-Apr-01	Standard transmitter	RionCalibrator	NC-72	J	1	¥	150,000.00	¥	150,000.00	NAVE#1	B	A	
405	29-Nov-00	ElectricalOven	FELISA	FE-350	L	1	$	10,488.00	$	10,488.00	NAVE#1	B	A	
406	02-Apr-01	Osciloscope	Yokogawa	OR300E,OR342-2/PM	J	1	¥	460,000.00	¥	460,000.00	NAVE#1	C	A	
407	02-Apr-01	Strain amplifier	YokokawaDengyo	DPM-601A	J	1	¥	170,000.00	¥	170,000.00	NAVE#1	C	A	
408	02-Apr-01	Strain amplifier	YokokawaDengyo	DPM-601A	J	1	¥	170,000.00	¥	170,000.00	NAVE#1	C	A	
409	02-Apr-01	Rotary	Matsuyama	PU-1705F-3S,A15LG/RG18	J	1	¥	838,200.00	¥	838,200.00	NAVE#3	B	A	
410	02-Apr-01	Rotary	Matsuyama	DX-2401NA	J	1	¥	1,287,000.00	¥	1,287,000.00	NAVE#3	B	A	
411	02-Apr-01	Cultivator	Matsuya	RK-311	J	1	¥	820,600.00	¥	820,600.00	NAVE#3	B	A	
412	02-Apr-01	Cultivator	ToyoNohki	TCV-3	J	1	¥	448,500.00	¥	448,500.00	NAVE#3	B	A	
413	02-Apr-01	PTO torquemeter	KyoeiGihan	TQR-50KF65	J	1	¥	590,000.00	¥	590,000.00	NAVE#1	B	A	
414	02-Apr-01	PTO torquemeter	KyoeiGihan	TQR-50KF65	J	1	¥	590,000.00	¥	590,000.00	NAVE#1	B	A	
415	02-Apr-01	ElectricalWhiteBoard	Kokuyo	BB-VR236FCW-BBA-Pck1	J	1	¥	282,000.00	¥	282,000.00	ADM.OFF	A	C	

Provision/Procurement/Maintenance of the Equipment (2000)

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No.	Date of Arrival	Description				Q'ty	Unit Price		S-total		Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number	R/P		Currrency							
416	02-Apr-01	Personal Computer soft	Microsoft	VisualBasic6.0Professionaledition	J	1	¥	120,000.00	¥	120,000.00	ADM.OFF	A	A	
417	02-Apr-01	Personal Computer soft	AutodeskCAD	AutCAD2000	J	1	¥	480,000.00	¥	480,000.00	ADM.OFF	A	A	
418	02-Apr-01	Computer soft	Labview	LabViewBasicPackage	J	1	¥	160,000.00	¥	160,000.00	ADM.OFF	A	A	
419	02-Apr-01	SoilSpecificVolumeScale	Fujiwara	Yamanakatype	J	1	¥	209,000.00	¥	209,000.00	NAVE#1	A	A	
420	02-Apr-01	HardnessTester	Akashi	HH-140	J	1	¥	163,000.00	¥	163,000.00	NAVE#1	A	A	
421	02-Apr-01	Incubator	Yamato	IN801	J	1	¥	500,000.00	¥	500,000.00	NAVE#1	B	A	
422	02-Apr-01	KTC toolsets	KTC	SK5500A	J	1	¥	570,000.00	¥	570,000.00	NAVE#1	A	A	
423	03-Apr-01	DinamometerAtachment	KyowaDenso	RJ-5	E	1	¥	28,700.00	¥	28,700.00	NAVE#1	A	A	
424	02-Apr-01	Digital tachometer	Keyence	Rx-22Multuple-type	J	1	¥	50,000.00	¥	50,000.00	NAVE#1	A	A	
425	08-Jan-01	Personal Computer soft	Microsoft	VisualBasicprofesional	L	1	$	1,265.00	$	1,265.00	ADM.OFF	B	A	
426	09-Jan-01	FlashLight for Videocamera	Sony	HVL-FDH2	E	1	¥	10,550.00	¥	10,550.00	ADM.OFF	B	A	
427	02-Apr-01	DigitalRotorIndicator	Keyence	Rx-22Multuple-type	J	1	¥	50,000.00	¥	50,000.00	NAVE#1	B	A	
428	08-Dec-00	Refragerator	Westinghouse	WRT16NRHW.BLA	L	1	$	4,750.99	$	4,750.99	ADM.OFF	A	A	
429	09-Dec-00	Battery for VideoCamera	Sony	NP-F960	E	1	¥	15,800.00	¥	15,800.00	ADM.OFF	A	A	
430	02-Apr-01	DigitalRotorIndicator	Keyence	Rx-22Multuple-type	J	1	¥	50,000.00	¥	50,000.00	NAVE#1	A	A	
431	08-Dec-00	Refragerator	Westinghouse	WRT16NRHW.BLA	L	1	$	4,750.99	$	4,750.99	ADM.OFF	A	A	
432	09-Dec-00	Battery for VideoCamera	Sony	NP-F750	E	1	¥	10,550.00	¥	10,550.00	ADM.OFF	A	A	
433	02-Apr-01	DigitalRotorIndicator	Keyence	Rx-22Multuple-type	J	1	¥	50,000.00	¥	50,000.00	NAVE#1	A	A	
434	22-Nov-00	Generator	EVANS	2.2KVA	L	1	$	6,496.93	$	6,496.93	NAVE#1	B	A	
435	23-Nov-00	Computer soft		DVBK-W2000	E	1	¥	44,800.00	¥	44,800.00	ADM.OFF	B	A	
436	02-Apr-01	DigitalRotorIndicator	Keyence	Rx-22Multuple-type	J	1	¥	50,000.00	¥	50,000.00	NAVE#1	B	A	
437	22-Nov-00	Generator	EVANS	2.2KVA	L	1	¥	6,496.93	¥	6,496.93	NAVE#1	B	A	
438	23-Nov-00	ZIP Drive	IOMEGA	ZIP100USB	E	1	¥	17,800.00	¥	17,800.00	ADM.OFF	B	A	
439	02-Apr-01	Photoswitch	Keyence	FS-V11,FU-35FA	J	1	¥	24,100.00	¥	24,100.00	ADM.OFF	B	A	
440	02-Apr-01	Photoswitch	Keyence	FS-V11,FU-35FA	J	1	¥	24,100.00	¥	24,100.00	ADM.OFF	B	A	
441	02-Apr-01	Photoswitch	Keyence	FS-V11,FU-35FA	J	1	¥	24,100.00	¥	24,100.00	ADM.OFF	B	A	

Provision/Procurement/Maintenance of the Equipment (2000)

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442	02-Apr-01	Photoswitch	Keyence	FS-V11,FU-35FA	J	1	¥	24,100.00	¥	24,100.00	ADM.OFF	B	A	
443	02-Apr-01	Photoswitch	Keyence	FS-V11,FU-35FA	J	1	¥	24,100.00	¥	24,100.00	ADM.OFF	B	A	
444	02-Apr-01	Tool	Tone	700SG	J	1	¥	60,000.00	¥	60,000.00	ADM.OFF	A	A	
445	02-Apr-01	Tool	Tone	700SG	J	1	¥	60,000.00	¥	60,000.00	ADM.OFF	A	A	
446	02-Apr-01	Elect.Tool Set	Hozan	S-75	J	1	¥	40,000.00	¥	40,000.00	NAVE#1	B	A	
447	02-Apr-01	Elect.Tool Set	Hozan	S-22	J	1	¥	11,700.00	¥	11,700.00	NAVE#1	B	A	
448	02-Apr-01	Load Cell	Kyowadengyou	LTZ-500KA	J	1	¥	65,000.00	¥	65,000.00	NAVE#1	C	A	
449	02-Apr-01	Load Cell	Kyowadengyou	LTZ-500KA	J	1	¥	65,000.00	¥	65,000.00	NAVE#1	C	A	
450	02-Apr-01	Load Cell	Kyowadengyou	LTZ-500KA	J	1	¥	65,000.00	¥	65,000.00	NAVE#1	C	A	
451	02-Apr-01	Load Cell	Kyowadengyou	LTZ-500KA	J	1	¥	65,000.00	¥	65,000.00	NAVE#1	C	A	
452	03-Apr-01	Tool set	Hozan	OP-21734	E	1	¥	4,800.00	¥	4,800.00	NAVE#1	C	A	
453	02-Apr-01	Relative Density Hidrometer	Yoshino Keisoku	JISB7525	J	1	¥	8,000.00	¥	8,000.00	NAVE#1	C	A	
454	25-Mar-01	Diccionario agroquimico	PLM	2000PLM	L	1	$	360.00	$	360.00	ADM.OFF	C	A	
455	25-Mar-01	NormalSO		1200-00-01	L	1	$	1,550.00	$	1,550.00	ADM.OFF	B	A	
456	25-Mar-01	Tecnica de la mecanización Agraria		N9788471142153	L	1	$	385.05	$	385.05	ADM.OFF	B	A	
457	25-Mar-01	Anuario Estadistico del Comercio Exterior 1999 Exportaciones			L	1	$	180.00	$	180.00	ADM.OFF	B	A	
458	25-Mar-01	Anuario Estadistico del Comercio Exterior 1999 Importaciones Tomo-I			L	1	$	150.00	$	150.00	ADM.OFF	B	A	
459	25-Mar-01	Anuario Estadistico del Comercio Exterior 1999 Importaciones Tomo-II			L	1	$	150.00	$	150.00	ADM.OFF	B	A	
460	25-Mar-01	Anuario Estadistico del Comercio Exterior 1999 Importaciones Tomo-III			L	1	$	150.00	$	150.00	ADM.OFF	B	A	

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		Item	Manufacture	Model Number			Currency					
461	25-Mar-01	Resultado Preliminares del XII Censo General de Población y Vivienda 2000			L	1	$ 50.00	$ 50.00	ADM.OFF	B	A	
462	25-Mar-01	Panorama Agfropuecario VII, 1991Guerrero			L	1	$ 21.00	$ 21.00	ADM.OFF	B	A	
463	25-Mar-01	Panorama Agfropuecario VII, 1991 Morelos			L	1	$ 21.00	$ 21.00	ADM.OFF	B	A	
464	25-Mar-01	Norma de Maquinaria		Ñ12000001	L	1	$ 1,350.00	$ 1,350.00	ADM.OFF	B	A	
465	25-Mar-01	Guia Basica del Exportador 2000 VIII dedición			L	1	$ 200.00	$ 200.00	ADM.OFF	B	A	
466	21-Feb-01	Ladder	LeonWeill	405-36	L	1	$ 2,702.50	$ 2,702.50	NAVE#1	A	A	
467	25-Mar-01	Cabinet	PM Steel	40x45x1.7m	L	1	$ 1,610.00	$ 1,610.00	ADM.OFF	A	A	
468	25-Mar-01	Cabinet	PM Steel	40x45x1.7m	L	1	$ 1,610.00	$ 1,610.00	ADM.OFF	A	A	
469	25-Mar-01	Cabinet	PM Steel	40x45x1.7m	L	1	$ 1,610.00	$ 1,610.00	ADM.OFF	A	A	
470	25-Mar-01	Cabinet	PM Steel	40x45x1.7m	L	1	$ 1,610.00	$ 1,610.00	ADM.OFF	A	A	
471	25-Mar-01	Computer desk	PM Steel	S308	L	1	$ 1,230.04	$ 1,230.04	ADM.OFF	A	A	
472	25-Mar-01	Computer desk	PM Steel	S308	L	1	$ 1,230.04	$ 1,230.04	ADM.OFF	A	A	
473	25-Mar-01	Coffee maker	ANCE	NOM-218	L	1	$ 1,265.00	$ 1,265.00	ADM.OFF	A	A	
474	25-Mar-01	Shelf	PM Steel	16ETL	L	1	$ 2,530.00	$ 2,530.00	ADM.OFF	A	A	
475	25-Mar-01	Shelf	PM Steel	16ETL	L	1	$ 2,530.00	$ 2,530.00	ADM.OFF	A	A	
476	25-Mar-01	Video Deck	PANASONIC	PanasonicNV-FJ600P	L	1	$ 1,999.00	$ 1,999.00	ADM.OFF	A	A	
477	25-Mar-01	Cabinet	PM Steel	PM451	L	1	$ 3,220.00	$ 3,220.00	ADM.OFF	A	A	
478	25-Mar-01	Cabinet	PM Steel	PM451	L	1	$ 3,220.00	$ 3,220.00	ADM.OFF	A	A	
479	25-Mar-01	Cabinet	PM Steel	PM451	L	1	$ 3,220.00	$ 3,220.00	ADM.OFF	A	A	
480	25-Mar-01	Shelf	PM Steel	93ETL	L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	
481	25-Mar-01	Shelf	PM Steel	93ETL	L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	
482	25-Mar-01	Shelf	PM Steel	93ETL	L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	
483	25-Mar-01	Shelf	PM Steel	93ETL	L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	
484	25-Mar-01	Shelf	PM Steel	93ETL	L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	
485	25-Mar-01	PC SOFT	MICROSOF	OFFICE2000	L	1	$ 2,415.00	$ 2,415.00	ADM.OFF	A	A	
486	25-Mar-01	White board	PM Steel	1.2x2.4m	L	1	$ 946.32	$ 946.32	ADM.OFF	A	A	
487	25-Mar-01	Ladder	LeonWeill	G-131-17	L	1	$ 1,040.75	$ 1,040.75	NAVE#1	A	A	
488	25-Mar-01	Shelf	PM Steel		L	1	$ 1,552.50	$ 1,552.50	ADM.OFF	A	A	

Provision/Procurement/Maintenance of the Equipment (2000)

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Condition : (A: Good - B: Fair - C: Bad)

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No.	Date of Arrival	Description			R/P	Q'ty	Unit Price	S-total	Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number			Currency					
489	25-Mar-01	Document Shelf	PM Steel		L	1	$ 3,220.00	$ 3,220.00	ADM.OFF	A	A	
490	25-Mar-01	Shredder	ABC	921-S	L	1	$ 3,699.50	$ 3,699.50	ADM.OFF	A	A	
491	25-Mar-01	Adaptor for Cutter	Bridgeport	#1230001	L	1	$ 2,367.85	$ 2,367.85	ADM.OFF	B	A	
492	25-Mar-01	Adaptor for Cutter	Helimill Iscar	F75AP-D2	L	1	$ 3,197.00	$ 3,197.00	ADM.OFF	B	A	
493	25-Mar-01	Adaptor for Cutter	Helimill Iscar	HM-IC635	L	1	$ 1,087.90	$ 1,087.90	ADM.OFF	B	A	
494	25-Mar-01	Adaptor for Cutter	Helimill Iscar	HM-IC635	L	1	$ 1,087.90	$ 1,087.90	ADM.OFF	B	A	

Provision/Procurement/Maintenance of the Equipm (Adquired in Mexico: 2001)

Note:

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Condition (A: Good - B: Fair - C: Bad) $: Peso

No.	Date of Arrival	Description				Q'ty	Unit Price		S-total	Place of Stora	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number	R/P		Currency	peso	peso				
1	25-Jan-02	Forklift	TOYOTA	42-7FG18	L	1		16,885.00	16,885.00	NAVE #1	A	A	
2	28-Jan-02	Seeder disk type	AMSSA	387-5HD	L	1		23,421.53	23,421.53	NAVE #1	B	A	
3	25-Jan-02	Pneumatic seeeder	JAS	LAUFEL.NEUM	L	1		55,200.00	55,200.00	NAVE #1	B	A	
4	25-Jan-02	Boom sprayer	JAS	AG1PEL651	L	1		35,330.00	35,330.00	NAVE #1	B	A	
5	25-Jan-02	Tri-point sprayer	HOWE	000-810040	L	1		32,800.00	32,800.00	NAVE #1	B	A	
6	25-Mar-02	Subsoiler	AMSSA	3/25 TRAC.AGR	L	1		5,677.00	5,677.00	NAVE #1	B	A	
7	22-Mar-02	Spot welding machine	MAC'S	MACS12KVA	L	1		11,493.00	11,493.00	NAVE #1	B	A	
8	28-Feb-02	Concrete mixer	TRIUNFO	502	L	1		10,817.39	10,817.39	NAVE #1	B	A	
9	11-Feb-02	Locker	DISTRIBUIDORA MEXICANAS DE EQUIPOS	40X45X170	L	10		724.89	7,248.90	NAVE #1	A	A	
10	08-Feb-02	Audio equipment	PROAM	SA1200	L	2		8,000.00	16,000.00	NAVE #1	B	A	
11	11-Feb-02	Fire extinguisher	DISTRIBUIDORA MEXICANAS DE EQUIPOS	35KGS	L	10		1,810.00	18,100.00	NAVE #1	C	A	
12	22-Mar-02	Compressor	PREMIER	29-G-01	L	1		2,500.00	2,500.00	NAVE #1	B	A	
13	22-Mar-02	Compressor	AIR-DRAGON	235	L	1		11,559.90	11,559.90	NAVE #1	B	A	
14	22-Mar-02	Tensor	ATD	ATD7494	L	5		232.50	1,162.50	NAVE #1	B	A	

Provision/Procurement/Maintenance of the Equipmen(From Japan: 2001)

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		Item	Manufacture	Model Number	R/P		US$	¥	US$	¥				
1	19-Nov-01	Aluminum bridge	KUBOTA	SBA-740-40-2.0	J	2		115,800.00		231,600.00	NAV E #1	B	A	
2	19-Nov-01	Electric drill w/transformer TB-500	BOSCH	GSR12VE-2FB	J	1		58,000.00		58,000.00	NAV E #1	A	A	
3	19-Nov-01	Caliper	MITSUTOYO	N-30	J	3		12,600.00		37,800.00	NAV E #1	B	A	
4	19-Nov-01	Iron cart	VANLACK	503S	J	1		33,200.00		33,200.00	NAV E #1	A	A	
5	19-Nov-01	Iron cart	VANLACK	301S	J	2		10,400.00		20,800.00	NAV E #1	A	A	
6	19-Nov-01	Glove	DPM	DPM-JM	J	50		750.00		37,500.00	NAV E #1	A	A	
7	19-Nov-01	Infrared radation thermomete	KI-ENSU	IT2-80	J	2		99,800.00		199,600.00	NAV E #1	B	A	
8	19-Nov-01	Degital PH meter w/Normal solution PH7 Y031	HoribaSeisakkujo	B-212	J	1		126,900.00		126,900.00	NAV E #1	B	A	
9	19-Nov-01	Ecletric marker w/cable	NiigataSeiki	AGA	J	1		33,400.00		33,400.00	NAV E #1	B	A	
10	19-Nov-01	Load-belt	G&J	GS50-10	J	10		2,400.00		24,000.00	NAV E #1	B	A	
11	19-Nov-01	Load-belt	G&J	GS50-20	J	10		3,400.00		34,000.00	NAV E #1	B	A	
12	19-Nov-01	Load-belt	G&J	GS50-30	J	10		4,300.00		43,000.00	NAV E #1	B	A	
13	19-Nov-01	Load-belt	G&J	GS50-50	J	10		6,300.00		63,000.00	NAV E #1	B	A	
14	19-Nov-01	Load-belt	G&J	GS100-30	J	10		8,700.00		87,000.00	NAV E #1	B	A	
15	19-Nov-01	Working bench 3000Kg	UnionSteel	TW-1509	J	1		62,100.00		62,100.00	NAV E #1	B	A	
16	19-Nov-01	Crane	NippouKougyou	TF-2	J	1		547,400.00		547,400.00	NAV E #1	A	A	
17	19-Nov-01	Anemometer	NipponaKanomax	6631A	J	1		405,200.00		405,200.00	NAV E #1	B	A	
18	19-Nov-01	Sieve shaker	Teraoka	S-1	J	1		633,700.00		633,700.00	NAV E #1	B	A	
19	19-Nov-01	Cord reel	Hataya	GS50	J	5		7,800.00		39,000.00	NAV E #1	B	A	
20	19-Nov-01	Labo.-working bench	Sankoulrika	BCF-1800DU	J	3		778,400.00		2,335,200.00	NAV E #1	A	A	
21	19-Nov-01	Side table	Sankoulrika	ESJ-1800U	J	10		231,600.00		2,316,000.00	NAV E #1	B	A	
22	19-Nov-01	Side table	Sankoulrika	BSE-1800U	J	4		284,200.00		1,136,800.00	NAV E #1	B	A	
23	19-Nov-01	Labo.-working bench	Sankoulrika	EWG-II-1800U	J	4		224,200.00		896,800.00	NAV E #1	B	A	
24	19-Nov-01	Dgital multimeter	Advantest	R6441B	J	1		89,500.00		89,500.00	NAV E #1	B	A	
25	19-Nov-01	Soil anlyzer	FujiwaraSeisakujo		J	1		420,100.00		420,100.00	NAV E #1	B	A	
26	19-Nov-01	Indicator for strain gauge	KyouwaDengyou	SLW-220PC	J	2		224,600.00		449,200.00	NAV E #1	B	A	
27	19-Nov-01	Universal grinder	YodokawaDenki	YS-2N	J	1		72,300.00		72,300.00	NAV E #1	A	A	
28	19-Nov-01	Tool kit	NiigataSeiki	SK-8	J	5		11,400.00		57,000.00	NAV E #1	A	A	

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		Item	Manufacture	Model Numb	R/P		US$	¥	US$	¥				
1	26-Feb-02	Vibrationmeter	Syowa Sokki	1332A	J	1		132,300.00		132,300.00	NAVE #1	B	A	Mr.Chiba
2	22-Feb-02	Fruits Hardness Tester	Fujihiraindustry	CF375/6/7	J	3		30,000.00		90,000.00	NAVE #1	B	A	Mr.Oshita
3	20-Mar-02	Hard disk drive	TOSHIBA	PAMHD005	J	1		61,290.00		61,290.00	Adm.Office	A	A	Mr.Yamagiwa
4	21-Mar-02	Memory module 64MB	TOSHIBA	Satellite252(	J	1		35,000.00		35,000.00	Adm.Office	A	A	Mr.Yamagiwa
5	22-Mar-02	CD-RW drive	TOSHIBA	PACDR002	J	1		49,000.00		49,000.00	Adm.Office	A	A	Mr.Yamagiwa
6	23-Mar-02	Cable connector	ONO SOKKI	DF-210A	J	3		8,400.00		25,200.00	NAVE #1	A	A	Mr.Yamagiwa
7	24-Mar-02	Conversion board interfa	INTERFACE	PCI-3521	J	2		69,500.00		139,000.00	NAVE #1	A	A	Mr.Yamagiwa
8	25-Mar-02	Connection cables	INTERFACE		J	9		14,822.00		133,400.00	NAVE #1	A	A	Mr.Yamagiwa
9	26-Mar-02	Tonner & others	CANON etc.		J	1		170,380.00		170,380.00	NAVE #1	A	A	Mr.Yamagiwa
10	27-May-02	A/D Converter	ELECTRONICA	ELK3012A	J	1		530,000.00		530,000.00	NAVE #1	B	A	Mr.Takao
11	27-May-02	Winnower	KUMAGAI		J	1		45,800.00		45,800.00	NAVE #1	B	A	Mr.Takao
12	27-May-02	Grain moisture tester	KETT Elect.Lab.	PM-400	J	1		91,400.00		91,400.00	NAVE #1	B	A	Mr.Takao
13	27-May-02	Infrared moisture tester	KETT Elect.Lab.	FD-620	J	1		301,600.00		301,600.00	NAVE #1	B	A	Mr.Takao
14	27-May-02	Grain crusher	KETT Elect.Lab.	TQ-100	J	1		51,200.00		51,200.00	NAVE #1	B	A	Mr.Takao
15	27-May-02	Compact disk and others	Maxell etc.		J	1		212,580.00		212,580.00	NAVE #1	B	A	Mr.Takao
16	04-Dec-02	Load cell	KYOWA	LUH-5TF	J	1		217,000.00		217,000.00	NAVE #1	B	A	Mr.Takao

Provision/Procurement/Maintenance of the Equipme (Adquired in Mexico: 2002)

Note:

R/P:Route of Procurement (J: From Japan,L: Local,E: With Expert)
Frequency of Use (A: Always - B: Often - C: Sometimes)
Condition (A: Good - B: Fair - C: Bad)

¥:JapaneseYen
US$:Doller
$: Peso

No.	Date of Arrival	Description			R/P	Q'ty	Unit Price		S-total		Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Numbe			US$	$	US$	$				
1	25-Mar-03	Grain moisture meter	SEEDBURO	919	L	1	1,077.00		1,077.00		NAVE #1	B	A	
2	05-Mar-03	Drawing desk set	SAME	100X150	L	1		3,623.00		3,623.00	Adm.Office	C	A	
3	26-Mar-03	Anemometer	BEN MEADOWS	110970	L	1	262.00		262.00		NAVE #1	B	A	
4	26-Mar-03	Thermohigrometer	HANNA	93640	L	1	3,091.00		3,091.00		NAVE #1	B	A	
5	25-Feb-03	Degital manometer	TROMIX	PG2000	L	1		6,950.00		6,950.00	NAVE #1	B	A	
6	25-Feb-03	Reduction motor	JIV 10HP	MA-120	L	2		15,500.00		31,000.00	NAVE #1	B	A	
7	25-Feb-03	Reductor	SIEMENS	40025180	L	2		15,000.00		30,000.00	NAVE #1	B	A	
8	25-Feb-03	Reduction motor	JIV 20HP	MA-250	L	2		30,425.00		60,850.00	NAVE #1	B	A	
9	25-Feb-03	Reductor	SIEMENS	40025182	L	2		21,420.00		42,840.00	NAVE #1	B	A	
10	25-Feb-03	Reduction motor	JIV- 40HP	MAPI-450	L	1		45,935.20		45,935.20	NAVE #1	B	A	
11	25-Feb-03	Reductor	SIEMENS	40025185	L	1		41,890.00		41,890.00	NAVE #1	B	A	
12	25-Feb-03	Degital multimeter	FLUKE	179	L	1		3,340.00		3,340.00	NAVE #1	B	A	
13	26-Mar-03	Grain selector	SEEDBURO	112	L	1	9,985.75		9,985.75		NAVE #1	C	A	
14	08-Jan-03	Tractor	VALTRA	BM110	L	1		315,000.00		315,000.00	NAVE #1	A	A	
15	26-Mar-03	Precision scale	ADAMLAB	AAA250L	L	2	1,760.00		3,520.00		NAVE #1	B	A	
16	10-Mar-03	Harrow	AMSSA	753NG	L	1		39,995.00		39,995.00	NAVE #1	B	A	
17	10-Mar-03	Corn sheller	AMSSA	10	L	1		3,480.00		3,480.00	NAVE #1	B	A	
18	10-Mar-03	Corn sheller	AMSSA	11-C	L	1		5,200.00		5,200.00	NAVE #1	B	A	
19	17-Mar-03	Non tallage planter	JUMIL	JM-2090	L	1	6,569.00		6,569.00		NAVE #1	B	A	
20	18-Mar-03	Photocopy machine	CANON	IR-3300	L	1	8,530.00		8,530.00		Adm.Office	A	A	
21	05-Mar-03	Screen	SAME	178X178	L	1		2,000.00		2,000.00	Adm.Office	A	A	
22	05-Mar-03	Video projector	PANASONIC	PT-L720	L	1		45,824.70		45,824.70	Adm.Office	B	A	
23	05-Mar-03	OHP	3M	1880	L	2		5,550.00		11,100.00	Adm.Office	B	A	
24	14-Mar-03	Bean thresher	EL PROGRESO	PR7615	L	1		44,983.00		44,983.00	NAVE #1	B	A	
25	27-Mar-03	Generator	EVANS	8 KVA	L	1		22,199.00		22,199.00	NAVE #1	B	A	

26	19-Mar-02	Electric Motor	MCA.BALDOR	ARMAZON56C	L	1		5,350.00		5,350.00	NAVE #1	B	A	
27	16-Apr-02	Battery charger	SONY(video)	AC-L10B	L	1		1,500.00		1,500.00	Adm.Office	B	A	
28	16-Apr-02	Tripod for Camera	Kodak	60"	L	1		800.00		800.00	Adm.Office	B	A	
29	07-Mar-03	Drinkwater supplyer	Oasis Corporation	BPI1SHS-D1	L	1		3,267.31		3,267.31	Adm.Office	A	A	
30	07-Mar-03	Sofa	P.M.STEELE	207X80X71	L	3		4,845.44		14,536.32	Adm.Office	A	A	
31	07-Mar-03	Partition	P.M.STEELE	168X90	L	8		3,103.56		24,828.48	Adm.Office	A	A	
32	07-Mar-03	Center table	P.M.STEELE	120X60X45	L	2		1,972.09		3,944.18	Adm.Office	A	A	
33	23-Apr-03	Office desk	OFIMAX	180x80x75	L	1		3,328.00		3,328.00	Adm.Office	A	A	
34	23-Apr-03	Lateral table	OFIMAX	100x40x75	L	1		1,242.00		1,242.00	Adm.Office	A	A	
35	23-Apr-03	Book shelf w/drawer	OFIMAX	180x40x195	L	1		5,634.00		5,634.00	Adm.Office	A	A	
36	23-Apr-03	Wooden cabinet(4drawe	OFIMAX	96x60x71	L	1		3,280.00		3,280.00	Adm.Office	A	A	
37	25-Apr-03	U.P.S. 400KVA	ISB	MicroSR400		2		1,800.00		3,600.00		A	A	
		BOOKS										B	A	
38	14-Dec-02	[2003 Nougyu kikai nenukan]	Shin Nourinsha		J	1		¥13,500.00		¥13,500.00		B	A	
39	09-Jun-03	Book [koseikikan shikenjo no ISO]			J	1		¥30,230.00		¥30,230.00		B	A	
40	09-Jun-03	Computer soft	Microsoft	Acrobat 5.0	J	1		¥29,725.00		¥29,725.00		B	A	
41	07-May-03	Aireacondicionado	John Deere		L	1		164.95		164.95		B	A	
42	07-May-03	Sistema electrico	John Deere		L	1		379.00		379.00		B	A	
43	07-May-03	Fos sellos y baleros	John Deere		L	1		60.00		60.00		B	A	
44	07-May-03	Fos de motores	John Deere		L	1		153.00		153.00		B	A	
45	07-May-03	IBW combustible, lubric	John Deere		L	1		90.00		90.00		B	A	
46	07-May-03	Tornilleria	John Deere		L	1		60.00		60.00		B	A	
47	07-May-03	Fos fibra de vidrio	John Deere		L	1		105.00		105.00		B	A	
48	07-May-03	Fos EQ.D/segado y roci	John Deere		L	1		60.00		60.00		B	A	
49	07-May-03	Transmisiones Esp.	John Deere		L	1		276.00		276.00		B	A	
50	07-May-03	Fos Herramientas de tall	John Deere		L	1		60.00		60.00		B	A	
51	07-May-03	Fos soldadura	John Deere		L	1		164.00		164.00		B	A	
52	07-May-03	Recoleccion con cosech	John Deere		L	1		223.00		223.00		B	A	
53	07-May-03	Adomon. De Maquinari	John Deere		L	1		256.00		256.00		B	A	
54	07-May-03	Sierra	John Deere		L	1		313.00		313.00		B	A	
55	07-May-03	Tractores(Func.de Maq.	John Deere		L	1		173.00		173.00		B	A	

Note:

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Frequency of Use (A: Always - B: Often - C: Sometimes)
Condition (A: Good - B: Fair - C: Bad)

¥:JapanseYen
US$:Doller
$: Peso

No.	Date of Arrival	Description				Q'ty	Unit Price		S-total		Place of Storage	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Numbe	R/P		US$	¥	US$	¥				
1		Load cell	KYOWA Co.,	LUH2TF	J	5		166,000.00		830,000.00				
		Accessory Ball joint		TU-18		5		9,900.00		49,500.00				
2	20-Jan-03	Load cell	KYOWA CO.,	LUH-5TF	J	5		179,700.00		898,500.00	NAVE #1	B	A	
	20-Jan-03	Accessory Ball joint	KYOWA CO.,	TU-26		5		29,800.00		149,000.00	NAVE #1	B	A	
3	20-Jan-03	Load cell	KYOWA CO.,	LUH-10TF	J	2		232,000.00		464,000.00	NAVE #1	B	A	
	20-Jan-03	Accessory Ball joint	KYOWA CO.,	TU-36		2		63,000.00		126,000.00	NAVE #1	B	A	
4	20-Jan-03	Load cell	KYOWA CO.,	LUH-1TF	J	3		166,000.00		498,000.00	NAVE #1	B	A	
	20-Jan-03	Accessory Ball joint	KYOWA CO.,	TU-14		3		3,400.00		10,200.00	NAVE #1	B	A	
5	20-Jan-03	Load cell	KYOWA CO.,	LUH-100KF	J	2		166,000.00		332,000.00	NAVE #1	B	A	
	20-Jan-03	Accessory Ball joint	KYOWA CO.,	TU-12		2		2,900.00		5,800.00	NAVE #1	B	A	
6	20-Jan-03	Engine revolution gauge	ONO SOKKI CO.	GE-1200	J	1		73,000.00		73,000.00	NAVE #1	B	A	
		Accessory D.Engine rotation detector	ONO SOKKI CO.	CP-044		1		34,000.00		34,000.00	NAVE #1	B	A	
7	20-Jan-03	Engine revolution gauge	ONO SOKKI CO.	SE-1520	J	1		106,000.00		106,000.00	NAVE #1	B	A	
		Accessory D.Engine rotation detector	ONO SOKKI CO.	IP292		1		10,000.00		10,000.00	NAVE #1	B	A	
8	20-Jan-03	Sound level meter	ONO SOKKI CO.	LA-1210	J	1		124,000.00		124,000.00	NAVE #1	B	A	
9	20-Jan-03	Walky talky with	KENWOOD	UBZ-LH20Y	J	6		9,800.00		58,800.00	NAVE #1	B	A	
		Microphone,	KENWOOD	EMC-3	J	6		2,600.00		15,600.00	NAVE #1		A	
		battery pack,	KENWOOD	UPB-1	J	6		1,900.00		11,400.00	NAVE #1		A	
		charger,	KENWOOD	UBC-4	J	6		1,700.00		10,200.00	NAVE #1		A	
10	20-Jan-03	Portable generator, with spare parts,	HONDA	EU-10i	J	2		120,000.00		240,000.00	NAVE #1	B	A	
		Spare parts	HONDA		J					24,000.00	NAVE #1			
		TOTAL								4,070,000.00				

(Accompanied with expert: 2002)

Note:

R/P:Route of Procurement (J: From Japan,L: Local,E: With Expert) ¥:JapaneseYen
Frequency of Use (A: Always - B: Often - C: Sometimes) US$:Dollar
Condition (A: Good - B: Fair - C: Bad) $: Peso

No.	Date of Arrival	Description			R/P	Q'ty	Unit Price		S-total		Place of Storag	Frequency of Use	Condition	Remarks
		Item	Manufacture	Model Number			US$	¥	US$	¥				
1	15-Apr-03	LCD Projector	SONY	VPL-PX11	J	1		610,000.00		610,000.00	Adm.Office	B	A	Takao
2	15-Apr-03	Carrying case	SONY	VLC-15	J	1		13,200.00		13,200.00	Adm.Office	B	A	Takao
3	15-Apr-03	Color scanner	EPSON	GT-9800F	J	1		45,800.00		45,800.00	Adm.Office	B	A	Takao
4	15-Apr-03	USB Cable	EPSON		J	1		1,300.00		1,300.00	Adm.Office	B	A	Takao
5	15-Apr-03	Degital video camera	SONY	DCR-TRV50	J	1		138,000.00		138,000.00	Adm.Office	B	A	Takao
6	15-Apr-03	Accessory kit	SONY	ACCKIT-QMM5	J	1		25,200.00		25,200.00	Adm.Office	B	A	Takao
7	15-Apr-03	Battery pack	SONY	MP-FM50	J	1		6,400.00		6,400.00	Adm.Office	B	A	Takao
8	15-Apr-03	Carrying case	SONY		J	1		6,800.00		6,800.00	Adm.Office	B	A	Takao
9	15-Apr-03	DV tapes	SONY	DVM60	J	30		450.00		13,500.00	Adm.Office	B	A	Takao
10	15-Apr-03	Portable MD recorder	PANASONIC	SJ-MR230	J	1		32,000.00		32,000.00	Adm.Office	B	A	Takao
11	15-Apr-03	Microphone	PANASONIC	RP-VC200	J	1		1,800.00		1,800.00	Adm.Office	B	A	Takao
12	15-Apr-03	VHS Video tape recorde	PANASONIC	AG-W3	J	1		280,000.00		280,000.00	Adm.Office	B	A	Takao

Annex 4 Allocated Budget by Japanese side

(Unit: Thousand Yen)

Fiscal Year	1998	1999	2000	2001	2002	2003	Total
Provision of Equipment and materials	8,609	76,136	24,182	16,995	18,505	5,000	149,427
Breakdown (Japanese Yen)	4,202,106	44,841,549	21,415,084	14,127,091	5,466,300	5,000,000	95,052,130
(Peso)	367,263	2,323,384	190,037	44,815	756,210		3,681,709
(US dollar)		28,445	4,050	19,418	33,035		84,948
Promotion for Local Adaptation (thousand Yen)		2,000	2,060	2,000	4,350	3,150	13,560
Regional Technical Cooperation (thousand Yen)						5,790	5,790
Construction of Project Infrastructure (thousand Yen)			40,000				40,000
Administration (General Affairs) (thousand Yen)		6,000	6,000	5,000	6,220	5,000	28,220
Total (thousand Yen)	8,609	84,136	72,242	23,995	29,075	18,940	236,997

Annex 5 Assignment of Counterpart

No.	Name of Counterpart	Field	Present Post	Period of Assignment		Period of Training		1998	1999	2000	2001	2002	2003	Training in Japan		
			Post at assignment time	From	To	From	To							Year	Name of Training Course	Duration
1	Mr. José L. Plaza Sánchez	Project Management				22-Aug-99	04-Sept.-99									
			G. Director, DGA	Mar-99	May-01									1999	Agr. Mechanization Plan and Test and Evaluation System	14 days
2	Mr. Alejandro Trueba C.	Project management	Government Staff, State of Mexico			05-Nov.-01	15-Nov.-01									
			G. Director, DGFA	Jun-01	Dec-01									2001	Agr. Mechanization Plan and Test and Evaluation System	11 days
3	Mr. Arturo Garza Carranza	Project management	G. Director, DGFA													
				Jul-02	Jul-03									2003, Cancelled		0
4	Mr. Ramón Jimenéz Regalado	Project Operation	Director, CENEMA			18-Mar.-00	17-Jun.-00									
				Mar-99	Today									1999	Group Training of Test and Evaluation of Agr. Machinery	92 days
5	Mr. Marco Antonio Caballero	Coordination	Sub Director, DGVDT			18-Mar.-00	17-Apr.-00									
				Mar-99	Jul-01									1999	Test and Evaluation of Agr. Machinery	31days
6	Mr. Francisco Sánchez V.	Coordination	Sub Director, DGFA			19-Sept.-01	12-Oct.-01									
			Chief, DGA	Mar-99	Today									2001	Agr. Mechanization Plan and Test and Evaluation System	24 days
7	Mr. Gabriela L. Hoyos F.	Evaluation system	Staff, CENEMA			15-Mar.-01	14-Apr.-01									
			Staff, CENEMA	Mar-99	Today									2000	Agr. Mechanization Plan and Test and Evaluation System	31 days
8	Mr. Salvador de la Cruz	Evaluation system	Secretary de Finance													
			Director, DGA	Mar-99	May-01											
9	Mr. Alejandro Sánchez	Evaluation system	Director, DGFA													
				May-01	Jul-03									2003, Cancelled		0
10	Mr. Luis Mario Ochoa F.	Evaluation system														
			G. Director , DGVDT	Jul-01	Mar-02											
11	Alejándro Méndez Pillado	Evaluation system	DGFA													
				Jun-01	Today											
12	Jonathan Martínez Cortéz	Evaluation system	DGFA													
			DGVDT	Mar-99	Apr-01											
13	Leticia Sánchez Hernández	Evaluation system	DGFA													
				Mar-99	Apr-01											
14	Mr. Ignacio Arevalo M.	Test & Evaluation														
			Staff, CENEMA	Mar-99	Jan-01											
15	Mr. Juan G. Ochoa B.	Test & Evaluation	Staff, CENEMA			19-Mar.-01	24-Jun.-01									
			Staff, CENEMA	Jan-01	Today									2000	Group Training of Test and Evaluation of Agr. Machinery	98 days

No.	Name of Counterpart	Field	Present Post	Period of Assignment		Period of Training		1998	1999	2000	2001	2002	2003	Training in Japan		
			Post at assignment time	From	To	From	To							Year	Name of Training Course	Duration
16	Mr. Marco A. Audelo B.	Test & Evaluation	Staff, CENEMA			25-Mar.-03	22-Jun.-03							2002	Group Training of Test and Evaluation of Agr. Machinery	90 days
			Staff, CENEMA	Jul-02	Today											
17	Mr. Adrián Aragón R.	Test & Evaluation														
				Mar-99	Oct-02											
18	Mr. Julio Torres S.	Test & Evaluation	Staff, CENEMA			19-Mar.-02	21-Jun.-02							2001	Group Training of Test and Evaluation of Agr. Machinery	95 days
			Staff, CENEMA	Jan-01	Today											
19	Mr. Miguel Alborán M.	Test & Evaluation	Staff, CENEMA													
			Staff, CENEMA	Apr-01	Today											
20	Andrés Maldonado Flores	Administration	Staff, CENEMA													
			Staff, CEVAMEX	Feb-03	Today											
21	Gilberto Samperio	Administration	Accountant, CENEMA													
			Accountant, CENEMA	Sep-02	Today											
22	Guillermo Anídez R.	Administration														
			Driver	Aug-99	Sep-00											
23	Arturo Anzaldo Rodríguez	Administration														
			Driver	Jan-01	Aug-02											
24	Víctor Hernández S.	Administration	Driver													
				Feb-01	Today											
25	Yolanda Guajardo Martínez	Administration														
			Typist	Apr-99	Aug-99											
26	Alejandra Romero	Administration														
			Typist	Sep-99	Aug-01											
27	Martha Clara Sánchez	Administration														
			Typist	Jan-02	Apr-02											
28	Irene Magos Benavídez	Administration	Typist													
				Jul-02	Today											
29	Rosalba Martínez	Administration	Typist													
				Jan-01	Today											
30	Jaime López	Test & Evaluation	Technical Assistant													
				Mar-00	Today											
31	Angel Acosta	Test & Evaluation	Technical Assistant													
				Mar-00	Today											

No.	Name of Counterpart	Field	Present Post	Period of Assignment		Period of Training		1998	1999	2000	2001	2002	2003	Training in Japan		
			Post at assignment time	From	To	From	To							Year	Name of Training Course	Duration
32	Jesús Campos	Test & Evaluation	Technical Assistant													
				Mar-00	Today											
33	Juán Flores E.	Test & Evaluation														
			Technical Assistant	Mar-00	May-01											
34	Geraldo Espinoza	Test & Evaluation	Technical Assistant													
				Jun-01	Today											
35	Mr. Francisco Gurria Tervino	Project management														
			Vice Minister, SAGARPA	Mar-99	Dec-00											
36	Mr. Victor Villalobos	Project management														
			Vice Minister, SAGARPA	Jan-01	Jan-02											
37	Mr. Francisco López Tostado	Project management														
			Vice Minister, SAGARPA	Feb-02	Today									2002, Cancelled		0
38	Mr. Jorge Kondo López	Project management														
			G. Manager, INIFAP	Mar-99	Feb-01											
39	Mr. Jesús Moncada dela Fuente	Project management	G. Manager, INIFAP			30-Aug.-02	07-Sept.-02									
			G. Manager, INIFAP	Mar-01	Today									2002	Agr. Mechanization Plan and Test and Evaluation System	8 days
40	Mr. David Moreno Rico	Project Operation	Director G., INIFAP			15-Oct.-00	02-Nov.-00									
			Director G., INIFAP	Mar-00	Today									2000	Agr. Mechanization Plan and Test and Evaluation System	19 days
41	Mr. Sebastián Acosta	Project operation	Director G., INIFAP			20-Feb.-03	07-Mar.-03							2002	Agr. Mechanization Plan and Test and Evaluation System	16 days
			G. Director, INIFAP	Jul-02	Today											
42	Mr. René Camacho Castro	Project operation	Director, INIFAP			20-Feb.-03	07-Mar.-03							2002	Agr. Mechanization Plan and Test and Evaluation System	16 days
			Director, INIFAP	Sep-02	Today											
43	Mr. Roberto Chacón Martínez	Evaluation system	Director, Investigation Center, INIFAP			02-Oct.-00	24-Oct.-00									
				Jun-99	May-01									2000	Test and Evaluation System	23 days
44	Mr. Eduardo Benítez Paulin	Project	G. Director													
		Management	DGVDT	Aug-03	Today											0
45	Mr. Joaquín Castro	Evaluation system	Director													
			DGVDT	Aug-03	Today											0

Annex 6 List of Facilities and Equipment provided by Mexican side

Fiscal Year	Facilities and land	Area (m²)	Period of use	Remarks
1999	Land (Test field)	16,000	From March 1999 to February 2004	
	Testing Laboratory No.1	1,377	From March 1999 to February 2004	Renovated using expenditure for Project Infrastructure by Japan
	Testing Laboratory No.2	473	From March 1999 to February 2004	Renovated using expenditure for Project Infrastructure by Japan
	Office at DFGA	40	From March 1999 to May 2003	
2001	Land (for training and office)	1,156	From April 2001 to February 2004	Building constructed using expenditure for Project Infrastructure by Japan
	Land (Testing Laboratory No.3)	425	From April 2001 to February 2004	Building constructed using expenditure for Project Infrastructure by Japan
	Land (house for crop)	59	From April 2001 to February 2004	Building constructed using expenditure for Project Infrastructure by Japan
	Equipment: none			

Annex 7 Allocated Budget by Mexican side

Unit: Thousand Peso

No.	Description		FY.1999	FY.2000	FY.2001	FY.2002	FY.2003	Total
1	Tax payment (IVA)	Received Budget	0	0	38	75	110	223
		Expenditure	0		38	75	95	208
2	Custom Fee for Imported Equipment	Received Budget	0	0	145	130	90	365
		Expenditure	0	0	145	130	45	320
3	Building construction	Received Budget	457	400	190	0	*0*	1,047
		Expenditure	457	400	190	0	*0*	1,047
4	Furniture	Received Budget	0	0	0	200	*0*	200
		Expenditure	0	0	0	200	*0*	200
5	Running costs	Received Budget	250	300	300	400	650	1,900
		Expenditure	250	300	300	400	250	1,500
6	Tractor Laboratory Construction	Received Budget	0	0	0	0	20,000	20,000
		Expenditure	0	0	0	0	20,000	20,000
7	OC Establishment Cost	Received Budget	0	0	0	0	2,200	2,200
		Expenditure	0	0	0	0	2,200	2,200
		Total Budgetary Plan	707	700	673	805	23,050	25,935
		Total Received Budget	707	700	673	805	23,050	25,935
		Total Expenditure	707	700	673	805	390	3,275
		Balance of Fiscal Year	0	0	0	0	22,660	22,660

Annex 8 Progress of Activities

Activity Plan According to TSI Details					Project Activity Situation		Final Objective	Achievement Status (%)
Item			Implementation Schedule (Bar Chart)	Institution/person responsible for the implementation of the project	Activities' Achievements	Activities' Results		
Main Item	Middle Item	Sub Item	1 2 3 4 5					
I Survey on the actual conditions of the production, marketing and adoption of agricultural machinery and selection of the types of machinery to be dealt in the project.	1.Baseline survey	1)Regionalization of the country		Sanchez, Panchito, Gaby, Noguchi	• Selection of main 10 crops • Understanding of the present condition of the main crops in 8 regions • Understanding of the production form by regions • Identification of number of farmers per agricultural surface • Grasp the number of spread tractors	• Main crops cultivation and/or situation of main crops by regions was identified. • Extension of tractor and animal usage conditions were identified • Number of farmers per region, average rice culture surface, average main crops surface and access conditions to markets were defined. • It was defined that the Plan for agricultural mechanization and reinforcement for rural development are the main activities in the politics for agricultural mechanization.	• The machine to be dealt by the project is defined. • Potentiality of agricultural production, sociofeconomical characteristics of farmers and current politics for mechanization are known.	100%
		2)Characterization of objectives			• Production scale of farmers, clarification of the actual access to products market (8 regions)	• Acquisition of tractors by concerning activities, support for repairs and/or situation of acquisition of agricultural equipment (operating machines and other) was made clear.		100%
		3)Mecanization politics			• Understanding of the development plan concerning agricultural mechanization in ALIANZA Program	Reports: 1.Baseline Survey Report(2001/6) 2.Informe de visitas a cedes de CENAPEMEA, productores agricolas y fabricantes de maquinaria agricola (oct. 1999)		100%
	2.Selection of machinery	1)Actual agricultural production		Sanchez, Panchito, Gaby, Ignacion, Ramon, Noguchi, Yagi	• Elucidate the 10 main crops and/or selection of main 25 crops	• Basic Crops, vegetables, forage and ornamental plants production situation was defined. Reports: Same as above	• Type and number of machinery used for main cultivation and for main states are identified. Finally, type of machinery to be dealt in the project is defined.	100%
		2)Comercialization of agricultural machinery			• Identify the number of tractors manufactured and sold by brand • Identify number of operating machine sold by brand • Clarify the financial aids for purchasing agricultural machinery by ALIANZA Plan	• Main models of tractors by horsepower and manufacturers was defined. • Number of sold agricultural machines (operating machinery) and sales by main manufacturers was defined. • The financing support for the purchase and repair of tractors by the agricultural mechanization plan of Regional beneficiaries of ALIANZA Plan was made clear.		100%
		3)Field survey			• Hearing survey among farmers, agricultural machinery manufacturers and dealers • Survey of real usage of agricultural machinery in main crop cultivation regions	• Through the survey of 13 agricultural machines dealers and manufacturers, the situation of quality control was made clear. • The situation of use of agricultural machines in the 5 states where main crops are cultivated was made clear.		100%
		4)Selection of machinery			• Finished the selection and testing of machinery for evaluation	• The machine for making the standards was selected. Report: Same as above		100%
	3.Detailed survey for selected machinery	1)Technical specification survey of selected machinery		Adrian, Ignacio, Juan, Julio, Miguel, Marco, Ramon, Kobayeshi, Itoh, Shimizu, Kashimoto	• Database integration of technical specifications of machinery types and/or lists of national manufacturers of involved machinery	• Main machines manufacturers brochures were collected.	• Technical specifications of selected machinery are known.	100%
Forecast for sustainability	It is expected that in the future, the same contents of the Baseline survey, selection of machinery and detailed investigation could be done independently.							

Activity Plan According to TSI Details					Project Activity Situation		Final Objective	Achievement Status (%)
Item			Implementation Schedule (Bar Chart)	Institution/person responsible for the implementation of the project	Activities' Achievements	Activities' Results		
Main Item	Middle Item	Sub Item	1 2 3 4 5					
Ⅱ .Improvement of techniques for evaluation tests of agricultural machinery	1.Selection of how to test and test items.	1)Study on evaluation methods and investigation in field.		Adrian, Ignacio, Juan, Julio, Miguel, Marco, Ramon, Kobayashi, Itoh, Shimizu, Kashimoto	・Of all selected machines (except tractors), a comparison table between test methods of RHAM, FAO, Japan, Cuba, Brazil and Canada was made.	・Main survey items are crop conditions, soil conditions, accuracy, energy savings, structure and duration, manageability and security among others.	・Techniques for evaluation test are improved. ・Test method and items to be evaluated in the test are known for each main crop.	100
		2)Analysis of cultivation methods of main crops.			・Standard technical packages of the main 10 crops in 4 regions were gathered. ・A table for fertilization and cultivation for corn, frijol been was made in Spanish. ・Basic quality survey of corn and frijol bean in collection point.	・Standard plowing forms used in for the main crops in production regions was understood.		100
		3)Determination of evaluation method.			・All selected machinery (except tractors) were finished	・Agreed main test items are: Specifications, test conditions (crops, soils, etc.), field performance test (operation accuracy, operation test, etc.), requirement power test, security confirmation tests, continuous operation tests, and investigation after disassembling..		100
	2.Improvement of test techniques	1)Analysis of test manual			・All selected machinery (except tractors) were finished	・Mechanical seeder, ploughs, and harrows are NMX constructing finished. Precision seeder, degrainer and thresher are currently being discussed in COTENNMAEA.	・Existing test manuals are analyzed and test techniques are improved	100
		2)Improvement of test techniques			・All selected machinery (except tractors) were finished			100
	3.Improvement of how to test	1)Analysis of test method			・All selected machinery (except tractors) were finished		・Test methods are improved	100
		2)Improvement of test method			・Finished mechanical seeders, ploughs, harrows, tractors (PTO、traction、hydraulic lift、ROPS). Precision seeder, corn sheller, thresher are now being discussed in the COTENNMAEA	Results ・Evaluation method for mechanical seeder ・Evaluation method for power sprayer ・Evaluation method for disk plough ・Evaluation method for disk harrows ・Evaluation method for Tractors (PTO) ・Evaluation method for Tractors (traction) ・Evaluation method for Tractors (hydraulic lift) ・Evaluation method for Tractors (ROPS)		90
	4.Making a test manual	1)Making test manual			・All selected machinery (except tractors) were finished.	Results ・Evaluation test manual for mechanical seeder ・Evaluation test manual for power sprayer ・Evaluation test manual for disk plough ・Evaluation test manual for disk harrow ・Evaluation test manual for precision seeder ・Evaluation test manual for corn sheller ・Evaluation test manual for bean thresher	・Test manuals are made.	100
Forecast for sustainability	For the testing activities of part of tractors (PTO、hitch、oil pressure and ROPS), it is necessary to do technology transfer under the direction and advise of the experts.							

Activity Plan According to TSI Details										Project Activity Situation		Final Objective	Achievement Status (%)
Item			Implementation Schedule (Bar Chart)						Institution/person responsible for the implementation of the project	Activities' Achievements	Activities' Results		
Main Item	Middle Item	Sub Item	1	2	3	4	5						
Ⅲ.Drafting evaluation standards for agricultural machinery	1.Examination of draft of agricultural machinery test standard	1)Analysis of test standard							Sanchez, Gaby, Noguchi, Matsui	• Finished the elaboration of planned standards.	Results •Evaluation method of mechanical seeder •Evaluation method for power sprayer •Evaluation method for plough •Evaluation method for harrows •Evaluation method for tractors (PTO) •Evaluation method for tractors (traction) •Evaluation method for tractors (hydraulic lift) •Evaluation method for tractors (ROPS)	•Evaluation standards are drafted •Existing test standards are analyzed and test standards are drafted	100%
		2)Making test standards								•Finished mechanical seeders, ploughs, harrows, tractors (PTO、traction、hydraulic lift、ROPS). Precision seeder, corn sheller, thresher are now being discussed in the COTENNMAEA			90%
	2.Examination of how to standardize the machinery	1)Study on the procedure for standardization							Sanchez, Gaby, Noguchi, Matsui	• The process for making NMX and/or NOM based on LFMN was understood.	•The national Committee of Standardization (COTENNMAEA) to standardize all agricultural machinery in August 2000 was established •A sub-committee for operation machines and/or tractors sub-committee was established, and for the subsequent standards making plan, a deliberations is being held.	•Required procedures for the standardization are known and the proposals for standardization are made.	100%
		2)Making proposal of standard								60			72%
	3.Examination of how to notify the results	1)Making procedure to notify results of evaluation standard							Sanchez, Gaby, Noguchi, Matsui	• The notification of the standards through official gazette and Ministry of Economy webpage was confirmed.	• The notification methods for test methods and standards, test results and results of evaluations of test was confirmed.	•Procedure to notify evaluation standard, results of evaluation and standardization are established and results mentioned above are notified properly.	55%
		2)Making procedure to notify results of evaluation tests								• The public information of CENEMA to manufacturers, notification method through the Center official notification was confirmed. • Making of the web page of CENEMA is examined.			30%
Forecast for sustainability	The process from the beginning of investigation of NMX to enforcement is confirmed that it can be done.												

Activity Plan According to TSI Details									Project Activity Situation		Final Objective	Achievement Status (%)
Item			Implementation Schedule (Bar Chart)					Institution/person responsible for the implementation of the project	Activities' Achievements	Activities' Results		
Main Item	Middle Item	Sub Item	1	2	3	4	5					
Ⅳ.Fostering experts of evaluation test	1.Making of study curriculum	1)Definition of theme and detailed study curriculum						Ramon, Yagi, Takao	• Training Items 1.Standards and test methods for mechanical seeder. 2.Standards and test methods for power sprayer 3.Standards and test methods for disk ploughs 4.Standards and test methods for disk harrows 5.Standards and test methods for precision seeder 6.Standards and test methods for corn sheller 7.Standards and test methods for bean thresher	Training for mechanical seeder, power sprayer, plough and harrow were made. For precision seeder is being prepared for September and for corn sheller and thresher for November.	• Experts for evaluation tests are fostered. • Training curriculums are defined	100
	2.Making of learning materials	1)Making of teaching materials							• Teaching materials for mechanical seeder, disk plough, disk harrows, precision seeder are finished. The corn sheller and thresher's are being prepared in forward to November training.		• Teaching materials are made.	80
	3.Training	1)Organization or workshops, training course and seminar.							• Training Items 1.Standards and test methods for mechanical seeder. 2.Standards and test methods for power sprayer 3.Standards and test methods for disk ploughs 4.Standards and test methods for disk harrows 5.Standards and test methods for precision seeder 6.Standards and test methods for corn sheller 7.Standards and test methods for bean thresher		• Training courses, seminar and workshop are realized.	80
	4.Follow up of participants	1)Integration of monitoring network							• Confirmation of didactic materials and structure for testing were confirmed in Antonio Narro University, Chapingo University, Nuevo Leon University, Guanajuato University, and INIFAP Cotastra research center.		• Training effects and monitoring systems are established to provide technical guidance to participants.	55
		2)Technical guidance for participants							Technical guidance was made in Antonio Narro University and Chapingo University.			20
Forecast for sustainability	It is thought that making of training curriculum to follow up of participants can be made autonomously.											

Activity Plan According to TSI Details					Project Activity Situation		Final Objective	Achievement Status (%)
Item			Implementation Schedule (Bar Chart)	Institution/person responsible for the implementation of the project	Activities' Achievements	Activities' Results		
Main Item	Middle Item	Sub Item	1 2 3 4 5					
V .Intensifying the evaluation test system	1.Reconstruction and consolidation of evaluation system	1)Study on institutional conditions for the execution of evaluation test		Sanchez Pancho Gaby Ignacio Noguchi Matsui Kobayashi Shimizu Itoh Kashimoto	•Legal conditions for extension and certification was investigated. •Legal and human resources items needed for INIFAP to become a certification entity was studied. •ISO certification readiness and conditions of 2 universities planned to evaluate mechanical seeder was investigated	•It was agreed that INIFAP will become the certication body instead of the CENAPEMEA which is in dormant condition. •Sagarpa solicited to the Ministry of Finance the budget of 2,200,000 pesos to establish the testing structure. •Universities that are capable of executing the tests of mechanical seeders selection were delimited.	•Evaluation test system is strengthened. •Evaluation test system is strengthened through seminars.	75%
		2)Study on procedures for the execution of evaluation test.			•Cost calculation needed for survey was made. • A profit calculation regarding autonomous operation of testing system was made. •The activity plan for execution of test and evaluation was made.	•Draft calculation of testing costs and profit system was presented. •Draft proposal of testing procedure was made.		50%
	2.Orientation for the operation of evaluation system	1)Orientation for the operation of evaluation system			•Guidance and remarks were made for the construction of test and evaluation systems to CENAPEMEA. •Guidance and remarks were made for the construction of test and evaluation systems to INIFAP • Present situation survey of the 5 proposed universities for the execution of evaluations was made.	•fundamental issues of quality systems and ISO 65 guides were explained and understood by INIFAP and proposed Universities involved people. •The situation for actual survey of the testing labs. (five universities) was grasped.		25%
	3.Analyze how to diffuse results of evaluation test	1)Analyze how to foster test results to manufacturers			• It is planned that evaluation approval will be a condition to get subsidy for purchasing machinery in the ALIANZA Plan	•it was decided that winning approval of test will be a condition to get subsidy for purchasing machinery in the ALIANZA Plan will be added, in an agreement with SAGARPA.		75%
		2)Analyze how to foster test results to farmers			• It was decided that evaluation approval will be a condition to get subsidy for purchasing machinery in the ALIANZA Plan			75%
	4.Diffusion and extension of evaluation system (Note: According to PO. On the PDM, it is written as enlightening and extension of test results)	1)Diffusion of the concept of NMX and evaluation test system			•We had interviews regarding CENEMA's activities for various public and private magazines. •A presentation video of CENEMA's activities was made. •The possibility of official notification through radio was considered.	•Articles of CENEMA's presentation were printed in 2 magazines.		50%
		2)Diffusion and extension of certification system			- Legal conditions education for evaluation systems was made for INIFAP and planned entities(universities).	•Quality systems and ISO 65 guides fundamental issues were explained and understood by INIFAP and proposed Universities involved people.		50%
		3)Planning and organization of seminars and diffusion events			•CENEMA hosted a Forum regarding standardization of agricultural machinery during the participation in the Mexican Academy of Agriculture (9th to 11th, 13th). •CENEMA made a presentation of it's activities (years 2000 to 2002) to the Latin American Agricultural Engineering Association. • CENEMA held a seminar with short term experts and operation guidance study team members •CENEMA hosted the Agricultural Machinery Expo (2001 and 2002) • Currently holding a seminar concerning certification systems by contracted consultants. • It was defined that CENEMA will host an international Seminar in February 2004.	• Strengthening vinculation with the people involved with the proposed 5 Universities for testing labs.. •Publicity of the Project activity and strengthening vinculation with agricultural machine makers and agricultural machine researchers.		75%
	5.Monitoring of test result	1)Monitoring to machinery makers			•List of manufacturers was made. • A channel with manufacturers were established through borrowing machines for making standards.	•The channel with agricultural machine makers and farmers is partially established. •Regarding to the farmers, it's necessary to delimit the farmers to be monitored.	•Results of evaluation test are monitored to machinery makers and farmers	10%
		2)Monitoring to farmers			•A channel with farmers was established through farmers survey.			10%
Forecast for sustainability	The final evaluation system is not yet established, and in case that it couldn't be established by the end of the project, it is supposed that further self development will be difficult.							

Annex 9 Project Design Matrix

(1) PDM Original

Project Name: The Agricultural Machinery Test and Evaluation Project
Cooperation term: March 1, 1999 to February 29, 2004

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal The Overall Goal is that agricultural machinery with appropriate performance and safety for small and middle farmers are developed and extended	1. Increased number of sold of certificated agricultural machinery 2. Decreased number of claims from farmers about machinery 3. Counting new machinery registered	1- Manufacturer survey 2. Questionnaire for farmers 3. Manufacturer survey	A. to continue the cooperative plan for farmers
Project Purpose The purpose of the Project is to strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation tests.	1. No. of manufacturers which took a license examination 2. No. of machinery which took a license examination 3. No. of training course and participation	1. Test report 2. Test report 3. Project report	A. to smooth test duties of CENAPEMEA B. maintenance of CENAPEMEA facilities
Outputs 1. The types of machines to be dealt with in the Project are selected on the results of preliminary surveys. 2. Techniques for evaluation tests are improved. 3. Evaluation standards are drafted. 4. Experts for evaluation tests are fostered. 5. Evaluation test system is strengthened.	1. 1st year's survey report 2. Manual of how to test 3. No. of standardized machinery 4. No. of participants in training activities 5-1. Publicity to administrator about test system 5-2. Publicity to farmers about standardization 5-3. Publicity to manufacturers about standardization	1. Project report 2. Project report 3. Project report 4. Project report 5-1. Survey for officials 5-2. Survey for farmers 5-3. Survey for manufacturers	A. maintenance of CENAPEMEA test equipment B. to express opinions of the standardization national committee C. official publication of standard and evaluation procedure
Activities 1. Surveys on the actual condition of the production, marketing and adoption of agricultural machinery and selection of the types of machinery to be dealt with in the Project. 1-1. Baseline survey 1-2. Selection of which machinery would be tested 1-3. Detailed survey for selected machinery 2. Improvement of techniques for evaluation tests of agricultural machinery 2-1. Selection of how to test and test items 2-2. Improvement of test techniques 2-3. Improvement of how to test 2-4. Making a testing manual 3. Drafting evaluation standards for agricultural machinery 3-1. Examination of draft agricultural machinery test standards 3-2. Examination of how to standardize the machinery 3-3. Examination of how to notify the results 4. Fostering experts of evaluation tests 4-1. Making study curriculums 4-2. Making teaching materials 4-3. Training 4-4. Following up participants 5. Intensify the evaluation test system 5-1. Planning and implementation of seminars concerned with evaluation system 5-2. Monitoring of tests results	**Inputs** **Japanese side** Dispatch of long-term experts Chief Advisor Coordinator Evaluation test systems Evaluation tests (in charge of performance) Evaluation tests (in charge of durability) Short-term experts some experts/year Provision of equipment Acceptance of counterpart training in Japan some counterpart /year **Mexican side** Position of counterpart Project Manager (Director of CENEMA) Counterpart for each field (2 counterparts for each field) Staff necessary for the operation of the Project Offer land and facilities Facilities Offices Local costs management / operation cost		A. enough chance to study for CENAPEMEA members (experts, administrator, the person in charge of diffusion, manufacturers of agricultural machinery, etc.) **Pre-Condition** A. function CENAPEMEA and great cooperation by CENAPEMEA B. confirmation of needs for the project by manufacturer C. increasing the domestic production of agricultural machinery

(2) Revised PDM

Project Name: The Agricultural Machinery Test and Evaluation Project
Revised September 5, 2001

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal The Overall Goal is that agricultural machinery with a appropriate performance and safety for small and middle farmers are developed and extended	1. Increased number of sold of certificated agricultural machinery 2. Counting new machinery registered ***3. No. of manufacturers which took a license examination*** ***4. No. of machinery which took a license examination***	1- Manufacturer survey 2. Manufacturer survey 3. Test report 4. Test report	A. To continue the cooperative plan for farmers
Project Purpose The purpose of the Project is to strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.	***1. 7 draft standards submitted to CONENNMEA*** ***2. No. of NMX standards reexamined*** ***3. No. of NMX standards enacted*** 4. No. of training course and participant	***1. Draft standards*** ***2. Plan National de Normalization (PNN)*** ***3. Annual report of COTENNMAEA*** ***4. Official Gazette*** 5. Project report	A. To smooth test duties of CENAPEMEA B. Maintenance of CENAPEMEA facilities
Outputs 5. The types of machinery to be dealt with in the Project are selected on the results of preliminary surveys. 6. Techniques for evaluation tests are improved. 7. Evaluation standards are drafted. 8. Experts for evaluation tests are fostered. 5. Evaluation test system is strengthened.	1. 1st year's survey report 2. Manual of how to test 3. No. of standardized machinery 4. No. of participants in training activities 5-1. Publicity to administrator about test system 5-2. Publicity to farmers about standardization 5-3. Publicity to manufacturers about standardization	1. Project report 2. Project report 3. Project report 4. Project report 5-1. Survey for officer 5-2. Survey for farmers 5-3. Survey for manufacturers	A. Maintenance of CENAPEMEA test equipment B. To express opinions of the standardization national committee C. Official publication of standard and evaluation procedure
Activities 1. Surveys on the actual condition of the production, marketing and adoption of agricultural machinery, and selection of the types of machinery to be dealt with in the Project. 1-1. Baseline survey 1-2. Selection of which machinery would be tested 1-3. Detailed survey for selected machinery 2. Improvement of techniques for evaluation test of agricultural machinery 2-1. Selection of how to test and test items 2-2. Improvement of test techniques 2-3. Improvement of how to test 2-4. Making test manual 3. Drafting evaluation standards for agricultural machinery 3-1. Examination of draft agricultural machinery test standards 3-2. Examination of how to standardize the machinery 3-3. Examination of how to notify the results 4. Fostering experts of evaluation tests 4-1. Making study curriculum 4-2. Making teaching materials 4-3. Training 4-4. Following up participants 5. Intensify the evaluation test system ***5-1. Study on the reconstruction and consolidation of evaluation system*** ***5-2. Orientation for the operation of evaluation test system*** ***5-3. Analyze how to diffuse results of evaluation test*** ***5-4. Diffusion and extension of test results*** 5-5. Monitoring of test results	**Inputs** **Japanese side** Dispatch of long-term experts Chief Advisor Coordinator Evaluation test systems Evaluation tests (performance) Evaluation tests (durability) Short-term experts Some experts/year Provision of equipment Acceptance of counterpart training in Japan Some counterparts /year **Mexican side** Position of counterpart Project Manager (Director of CENEMA) Counterpart for each field (2 counterparts for each field) Staff necessary for the operation of the Project Offer land and facilities Facilities Offices Local costs Management / operation cost		A. Enough chance to study for CENAPEMEA members (experts, administrator, the person in charge of diffusion, manufacturers of agricultural machinery, etc.) **Pre-Condition** A. Function CENAPEMEA and great cooperation by CENAPEMEA B. Confirmation of needs for the project by manufacturer C. Increasing the domestic production of agricultural machinery

(3) PDM for Evaluation

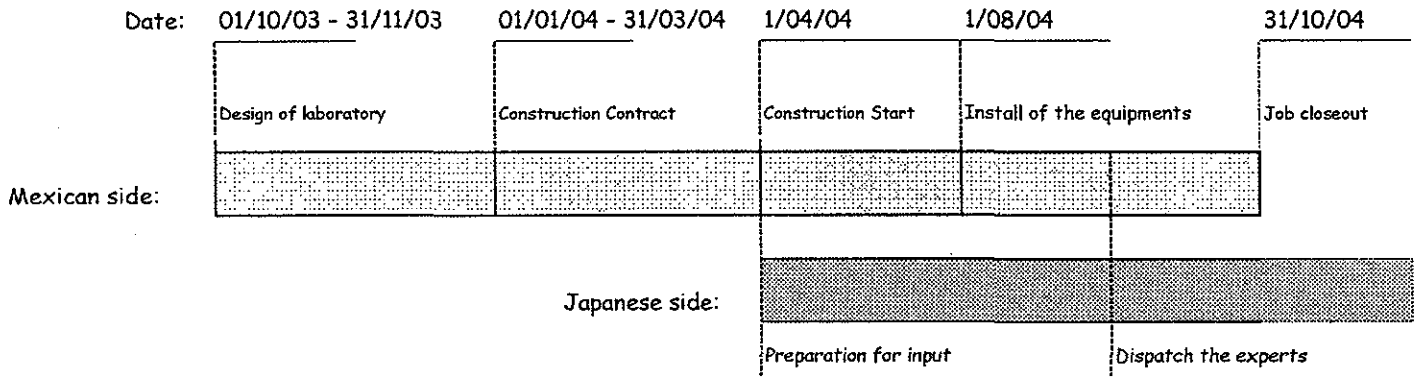
Project Name: The Agricultural Machinery Test and Evaluation Project
Revised September 2003

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal The Overall Goal is that agricultural machinery with appropriate performance and safety for small and medium farmers are developed and extended	1. Increased number of sold of certificated agricultural machinery 2. Counting new machinery registered 3. No. of manufacturers which took a license examination 4. No. of machinery which took a license examination	1- Manufacturer survey 2. Manufacturer survey 3. Test report 4. Test report	A. To continue the cooperative plan for farmers
Project Purpose The purpose of the Project is to strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.	1. 7 draft standards submitted to CONENNMEA 2. No. of NMX standards enacted 3. No. of training course and participant	1. Draft standards 2. Annual report of COTENNMAEA, Official Gazette 3. Project report	A. To smooth test duties of CENAPEMEA B. Maintenance of CENAPEMEA facilities
Outputs 9. The types of machinery to be dealt with in the Project are selected on the results of preliminary surveys. 10. Techniques for evaluation tests are improved. 11. Evaluation standards are drafted. 12. Experts for evaluation tests are fostered. 5. Evaluation test system is strengthened.	1. 1st year's survey report 2. Manual of how to test 3. No. of standardized machinery 4. No. of participants in training activities 5-1. Publicity to administrator about test system 5-2. Publicity to farmers about standardization 5-3. Publicity to manufacturers about standardization	1. Project report 2. Project report 3. Project report 4. Project report 5-1. Survey for officer 5-2. Survey for farmers 5-3. Survey for manufacturers	A. Maintenance of CENAPEMEA test equipment B. To express opinions of the standardization national committee C. Official publication of standard and evaluation procedure
Activities 1. Surveys on the actual condition of the production, marketing and adoption of agricultural machinery, and selection of the types of machinery to be dealt with in the Project. 1-1. Baseline survey 1-2. Selection of which machinery would be tested 1-3. Detailed survey for selected machinery 2. Improvement of techniques for evaluation test of agricultural machinery 2-1. Selection of how to test and test items 2-2. Improvement of test techniques 2-3. Improvement of how to test 2-4. Making test manual 3. Drafting evaluation standards for agricultural machinery 3-1. Examination of draft agricultural machinery test standards 3-2. Examination of how to standardize the machinery 3-3. Examination of how to notify the results 4. Fostering experts of evaluation tests 4-1. Making study curriculum 4-2. Making teaching materials 4-3. Training 4-4. Following up participants 5. Intensify the evaluation test system 5-1. Study on the reconstruction and consolidation of evaluation system 5-2. Orientation for the operation of evaluation test system 5-3. Analyze how to diffuse results of evaluation test 5-4. Diffusion and extension of test results 5-5. Monitoring of test results	**Inputs** **Japanese side** Dispatch of long-term experts Chief Advisor Coordinator Evaluation test systems Evaluation tests (performance) Evaluation tests (durability) Short-term experts Some experts/year Provision of equipment Acceptance of counterpart training in Japan Some counterparts /year **Mexican side** Position of counterpart Project Manager (Director of CENEMA) Counterpart for each field (2 counterparts for each field) Staff necessary for the operation of the Project Offer land and facilities Facilities Offices Local costs Management / operation cost		A. Enough chance to study for CENAPEMEA members (experts, administrator, the person in charge of diffusion, manufacturers of agricultural machinery, etc.) **Pre-Condition** A. Function CENAPEMEA and great cooperation by CENAPEMEA B. Confirmation of needs for the project by manufacturer C. Increasing the domestic production of agricultural machinery

Preliminary Program for the field of ROPS etc, of tractor

Mexican side : Establish the laboratory for ROPS etc, of tractor

Japanese side : Input of experts (long and short term experts)



/ attention: The program is prospects of the moment, will be subject to variation.

Mexico City, September 25, 2003

荒井博之

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Secretariat of Agriculture, Livestock,
Rural Development, Fishery and Foods

Calendario para el equipamiento del Laboratorio de Pruebas de Tractores del CENEMA														
2003 - 2004														
Actividad		Año 2003			Año 2004									
		Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct
1	Definición de especificaciones (PTO)	◄	———	►										
2	Definición de especificaciones (Levante hidráulico)	◄	———	►										
3	Definición de especificaciones (ROPS)	◄	———	►										
4	Identificación de proveedores	◄	———	———	►									
5	Cotizaciones		◄	———	►									
6	Selección de proveedor			◆										
7	Compra (Licitación o asignación directa)				◄	———	———	►						
8	Entrega de equipos									◄	———	———	►	
9	Instalación de equipos											◄	———	►
10	Ensayos y ajustes												◄	——— ►
11	Asignación de presupuesto 2004								◆					
12	Definición de especificaciones (Tracción)		◄	———	———	►								
13	Identificación de proveedores		◄	———	———	►								
14	Cotizaciones				◄	———	►							
15	Selección de proveedor						◆							
16	Compra (Licitación o asignación directa)								◄	———	———	►		
17	Entrega, instalación, ensayos y ajustes de equipo			Se extenderían hasta el 2005, finalizando en Marzo								◄	———	———

Calendario para la construcción de nave para el Laboratorio de Pruebas de Tractores del CENEMA														
2003 - 2004														
Actividad		Año 2003			Año 2004									
		Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct
1	Definición y diseño	◄	———	►										
2	Especificaciones técnicas	◄	———	►										
3	Identificación de constructores	◄	►											
4	Proyecto ejecutivo		◄	———	►									
5	Convocatoria de licitación				◆									
6	Licitación				◄	———	———	►						
7	Selección del constructor						◆							
8	Construcción							◄	———	———	———	———	►	
9	Entrega de equipos									◄	———	———	►	
10	Instalación de equipos											◄	———	►
11	Ensayos y ajustes												◄	——— ►

NMX基準制定までのフローと現状

2003.9 作成

		注1	プロジェクトで取り扱う農業機械	播種機		防除機	トラクター				ディスクプラウ	ディスクハロー	脱粒・脱穀機	
				機械式	真空		PTO	ROPS	油圧	けん引			豆類脱穀機	メーズ脱粒機
NMX制定までのフロー	プロジェクト活動	①-②	試験法・基準調査 開始	1999.8	2001.10	2000.1	2001.2	2001.11	2002.12	2002.12	2001.1	2001.9	2002.7	2002.7
			完了	2000.4	2002.4	2000.9	2001.2	2001.11	2002.12	2002.12	2001.3	2001.10	2002.10	2002.10
		③-⑥	試験マニュアル（案）作成	2000.1	2002.2	2000.7	—	—	—	—	2001.3	2001.10	2002.11	2002.10
			終了	2000.9	2003.7	2001.8	—	—	—	—	2002.7	2000.7	2003.7	2003.7
		⑦	NMX原案 検討開始	2000.10	2003.4	2001.8	2001.2	2001.11	2002.12	2002.12	2002.5	2002.5	2003.5	2003.5
			検討終了	2000.11	2003.7	2001.9	2001.2	2001.11	2003.1	2003.1	2002.7	2002.7	2003.7	2003.7
		⑧	COTENNMAEA 審議開始	2001.2.15	2003.7	2001.10.4	2001.2.15	2001.12.5	2003.2.26	2003.2.26	2002.8.30	2002.8.30	2003.7	2003.7
			審議終了	2001.6.5	2003.9	2002.2.13	2001.11.8	2002.7.31	2003.5.9	2003.5.9	2002.9.12	2002.9.12	2003.10	2003.10
			署名	2001.9.20	2003.9	2002.2.13	2001.11.8	2002.7.31	2003.6.18	2003.6.18	2002.9.26	2002.9.26	2003.10	2003.10
	注2		CENEMA -> DGFA COTENNMAEA案送付	2001.9.25		2002.2.13	-	2002.8.6			2002.9.30	2002.9.30		
			DGFA -> DGN, SECON 公聴に関する実施申請	2001.10.2		2002.5.31	2001.11.27	2002.8.7			2002.10.1	2002.10.1		
			公聴に供するための官報掲載	2001.10.30		2002.7.11	2002.2.8	2002.9.23			2002.11.8	2002.11.8		
			同期間終了	2001.12.30		2002.9.11	2002.4.8	2002.11.23			2003.1.8	2003.1.8		
			DGFA -> DGN, SECON 公布・施行申請	2002.1.24		2002.9.25	2002.4.9	2003.1.23			2003.1.23	2003.1.23		
			施行に関する官報掲載	2002.3.20		2002.12.5	2002.6.18	2003.4.17			2003.4.17	2003.4.17		
			施行	2002.5.20		2003.2.5	2002.8.18	2003.6.17			2003.6.17	2003.6.17		
			NMX番号	NMX-O-168 -SCFI-2001		NMX-O-179 -SCFI-2002	NMX-O-169 -SCFI-2002	NMX-O-181 -SCFI-2003			NMX-O-182 -SCFI-2003	NMX-O-183 -SCFI-2003		
プロジェクト活動		注3	CENAPEMEA傘下のLPへの研修実施	2001.11	2003.9	2003.8	—	—	—	—	2003.2	2003.2	2003.11	2003.11
			研修受講者数（人）	3	5	5	—	—	—	—	5	5	5	5

注１：枠中は年月日を表す。なお、下線のある年月日については本表作成時点での予定を記載している。

注２：NMX(メキシコ任意規格)原案検討開始から終了までの作業の流れ
①カタログ請求、文献（試験方法等）調査－②試験項目の検討・決定－③マニュアル（案）の作成－④供試機・ほ場準備－⑤試験（構造調査、各種条件調査、性能試験、所要動力試験、連続運転試験、分解調査）－⑥マニュアル（案）の改良と最終（案）作成－⑦NMX（原案）作成・検討と最終（原案）作成－⑧COTENNMAEAへ提出

注３：COTENNMAEA(国家標準化委員会)における審議開始からNMX施行までの流れ
CENEMAから提出された各機種のマニュアル（案）、NMX(原案)は、メーカー等からなる委員で構成されるCOTENNMAEAにて技術的内容について審議され、NMX(案)となる。
NMX(案)は、DGFAにて事務手続き後、SECON(経済省)に送られ、SECONから官報にて公開され、各60日間の公聴期間、公布期間を経て施行される。

注４：CENAPEMEA(全国農業機械評価試験センター)に対する技術研修
C/Pが講師を務め、COTENNMAEAで審議されたマニュアル(案)、NMX(案)をもとに、CENAPEMEA検査実施機関の職員に対して研修を行なう。

5. ALIANZAの概略と実績

1. アリアンサ計画の概略

「農村との連帯」計画は、「農牧業及び農村開発プログラム 1995-2000」における中心施策として、1996年に開始されたプログラムである。2001年までは、その中に36のプログラムが含まれていた。2001-2006年の期間においても、「農業、牧畜、農村開発、漁業及び食糧のためのセクタープログラム」の枠組みの中に含まれている。26のプログラムで構成され、その内訳は次のとおりである。

分野	No.	個別プログラム名
農業振興関連	1	生産再編振興
	2	農産加工用作物の振興
	3	土壌及び水の総合的管理
	4	生産技術の近代化（ここに、農機具の購入に対する補助金制度が含まれる）
	5	野菜及び装飾用作物の生産振興
	6	果樹振興
	7	熱帯及び亜熱帯の農業システム開発
	8	技術開発と普及
農村開発関連	1	農村投資プロジェクトへの支援プログラム
	2	農村環境に関する能力開発プログラム
	3	企業及び農村組織の強化プログラム
	4	農村開発及び人材育成のための調査やプロジェクトの形成を支援する特別基金プログラム
	5	その他、低収入な生産者のためのプログラム
牧畜振興関連	1	牧草地回復プログラム
	2	遺伝改善プログラム
	3	牛乳プログラム
	4	養蜂プログラム
	5	農牧総合プロジェクトの開発
	6	養鶏及び養豚振興
	7	低収入な牛乳生産農家の支援プログラム
農牧衛生関連	1	動物衛生
	2	植物衛生
	3	水産衛生
	4	無害な食糧
輸出振興関連	1	持続可能な農村開発のための情報システム
	2	市場と農産物輸出振興の統合のための支援

2. アリアンサ計画における農業機械化の実績

(1) 機械化に関する指標の推移

年	播種面積(ha)	トラクターの台数	ﾄﾗｸﾀｰ1台当たりの面積(ha)
1950			450
1982	19,498,087	168,836	115
1987	21,021,338	161,470	130
1991	19,260,680	177,000	109
1995	20,940,622	190,200	110
2000	21,780,045	207,429	105

資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

(2) 地域別の機械化指標

	地域			
	北部	中部	南部	全国
機械化が可能な面積（百万 ha）	6.2	8.3	4.1	18.6
トラクター台数（千台）	87.5	79.6	18.5	185.7
機械化指標（ha/トラクター）	70.8	104.3	221.6	101.0

資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

(3) 計画対象地域の農業活動の一例

地域	農地面積（ha）	非灌漑面積の比率（%）	主要作物	灌漑面積の割合(%)	主要作物
北部					
Sinalna	1,278,410	42.7	ソルガム、トウモロコシ、飼料用ソルガム、ゴマ、サフラン	57.3	トウモロコシ、フリホール豆、小麦、大豆、サトウキビ、白ヒヨコ豆、トマト
Durango	696,234	81.7	フリホール豆、トウモロコシ、エン麦、大麦、ソルガム	18.3	トウモロコシ、アルファルファ、飼料用トウモロコシ、リンゴ、エン麦、フリホール豆
中部					
Jalisco	1,425,048	85.2	トウモロコシ、牧草、ソルガム、飼料用トウモロコシ、リュウゼツラン（テキーラ用）、フリホール豆、飼料用ヒヨコ豆	14.8	サトウキビ、トウモロコシ、小麦、飼料用トウモロコシ、アルファルファ、飼料用エン麦、ソルガム
Hidalgo	579,795	78.7	トウモロコシ、牧草、飼料用エン麦、大麦、小麦、フリホール豆	21.3	トウモロコシ、アルファルファ、フリホール豆、牧草
南部					
Mexico	920,297	83.1	トウモロコシ、牧草、飼料用エン麦、大麦、小麦、フリホール豆	16.9	トウモロコシ、アルファルファ、飼料用トウモロコシ、飼料用エン麦、牧草
Oaxaca	1,177,379	93.2	トウモロコシ、コーヒー、牧草、フリホール豆、サトウキビ、小麦	6.8	トウモロコシ、フリホール豆、アルファルファ、レモン、牧草

資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

- 機械化プログラム、これは、トラクターや農機具の国内産業の発展と密接に関連するが、農業生産者の資本化に貢献するとともに、平行して、農業機械メーカーとして良く知られたブランドの販売店の売り上げを向上させている。
- このプログラムによる支援では、約 60%が New Holland 社の製品を購入し、残り 40%は、John Deere 社、Massay Ferguson 社、Case International 社の順番である。
- この機械化プログラムの目的は、「生産効率を向上させ、農用地の土壌の劣化を減少させ、農業生産者の収入を改善することを目的として、トラクターや農機具の購入や修理を振興する。」ことにある。
- これまで主として、トラクターの購入・修理と農機具の購入に対する補助金支出が実施されてきた。
- 機械化プログラムの対象作物として想定しているのは、基礎穀物（トウモロコシとフリホール豆m）、飼料作物（大麦、ソルガム、トウモロコシ、エン麦）、牧草、アルファルファ、サトウキビ等である。

(4) 本プログラムによる支援の内容（補助率と金額の上限）

	トラクターや農機具の購入		トラクターの修理		タイヤのセット
年	補助率(%)	上限金額（ペソ）	補助率(%)	上限金額（ペソ）	
1996	20	20,000	30	5,000	
1997	20	22,000	30	6,000	
1998	20	25,000	30	6,000	
1999	20	29,000	30	6,000	
2000	20	32,000	30	7,000	
2001	20	35,200	30	7,700	30%、上限 2,750
2000	45	72,000	45	10,500	
2001	50	79,200	50	11,550	50%、上限 4,000

資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

(5) 本プログラムによる支援実績（1996-2001 年と 2000-2003 年）

項目	1996 年	1997 年	1998 年	1999 年	2000 年	2001 年	計
トラクター購入	5,156	6,400	4,591	5,013	3,433	4,616	29,209
トラクター修理	5,965	6,133	4,250	2,148	944	1,201	20,641
播種機購入	956	1,380	492	633	505		3,966
その他農機具			224	416	564	1,597	2,801
タイヤ						1,208	1,208
サトウキビ収穫機						18	18
その他サトウキビ関連						5	5
計	12,077	13,913	9,557	8,210	5,446	8,645	57,848

注： 他の資料では、トラクターの大きさは、75-105 馬力が主体であるとされている（オアハカ州の事例）。
資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

項目	2000年（実績）	2001年（実績）	2002年（実績）	2003年（計画値）	計
トラクター購入	3,715	4,603	4,027	4,000	16,345
トラクター修理	1,322	1,280	54		2,656
計	5,037	5,883	4,081	4,000	19,001
裨益農家数	38,868	36,057	50,368	33,127	158,420
(ﾄﾗｸﾀｰ1台当たりの平均農家数)	7.7	6.1	12.3	8.3	8.3

資料：農牧省資料（評価調査団入手資料）

(6) 裨益者数実績（1996-2001 年）

	1996 年	1997 年	1998 年	1999 年	2000 年	2001 年	計
エヒード	14,945	26,510	8,343	22,751	20,793	27,294	140,636
小規模所有者	6,909	12,807	9,778	8,890	7,405	10,709	56,498
共同所有者	3,052	2,891	2,904	2,931	523	2,613	14,914
計	24,906	42,208	41,025	34,572	28,721	40,616	212,048

エヒード： 共同体的所有の土地あるいは共同体そのもの。
資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

(7) 補助金支出金額実績（1996-2001 年）（単位：千ペソ）

	連邦政府負担	州政府負担	計	増減率(%)	(参考)
1996 年	139,698	69,171	208,869		(22 億円)
1997 年	156,204	92,761	248,965	+19.2	(27 億円)
1998 年	115,658	71,265	186,923	-24.9	(20 億円)
1999 年	153,656	97,884	251,540	+34.6	(27 億円)
2000 年	127,315	84,231	211,546	-15.9	(23 億円)
2001 年	228,056	82,939	310,995	+47.0	(34 億円)
計	920,587	498,251	1,418,838		(155 億円)
(参考)	(100 億円)	(55 億円)	(155 億円)	注：1 ペソ=11.0 円で換算	

資料：Evaluacion de la Alianza para el Campo 2001, Informae de Evaluacion Nacional Mecanizacion, Octubre de 2002, SAGARPA & FAO

(8) アリアンサ計画の中での機械化プログラムへの予算支出実績（2000 年～2003 年）

(単位：千ペソ)	2000年	2001年	2002年	2003年	計
連邦政府予算	130,779.08	228,689.78	286,974.44	230,000.00	876,443.30
州政府予算	86,927.95	88,053.26	129,332.51		304,313.72
生産者負担	632,024.61	967,281.75	346,768.80		1,946,075.16
計	849,731.64	1,284,024.79	763,075.75	230,000.00	3,126,832.18

資料：農牧省資料（評価調査団入手資料）

(9) アリアンサ計画に対する連邦政府予算と機械化プログラムへの予算支出（2000 年～2003 年）

(単位：千ペソ)	2000年	2001年	2002年	2003年	計
ｱﾘｱﾝｻ計画に対する連邦政府予算総額	2,692,583	4,050,312	3,669,154	3,991,300	14,403,349
その内、機械化ﾌﾟﾛｸﾞﾗﾑへの予算	130,779	228,690	286,974	230,000	876,443
機械化ﾌﾟﾛｸﾞﾗﾑが占める比率 (%)	4.9%	5.6%	7.8%	5.8%	6.1%

参考： 2003 年度の場合、農牧省の全体予算約 4,400 億円のうち、アリアンサ計画の予算は、約 1 割の 440 億円を占めている。
資料：農牧省資料（評価調査団入手資料）

(10) 問題点

機械化プラグラムについては、当該セクターの開発計画の中には、明確には位置付けられていない。また、機械の所有状況などに関するインベントリーや、機械化の必要性に関する調査診断が実施されていない。したがって、どのくらい進捗したのか、あるいはどれだけ機械化が達成したのか測ることができない。

さらに、今回の評価調査時の現地調査において農民の意見を聞いたところ、申請手続きが難しく、多くの書類を準備する必要があることから、手続きの簡素化の要望が強かった。

6. 国家開発計画及び農業セクター開発政策の概要

1. 国家開発計画 2001-2006 年 (Plan Nacional de Desarrollo 2001-2006)

国家開発計画では、各セクターの詳細については記述されず、別途、セクター毎に策定されると記述されている。なお、国家開発計画に記されている、開発目的と戦略の焦点は、次の３分野である。

(1) 社会開発及び人間開発の分野
(2) 質を伴う成長の分野
(3) 秩序と尊守

この内、「(1)社会開発及び人間開発の分野」に記述されている項目（主要目的）は、次の通り。

主要目的１： 教育水準の向上とメキシコ人の福祉の向上
主要目的２： 公平性の増大と機会均等
主要目的３： 人間の能力開発や個人及び集団のイニシアティブ強化のための教育振興
主要目的４： つながりの強化と社会資本の強化
主要目的５： 自然と調和した社会開発及び人間開発の達成
主要目的６： 国民に信頼される行政能力の向上

「(2)質を伴う成長の分野」に記述されている項目（主要目的）は、次のとおり。

主要目的１： 責任を持って国家経済を運営する。
主要目的２： 国の競争力を向上させ拡大させる。
主要目的３： 開発対象を固定する。（この中で、農村開発や貧困層及び先住民のための支援について記述がある。）
主要目的４： 均衡ある地域経済開発の振興。
主要目的５： 持続可能な開発のための条件を形成する。

なお、(3) 秩序と尊守については、農業分野と関係がないので、その項目については省略する。

2. 農業・牧畜・農村開発・漁業・食糧に係るセクタープログラム 2001-2006 年 (Programa Sectorial de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación 2001-2006)

農業・牧畜・農村開発・漁業・食糧に係るセクタープログラム 2001-2006 では、構造的問題、特に、農村部の貧困、ポテンシャルや機会の開発を重視している。

そこには、10 の政策課題が示されている。

(1) 取り残された農村地域の開発
(2) 地域に焦点を当てた農村開発
(3) 差のある政策
(4) 生産体系への刺激
(5) 連邦主義の強化
(6) プログラムと制度的活動との結びつけ
(7) 確実性と法律的安全

(8) 社会組織の参画

(9) 生産の多様化と転換

(10) 自然資源の保全と改善、生物多様性

具体的には、次の4つのプログラムがある。

(1) 水産プログラム、(2) 農業プログラム、(3) 牧畜プログラム、(4) 食糧関連のプログラム

農業プログラムのなかに、次の3つプログラムがある。

(1) 農村開発振興、(2) 持続可能な農村開発、(3) 生産性向上

この「生産性向上」の中で、生産の技術化として、生産効率の向上や収益性の向上を図る手段として、農業機械の利用振興を図る必要性が記されている。

3. 農業セクターの施策

農業セクターの具体的施策としては、「アリアンサ計画」や農家への直接所得補填制度である「プロカンポ(ProCampo)」等が実施されている。

その他、「農村のための国民合意(2003年4月28日)」と題する施策も実施されている。NAFTA合意に基づく農産物市場の自由化進展に伴い、2003年になり農民の反対運動が激化したことから、連邦政府が農業生産者との話し合いを行った後に、作成した文書が「農村のための国民合意」である。そこでは、農村の経済・社会的発展を目的とする各種施策の実施のため、本年度(2003年)新たに28億ペソ(約305億円)拠出することを約束している。予算配分は次の通りである。

分野	予算 (百万ペソ)	(円換算値:億円)	概要
保健サービス	400	43.6	農村地帯の健康管理を進める目的で、内科、小児科、婦人科、外科の分野に予算配分する。
農村住宅	260	28.3	農村住宅を充実させるため農村住宅全国基金を創設し、それぞれの地方で豊富な建築用材を使い、受益者が労働を負担することを基本に、新しい住宅の建設と既存の住宅の整備を行う。
プロカンポ	650	70.8	プロカンポ(農民への直接補助プログラム)の補助金支給対象地リストに新たな土地が組み込まれたことにより、追加資金を充当する。
緊急雇用	150	16.4	農業省が主管の一時雇用プログラムに対して新たな予算を追加する。遠隔地域を優先的に290万の雇用を実現するための資金。
流通組織支援	140	15.3	農業流通組織各種プロジェクトに資金を追加する。
土地所有	300	32.7	土地購入、土地収用に伴う補償支払いに3億ペソを分配し、法に基づく土地所有を推進する。
投資リスク基金	300	32.7	農業、林業、漁業、農村部門での開発銀行での不良債権について、生産者側の原因以外から支払いが不可能になったプロジェクトについて、国がリスクを負うために、支出する。
女性支援	100	10.9	女性援助プログラムに対する支出。
高齢者支援	500	54.5	高齢者プログラムに対する支出。
計	2,800	305	

活動実績評価表 (1/5)

詳細TSIによる活動計画(項目毎) (注: 本評価表は、プロジェクト側が作成したものである)					プロジェクトの活動状況		最終到達目標	達成度 (%)
項目			実施時期(バーチャート)	担当者	活動実績	活動成果		
大項目	中項目	小項目	1 2 3 4 5					
Ⅰ.農業機械の生産・流通及び導入の実態調査とプロジェクトで扱う機種の選定	1.ベースライン調査	1)国の地域化		サンチェス、バンチート、ガビ、野口	・主要作物10作目の特定 ・8地域における主要作物栽培状況の把握 ・地域別生産形態の把握 ・農地所有面積別生産者数把握 ・トラクター普及台数把握	・主要作物栽培及び地域別の主要作物栽培状況が把握出来た。 ・地域別のトラクター普及台数及び畜力農機使用状況が把握出来た。 ・地域別生産者数、平均耕作面積、主要作物平均栽培面積、市場へのアクセス状況等が解明された。	・プロジェクトで取り扱う機種が定義される。 ・農業生産力、農家の社会経済的特徴及び現在の機械化に関する政策が把握される。	100%
		2)対象の特徴付け			・農家生産規模、生産物市場アクセス状況の解明(8地域)	・農業機械化計画、農村開発支援計画の2事業が主要な農業機械化政策であることが分かった。 ・当該事業によるトラクター購入、修理等の支援、及び農業機械(作業機等)の購入の支援実態が解明された。		100%
		3)機械化政策			・ALIANZA計画の農業機械化に関する開発計画の把握	報告書: 1.ベースライン調査報告書(2001/6) 2.Informe de visitas a cedes de CENAPEMEA, productores agrícolas y fabricantes de maquinaria agrícola (oct. 1999)		100%
	2.機械の選定	1)農業の生産実態		サンチェス、バンチート、ガビ、イグナシオ、ラモン、野口、八木	・地域別主要10作目の解明及び主要作物25作目の特定	・基礎穀物、野菜、飼料作物、工芸作物等の生産実態が把握出来た。 報告書:同上	・主要な耕作及び主要な州において使われている機種と台数が特定される。最後にプロジェクトで扱う機種が定義される。	100%
		2)農業機械の商品化			・メーカー別トラクター製造、販売台数の把握 ・メーカー別作業機の販売台数の把握 ・ALIANZA計画による農業機械購入資金援助実態の解明	・トラクターの馬力別主要機種及び主要製造メーカーが把握出来た。 ・農業機械(作業機)の販売台数、主要機種のメーカー別販売台数が把握できた。 ・ALIANZA計画の地域別受益者数、の農業機械化計画によるトラクター購入・修理の資金援助実態が解明された。		100%
		3)フィールド調査			・農機製造メーカー、販売代理店、生産者に対する聞き取り調査 ・主要作物生産地域に於ける農業機械利用実態の調査	・農業機械製造メーカー、販売代理店等13社の調査を通じて、製造品質管理の実態が把握出来た。 ・主要作物栽培地域(5州)における農業機械利用の実態が把握できた。		100%
		4)機械の選定			・評価試験対象機種の選定を終了	・基準を策定する機械が選定された。 報告書:同上		100%
	3.選定された機械の詳細調査	1)選定された機械の技術的スペックに関する調査		アドリアン、イグナシオ、ファン、フリオ、ミゲール、マルコ、ラモン、小林、伊藤、清水、樫元	・対象機械の国内メーカーのリスト及び製造機種の技術スペック等のデーターベースの作成	・対象機械の主要メーカー、カタログ等が収集出来た。	・選定された機械の技術的詳細が把握される。	100%
自立発展の見通し	将来、ベースライン調査の内容と同内容の調査、機種選定及びその詳細の調査は自主的にできるものと考えられる。							

活動実績評価表 (2/5)

詳細TSIによる活動計画(項目毎) (注: 本評価表は、プロジェクト側が作成したものである)						プロジェクトの活動状況		最終目標	達成度 (%)
項目			実施時期 (バーチャート)		担当者	活動実績	活動成果		
大項目	中項目	小項目	1 2 3 4 5						
Ⅱ.農業機械の評価試験技術の改善	1.試験方法及び試験項目の選定	1)評価方法及びフィールド調査			アドリアン、イグナシオ、ファン、フリオ、ミゲール、マルコ、ラモン、小林、伊藤、清水、樫元	・選定した全機種(トラクタ除く)について、RHAM, FAO, 日本、キューバ、ブラジル、カナダ等の試験法の検討、比較一覧表を作成した。	・主な調査項目は作物条件、土壌条件、精度、エネルギー・経済性、構造・機械耐久性、操作性、安全性等。	・評価試験技術が改善される。 ・評価される試験方法及び項目が、主要作物毎に評判である。	100%
		2)主要作物の栽培方法の分析				・主要作物10作目について4 地域における標準的栽培技術 パッケージを収集。 ・トウモロコシ、フリホール豆 の施肥・播種条件一覧表(西語)を作成した。 ・トウモロコシ及びフリホール集荷場の品質基準調査。	・主要作物生産地域における標準的な耕種基準が把握出来た。		100%
		3)評価方法の決定				・選定した全機種(トラクタ除く)について終了した。	・決定した主な試験項目は、構造調査、試験条件(作物、土壌等)、作業性能試験(作業精度、作業能率等)、所要動力試験、安全確認調査、連続運転試験、分解調査。		100%
	2.試験技術の改善	1)試験マニュアルの分析				・選定した全機種(トラクタ除く)について終了した。	・機械式播種機、プラウ、ハローは、NMX施工済み。精密播種機、脱粒機、脱穀機は、COTENNMAEAIにて審議中。	・既存試験マニュアルが分析され、試験技術が改善される。	100%
		2)試験技術の改善				・選定した全機種(トラクタ除く)について終了した。			100%
	3.試験方法の改善	1)試験方法の分析				・選定した全機種(トラクタ除く)について終了した。		・試験方法が改善される。	100%
		2)試験方法の改善				・機械式播種機、防除機、プラウ、ハロー、トラクタ(PTO、けん引、油圧、ROPS)は終了。精密播種機、脱粒機、脱穀機は、国家基準化委員会で審議中。	成果品 ・機械式播種機評価方法 ・防除機評価方法 ・ディスクプラウ評価方法 ・ディスクハロー評価方法 ・トラクタ(PTO)評価方法 ・トラクタ(けん引)評価方法 ・トラクタ(油圧)評価方法 ・トラクタ(ROPS)試価方法		90%
	4.試験マニュアルの作成	1)試験マニュアルの作成				・選定した全機種(トラクタ除く)について終了した。	成果品 ・機械式播種機評価試験実施マニュアル ・防除機評価試験実施マニュアル ・ディスクプラウ評価試験実施マニュアル ・ディスクハロー評価試験実施マニュアル ・精密播種機評価試験実施マニュアル ・トウモロコシ用脱粒機評価試験実施マニュアル ・豆用脱穀機評価試験実施マニュアル	・試験マニュアルが作成される。	100%
自立発展の見通し	トラクタ(PTO、けん引、油圧、ROPS)及び一部の作業機試験については、今後も専門家等の指導を受けながら、技術移転を行う必要がある。								

活動実績評価表 (3/5)

詳細TSIIによる活動計画(項目毎) (注: 本評価表は、プロジェクト側が作成したものである)					プロジェクトの活動状況		最終到達目標	達成度 (%)
項目			実施時期 (バーチャート)	担当者	活動実績	活動成果		
大項目	中項目	小項目	1 2 3 4 5					
Ⅲ.農業機械の評価基準案の作成	1.農業機械試験基準案の調査	1)試験基準の分析		サンチェス ガビ 野口 松井	・基準策定予定機種について終了。	成果品 ・機械式播種機評価方法 ・防除機評価方法 ・プラウ評価方法 ・ハロー評価方法 ・トラクタ(PTO)評価方法 ・トラクタ(けん引)評価方法 ・トラクタ(油圧)評価方法 ・トラクタ(ROPS)評価方法	・評価基準案が作成される。 ・既存の試験基準が分析され試験基準案が作成される。	100%
		2)試験基準の作成			・機械式播種機、防除機、プラウ、ハロー、トラクタ(PTO、けん引、油圧、ROPS)は終了。精密播種機、脱粒機、脱穀機は、国家基準化委員会で審議中。			90%
	2.機械標準化方法の調査	1)標準化の手続きの調査		サンチェス ガビ 野口 松井	・度量衡法に基づくNMX及びNOM法律化プロセスが把握出来た。	・2000年8月に農業機械標準化に関する国家基準化技術委員会(COTENNMAEA)設置 ・同委員会に作業機部会及びトラクター部会を設立し、順次基準の策定が予定されているものについて、審議を実施している。	・標準化に必要な手続きが把握され、標準化に対する提案が作られる。	100%
		2)基準に関する提案の作成			・策定が予定されている11基準のうち、8基準案について作成が完了。			72%
	3.試験結果公示方法の調査	1)評価基準の成果の周知 手続きの作成		サンチェス ガビ 野口 松井	・官報、経済省のホームページを通じての基準の周知方法を確認した。	・試験方法・基準、試験結果、及び検査評価結果の周知方法の確認が出来た。	・評価基準、評価の結果及び標準化に関する公示手続きが確立され、上記の結果が適切に公示される。	55%
		2)試験結果の周知方法の策定			・メーカーに対するCENEMAの広報、センター公開等を通じての周知方法を確認した。 ・CENEMAのホームページの作成を検討中			30%
自立発展の見通し	NMXの検討開始から施行に至るプロセスは確実に実施できるようになっている。							

活動実績評価表 (4/5)

詳細TSIによる活動計画(項目毎) (注: 本評価表は、プロジェクト側が作成したものである)						プロジェクトの活動状況		最終到達目標	達成度 (%)
項目			実施時期 (バーチャート)		担当者	活動実績	活動成果		
大項目	中項目	小項目	1 2 3 4 5						
Ⅳ.評価試験専門家の養成	1.学習カリキュラムの作成	1)課題と詳細学習カリキュラムの決定			ﾗﾓﾝ、八木、鷹尾	・研修課題 1.機械式播種機試験方法・基準 2.防除機試験方法・基準 3.ディスクプラウ試験方法・基準 4.ディスクハロー試験方法・基準 5.精密播種機試験方法・基準 6.トウモロコシ用脱粒機試験方法・基準 7.豆用脱穀機試験方法・基準	・機械式播種機、防除機、プラウ、ハローについては、研修実施済み。精密播種機は9月、脱粒機、脱穀機は、11月の研修実施に向け準備中。	・評価試験専門家が養成される。 ・研修カリキュラムが、策定される。	100%
	2.教材の作成	1)教材の作成				・機械式播種機、防除機、ディスクプラウ、ディスクハロー、精密播種機については、教材作成済み。脱粒機、脱穀機については、11月の研修実施に向け準備中。		・教材が作成される。	80%
	3.研修	1)ワークショップ、研修コース及びセミナーの企画				・実施研修課題 1.機械式播種機試験方法・基準 2.防除機試験方法・基準 3.ディスクプラウ試験方法・基準 4.ディスクハロー試験方法・基準 ・実施企画課題 5.精密播種機試験方法・基準 6.トウモロコシ用脱粒機試験方法・基準 7.豆用脱穀機試験方法・基準		・研修コース、セミナー、ワークショップが、実施される。	80%
	4.参加者のフォローアップ	1)統合モニタリングネット				・アントニオナロー大学、チャピンゴ大学、ヌエボレオン大学、グァナファト大学、INIFAPコタストラ試験場において、試験実施体制、試験機材等の確認を行った。		・研修効果とモニタリングシステムが、参加者への技術指導により、定着する。	55%
		2)参加者への技術指導				アントニオナロー大学及びチャピンゴ大学に対して、技術指導を行った。			20%
自立発展の見通し	研修カリキュラムの作成から研修参加者のフォローアップに至る一連の作業を自主的に行えるものと考える。								

活動実績評価表 (5/5)

詳細TSIによる活動計画(項目毎) (注: 本評価表は、プロジェクト側が作成したものである)									プロジェクトの活動状況		最終到達目標	達成度(%)
項目			実施時期(バーチャート)					担当者	活動実績	活動成果		
大項目	中項目	小項目	1	2	3	4	5					
V.評価試験システムの強化	1.評価システムの再構築及び強化	1)評価試験実施のための制度的条件の調査						サンチェス パンチョ ガビ イグナシオ 野口 松井 小林 清水 伊藤 櫻元	・検査及び認証をするための法的条件を調査した。 ・INIFAPが認証機関となるための法的及び人的必要事項の調査を行った。 ・機械式播種機の検査実施予定機関である2大学のISO認定に向けた準備能力及び状況について調査を行った。	・休眠状態にあるCENAPEMEAに替わり、INIFAPが認証機関となることが合意された。 ・検査体制確立のための予算(220万ペソ)がSAGARPAから財務省に対して申請された。 ・機械式播種機の検査実施が可能である大学が絞られた。	・評価システムが強化される。 ・セミナーを通じて評価試験制度が強化される。	75%
		2)評価試験実施手順の検討							・検査費用の確定に必要なコストの計算を行った。 ・検査システム運営に関する採算性について試算を行った。 ・評価実施体制確立のための活動計画を作成した。	・検査コスト、採算性について、叩き台となる試算結果が出された。 ・検査手順案が作成された。		50%
	2.評価試験システムの運営指導	1)評価試験システムの運営指導							・CENAPEMEAに対し、評価試験システム構築のための助言・指導を実施した。 ・INIFAPに対し、評価試験システム構築のための助言・指導を実施した。 ・検査実施候補機関である5大学の状況調査を行った。	・品質システム及びISOガイド65に関する基本的概念がINIFAP関係者及び検査実施機関候補である大学関係者において理解された。 ・試験実施候補機関である5大学の検査準備状況を把握した。		25%
	3.評価試験結果の普及方策の分析	1)製造業者に対する評価試験結果の推進方策の分析							・アリアンサ計画において、機械購入に対して補助金が交付されるための要件として検査に合格することを追加する予定。	・アリアンサ計画において、農家が機械を購入する際に補助金が公布されるための要件として検査に合格することを追加することについて、SAGARPAとの間で合意された。		75%
		2)農業生産者に対する評価試験結果の推進方策の分析							・アリアンサ計画において、機械購入に対して補助金が交付されるための要件として検査に合格することを追加することとした。			75%
	4.評価試験システムの普及啓発 (注:POによる。PDMでは、試験結果の普及啓発となっている)	1)NMX及び評価試験システムの概念の普及							・政府系及び民間の雑誌からCENEMAの活動の取材を受けた。 ・CENEMAの活動紹介ビデオを作成した。 ・ラジオを通じた公報の可能性について検討した。	・2誌にCENEMAの紹介記事が掲載された。		50%
		2)認証システムの普及啓発							・INIFAP及び検査実施予定機関である大学に対し、認証システムの法的要件について啓発を行った。	・品質システム及びISOガイド65に関する基本的概念がINIFAP関係者及び検査実施候補機関である大学関係者において理解された。		50%
		3)セミナー及び普及のためのイベントの企画と実施							・メキシコ農業学会への参加(第9～11, 13回)及び同学会開催中に農業機械評価試験及び標準化に関するフォーラムを主催。 ・ラテンアメリカ農業工学会でCENEMAの活動を紹介(2000年及び2002年) ・短期専門家、運営指導調査団によるセミナー開催 ・農業機械エクスポを主催(2001年及び2002年) ・コンサルタント契約による認証システムに関するセミナーを順次開催中。	・検査実施候補機関である大学関係者との連携強化。 ・プロジェクトの活動の広報、農機製造メーカー、農業機械研究者との連携強化。		75%
	5.試験結果のモニタリング	1)機械メーカー対するモニタリング							・メーカーリストを作成した ・播種機、防除機等試験機種の借用・供与等を通じてメーカーとのモニタリングのチャンネルを確立。	・農業機械メーカー、農家とのチャンネルはある程度確立出来た。 ・農家に関しては今後モニタリング用農家の絞り込みが必要。	・メーカーと農家のために評価結果がモニタリングされる。	10%
		2)農家に対するモニタリング							・農家調査を通じて、生産者とのチャンネルを確立。			10%
自立発展の見通し	評価システムは最終的に確立しておらず、プロジェクト終了までに確立できなかった場合、自立的にこれを達成し発展させていくことは難しいと思われる。											

8. CENEMA 技術者の氏名と能力

CENEMA技術者の氏名と能力（農業機械の機種別）

	機種		カウンターパートの氏名と能力		日本側担当専門家	
			氏名	能力	長期	短期
1	機械式播種機		**Adrian Aragon R.** ▲ Ignacio Arevalo M. × Juan G. Ochoa B. ▲ Julio Torres S. ○	C C A A	小林　研 伊藤　建夫	金井　啓吉
2	精密播種機		**Adrian Aragon R.** ▲ **Miguel Albarran M.** ○	C B+	樫元正一 清水一史	千葉　博之
3	防除機		**Julio Torres S.** ○	A	小林　研 伊藤　建夫 樫元　正一 清水　一史	戸崎　紘一
4	トラクタ	PTO	**Ramon Jimenes R.** ○		－	積　栄
		ROPS	**Ramon Jimenes R.** ○		－	森本　國夫
		油圧	**Ramon Jimenes R.** ○		－	
		けん引	**Ramon Jimenes R.** ○		－	
5	ディスクプラウ		**Juan G. Ochoa B.** ▲ Miguel Albarran M. ○	A B+	清水　一史 小林　研 樫元　正一	西崎　邦夫
6	ディスクハロー		**Miguel Albarran M.** ○ Juan G. Ochoa B. ▲	B+ A	清水　一史 樫元　正一	大下　泰生
7	ﾄｳﾓﾛｺｼ用脱粒機		**Juan G. Ochoa B.** ▲ **Marco Antonio A.** ○	A B+	清水　一史 樫元　正一	山中　秀城
8	豆用脱穀機		**Julio Torres S.** ○	A	樫元　正一 清水　一史	冨田　宗樹

注：

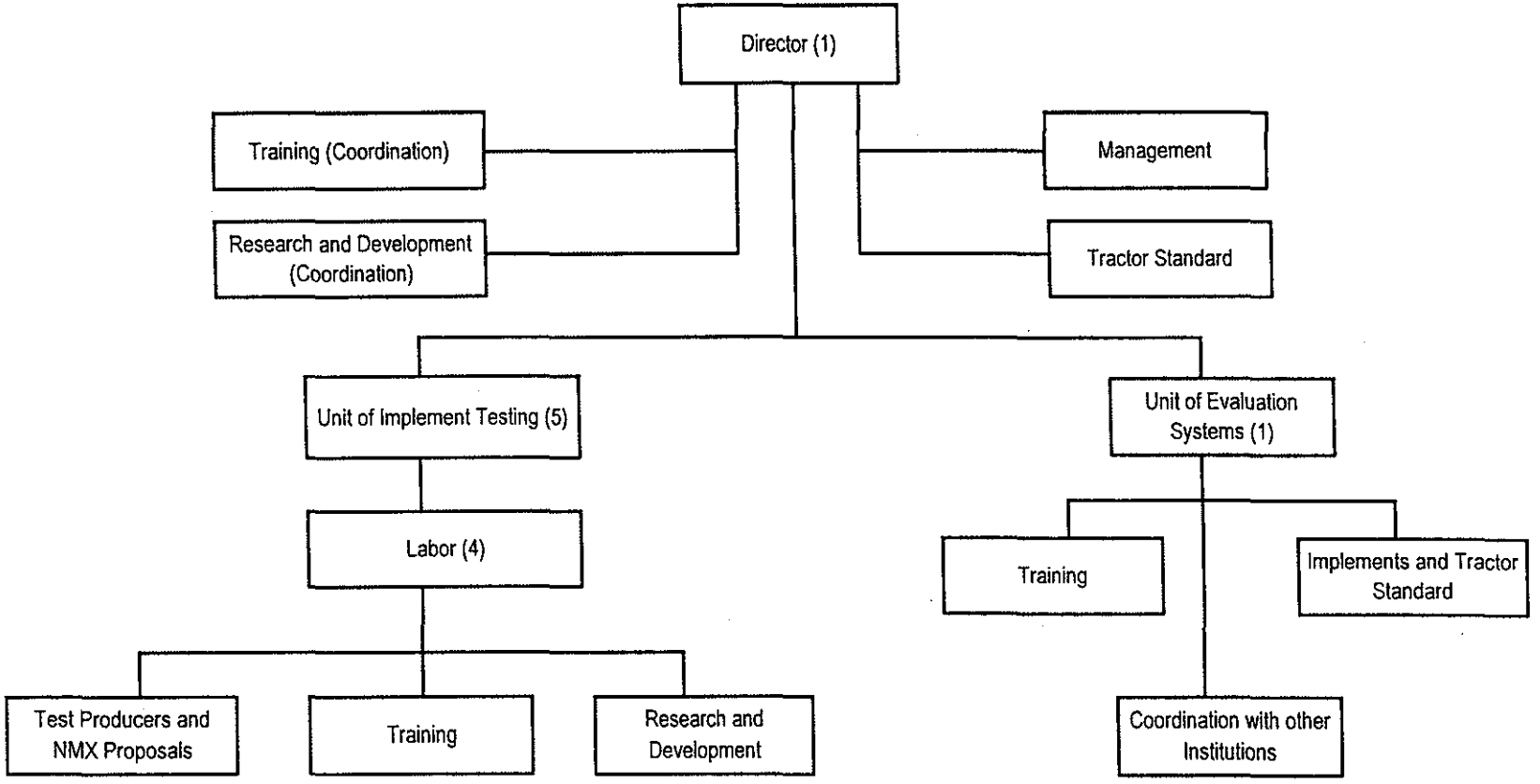
(1) トラクター担当として2003年7月に2名新規採用した。現在、勉強中であり、表中には氏名を記入していない。なお、トラクターの4項目全部を担当する予定。

(2) ○は、現職。▲は、大学院に進学（戻る予定）。×は、退職した。留学中のもの2名： Mr. Adrian Aragonは、京都大学の博士課程（3年間）、Mr. Juan Ochoaは、2003年8月からメキシコ国内の大学の修士課程に進学した。氏名に下線を引いた者が主担当である。

(3) テクニコ(Tecnico)と呼ばれる補助技術者が他にいるが、氏名は省略してある。

(4) A =十分な能力有り自立可能、B+ =ある程度の能力有り、C =まだ能力的には不十分。

(5) トラクター部門以外は、各機種とも十分な能力を持つカウンターパートが最低1名はいる。



注: 括弧内は人数。
所長1名、評価システム部門に1名、評価試験部門に、技術者5名と技術補助員4名がいる。この他に職員としては、秘書2名、掃除係1名、運転手2名がいる。

（日本人専門家から入手した資料に基づき作成）

CENEMAは、INIFAPの農業試験場の1つである、Valle de Mexico農業試験場の一角に、テストラボ、事務所、圃場などの施設・設備を有している。メキシコ市中心部から車で約40-50分の距離にある。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