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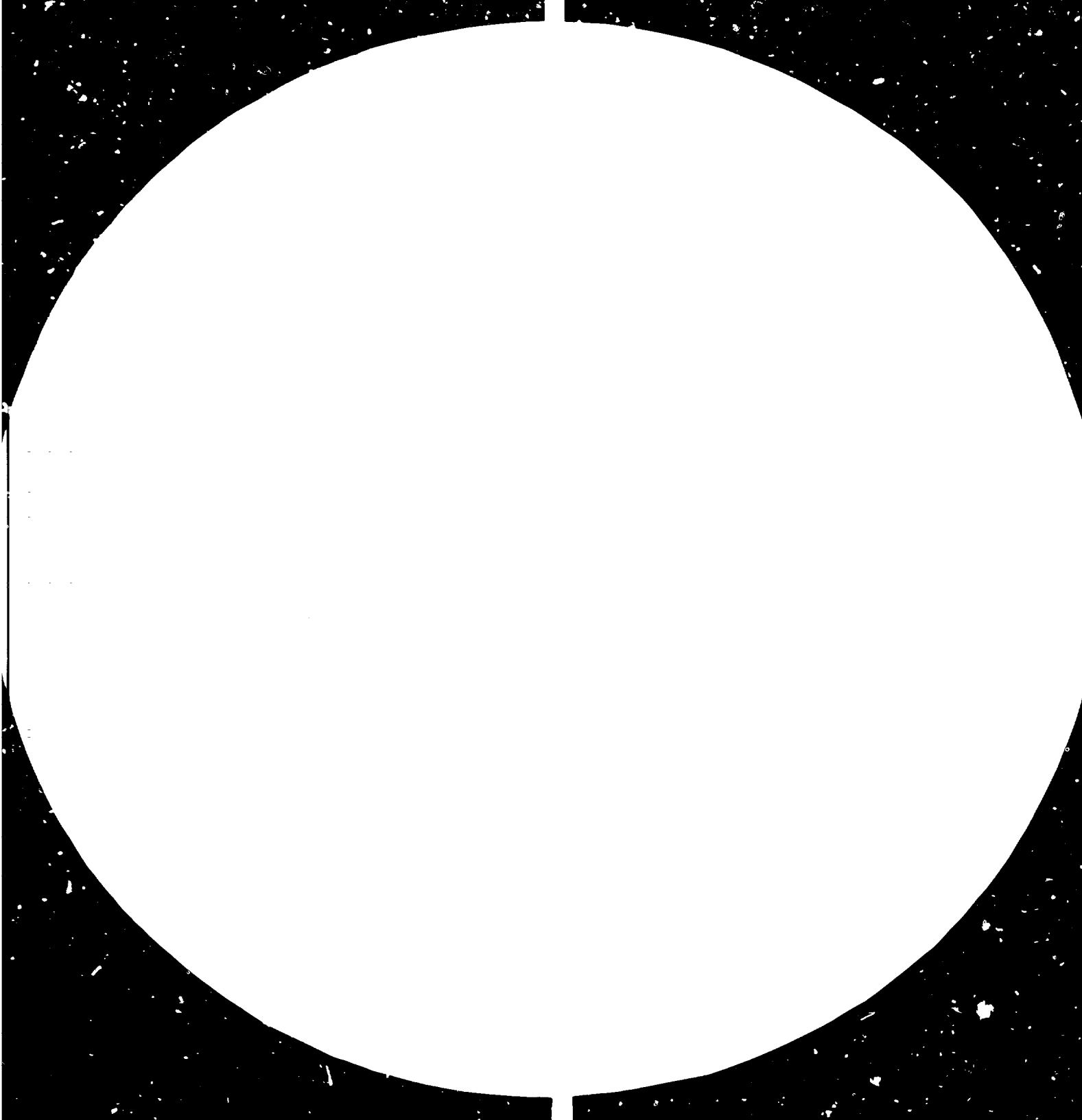
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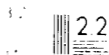
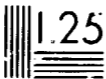
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Agricultural machinery industry.

REPORT ON COLOMBIA

12279

INDUSTRY

Colombia has around 7,500,000 Hectares of land under cultivation including grassland areas. Around 2,500,000 Hectares are what they call hillside lands with a slope of 30° to more than 45° , which means that tractors cannot be used. Most of this land, as in other Andean countries, is in the hands of small farmers owning from 2 to 5 Hectares. The rest of the land is under intensive use and the holdings are of medium and large size. The crops that are grown are coffee, rice, sugar cane, cotton, wheat, corn (grain), soybeans, edible beans, forages, vegetables and fruits of different kinds. Colombia is a big coffee exporter and this grain is the commodity that generates most foreign currency for the country. They also produce flowers in huge quantities and it is the third country in the world in the production of flowers for commercial purposes and for the export markets. In the tropical areas they have nearly 100,000 Hectares of the African palm tree for the production of oil. In these areas and especially in the Amazonian lands they have big forests that are devoted to the production of wood. Colombia has a big beef cattle population in the oriental flat lands (the "llanos"). They are meat exporters. They also have a great production of milk and other dairy products.

As it can be concluded from this description of its agricultural production, Colombia is a rather rich country with a production that satisfies its needs with the exception of wheat. They have to import from 20% to 30% of its needs, but on the other hand the exports of coffee and other crops are much bigger in value. The commercial balance in agricultural products is positive in around 1,500 millions of dollars.

It can be said that 60% to 70% of the cultivated land is under intensive exploitation with a high level technology. It is well mechanized with tractor operated machinery and grain combines.

Colombia has a population of 25 million people. In Latin America Colombia comes after Brazil and Mexico and its population is more or less equal to the population of Argentina, but with a higher yearly increase. The rate of increase has been of 3% in the past years, but in the last two years, it has been about 2.2%. There are great differences in the income distribution and the social tensions are also great.

The number of tractors in Colombia at the end of 1977 was of 25,534 units with an average of 64 H.P. for an area under mechanized cultivation of 2,300,000 Hectares.

As far as the agricultural machinery industries are concerned, they manufacture almost all the items in categories I and II. In Colombia there is no manufacture of tractors and combines or other complex machines for field use. However, they are manufacturing grain driers of the blower type, rice and wheat processing machines of different capacities and stationary machines for many applications.

POLICIES

Colombia gives a top priority to agriculture in its general policy plan. In the 5 years plan they give great importance to the agricultural imports and farm machinery is considered at an equal level as fertilizers, seeds, pesticides, etc. Credit for farmers is also very important. The Agrarian Bank is a big institution covering all the country. It has warehouse facilities and gives storage services for crop products and other needs. There are also commercial banks that give credit for the farmers.

The Department of Planning is an independent institution from the other Ministries and Government entities. Both in the agricultural and the industrial field they have a plan for the agricultural mechanization and the agricultural machinery industries.

As a general policy they want to promote and encourage the production of farm machinery in the country provided the cost of the machines to the farmers is not higher than the cost of the similar machines if they are imported. They do not want to charge the farmers with the additional costs originated by a higher cost of the local production. They are extremely careful with the prices of food products and due to some natural price increases in some of these products in the last two years they have had social and political reactions of rather serious importance. The inflation is not as high as in other Latin American countries, but anyway there is some increase in the rate of inflation. Lately they have had to import some oil and gas. This situation is expected to continue in larger quantities until they have under exploitation new oil discoveries.

The Situation in the Categories I and II

Colombia has well developed industries for the production of implements for tractors. There are two important companies, APOLCO and INTERAGRO, that make a complete line of implements, including ploughs, harrows, planters, cultivators, blades, etc. They have good products. Many of them are made under license of world renowned manufacturers and are also exported to

other countries in South and Central America. Sprayers, corn-shellors, coffee pulp separation machines, mills, irrigation pumps of different sizes, sprinkle irrigation equipment, grain driers, rice processing machines, sugar and coffee processing machines of different types are also made in Colombia.

In the case of Category I they made most of the hand tools and they are even exporting some tools to other countries. In the case of the draft implements there has been a tradition for the manufacture of these in small plants and workshops in different rural areas.

The ICA-Instituto Colombiano Agropecuario, through its Agricultural Engineering Department, has done a lot of research in its Agricultural Machinery Programme in the design and development of improved implements for animal draft. They have built some good prototypes that have tested in the last two years with great success. They have made economic studies for the farmers comparing results with these implements against the traditional implements that show very significant results with a great advantage for the method of work using the improved implements developed by the Institute. Now, they are at a moment of starting the production of these implements using the installations of the Military Industries Enterprise, which is a Government entity that owns good installations. The Agrarian Bank is ready to give credit to the farmers and will lend the use of its warehouses for the storage of the implements and the sale of them avoiding the problems of marketing that are always a limiting factor for the low cost machines and implements.

The issue of manufacturing all the products in categories I and II in the country is fully accepted. They have an industry with experience and resources to accomplish this. There are problems of marketing low cost equipment and the industries are not very much interested in producing these implements. There is a lot to do in the improvement of workshops in the rural areas that make tools and implements as well as spare parts for bigger machines .

The Situation in Category III

In Columbia there is no manufacture of wheel tractors. The tractors are all imported. They have been considering the manufacture of tractors, but they have not taken a favourable decision because according to their point of view the market is not big enough to justify the investment and also because the selling price to the farmers will be too high on account of the capacity of the plant. The sales of tractors in the last years has been of 2200 to 2400 units per year. Considering this size of market it would be necessary to have only one plant and that would mean a market given to a certain manufacturer on an exclusive basis. They are reluctant to have this kind of monopoly which is always a difficult decision in a country with a liberal economic policy which is of free market.

The Situation in Category IV

There is no manufacture of self propelled machines of any kind. They do manufacture sophisticated machines for processing or stationary work.

Institutional Aspects

Columbia is giving a great importance to the agricultural inputs including the machinery. As in other countries there is a lack of co-ordination between the agricultural and the industrial sector. At the general planning level there is a co-ordination, but at the execution level the situation is different. In practice the private industry makes its plans quite independently. The need of an intersectorial committee

is accepted as a basis for a strategy in the farm mechanization and farm machinery industries.

Research and Development

The research in farm mechanization is in the hands of the Instituto Colombiano Agropecuario (ICA). There is an Agricultural Engineering Department and an Agricultural Machinery Programme as a Crop Processing-Programme. Both of them work on research, design and development of equipment based on improved methods of work. This Department operates in Tibaitatá, Bogotá.

Evaluation and Training

In Colombia there are Agricultural Engineering Faculties in Medellín and Cali. They also have a Post-Graduate Programme in the National University at Bogotá. The agricultural engineers are responsible for the research.

For the training of mechanics and operators there is an institute called the Servicio Nacional de Aprendizaje-SENA which operates in Buga, at a distance of around 100 kilometers of Cali. It was organized around 15 years ago with the co-operation of FAO and the Massey Ferguson Company. It is very well installed and gives instruction to professionals, technicians and operators in the operation, maintenance and repairs of tractors and machinery. The courses are open for foreign students also. The work has been successful.

They also have technical institutes in other parts of the country for the training of industry workers and also for operators.

Extension

The extension is in the hands of the Ministry of Agriculture through the Extension Service. The field of farm mechanization is covered by the "extensionists" that are agronomists with a limited knowledge of farm machinery.

Repair and Maintenance

It is usually done by the tractor and machinery dealers. Most of them have service facilities and well trained mechanics.

The service of parts supply is good. There are no restrictions in the import of parts and the import duties are reasonable. Most of the parts are imported, but in the case of implements there is a lot of local manufacture. There is even local manufacture of disks for ploughing and harrowing. The Apolo company exports plow disks.

Financing and Investment

The Agrarian Bank finances the purchases of tractors and conventional farm machinery under good terms. The Bank also buys tractors and sells them to the farmers just recovering the expenses and under good terms. It can be said that the medium and big size farmers get all the help that is needed to buy tractors and farm machines.

The situation is more difficult for small farmers. The economic situation of small farmers is of such a kind that they can hardly buy machinery. So, the credit is very carefully studied and because of this a lot of requests are turned down. It is expected that with the new implements that are being developed the economic results will be better and that they will be in a better position to buy and get better results.

In the case of the industries there are enough credit facilities for the well organized industries.

It may be necessary to have an aggressive policy of financing the small rural industries of farm machinery. It is one of the key points for the development of small industries.

List of Persons Visited in Colombia

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