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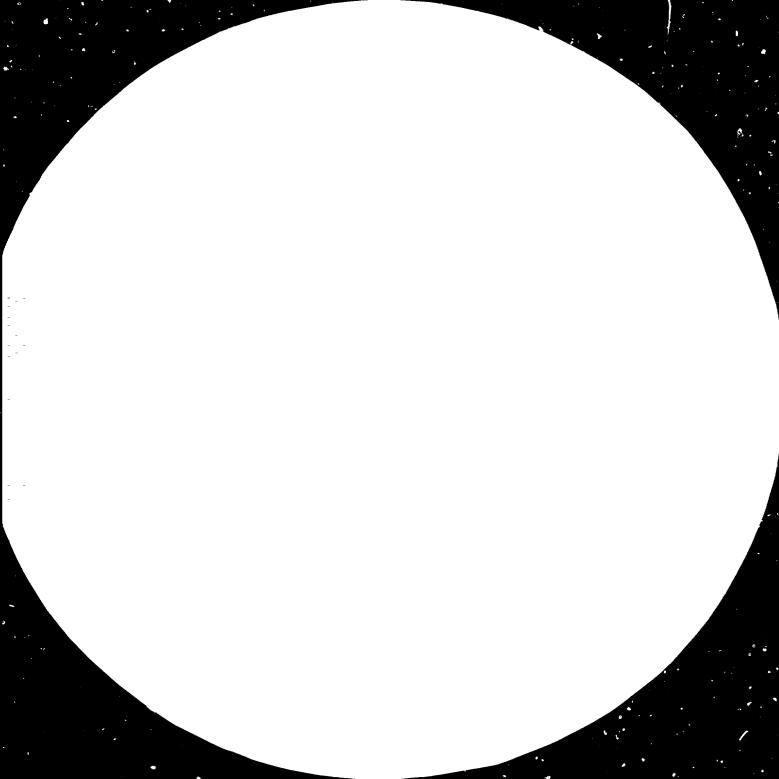
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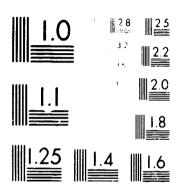
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#### United Nations Industrial Development Organization

Meeting on Exchange of Experiences and Co-operation among Developing Countries in the Development of Agricultural Machinery Industry

Beijing, China, 20 - 27 October 1980

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<sup>\*</sup> The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been reproduced without formal editing.

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# 1. Agricultural machinery and implements : needs and demand

According to the estimates made by the manufacturers of agricultural machinery and tractors the requirements for the next five years could be established according to the production over the past period:

	1976	1977	1978
Category I, tons	5.600	5.320	5.690
Category II, tons	7.800	8.200	8.600
Category III, tons	18.004	22.181	28.784
Category IV, tons	120.561	146.554	178.760
Total Tons	151.965	182.225	218.834

The list of products included into production programme of the agricultural machinery and tractors industry is given in Appendix I.

It could be noted that mechanization of agricultural production in Yugoslavia is carried out mainly in categories III and IV whereas the categories I and II are in a standstill and are liable for further decline.

The realistic need for agricultural machinery shall, according to the estimates of the agricultural machinery industry, be as follows:

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Category I	tons	<b>30.000</b>	
Category II	tons	40.000	
Category III	tons	125.000	
Category I7	tons	1.500.000	
Total		1.695.000	

#### 2. Estimated demand and present useage

According to the foregoing it could be noted that in the next five years Yugoslavia will produce 1.695.000 tons of tractors and agricultural machines. Categories III and IV are increasing. Production analyses indicate the demand for small, medium and large tractors, combined harvesters and special purpose machines. A marked demand is also anticipated for larger tractors and combined harvesters, plough, cultivators, sowers. Production of other special machines shall depend upon further research.

# 3. Manufacture and imports

- 3.1. In Category I: annual requirements are met from domestic production.
- 3.2. In category II: annual requirments are met from domestic production.
- 3.3. In Categories III and IV: further research and testing of the machines is carried out with a view to improving the productivity and technology applied. The value of the imports in these categories amounts to approximately lo.000.000 US \$ a year. Types and quantities of machines differ and cannot be given in exact figures.

#### 3.4. Basic facilities and ancilliary industries

Production facilities, foundries, forging shops, heat treatment plants, gearshops, etc. are available and can meet the requirements of technology.

However, an increased production requires further modernization of production and keeping in line with up-to-date technique.

#### 4. Design and development, adaptation and evaluation

The Yugoslav association of agricultural machinery producers (Business Association of the Yugoslav industry for production of tractors, agricultural machinery and equipment) includes institutes, expekt services for construction and development, promotion, testing and evaluation, capable of undertaking all the aforementioned activities within the programme given in Appendix I as well as new constructions. Programmes of these institutes are financed partially by industrial plants and partly by development funds.

## 5. Engineering and manufacturing technology

- (a) Business Association of the Yugoslav industry for production of tractors, agricultural machinery and equipment can offer advice, assistance or services in elaboration of projects and production technology for the local development and production of agricultural machinery and implements.
- (b) Such services could be given in all product categories.

(c) Exchange of experience and integration into the International Division of Labour.

#### 6. Repair, maintenance and spare parts supply

Specialized service organizations under control of the producers and experts carry out the maintenace nad repair work as well as supply of spare parts. Many of these are directly under the management of the large users of mechanization and service shops of the producers.

An exchange of the experience and modern organization of operations could be subjects of future cooperation.

#### 7. Policy, planning, strategy and coordination

The General Association of Metalworking industry at the Yugoslav Chamber of Economy and the Federal Institute for Social Planning of Yugoslavia plan the production and establish the policy of agricultural mechanization. In addition to these the Federal Committee for Fnergy and Industry and the Federal Committee for Agriculture which, within the limits of their competence, carry out different activities of importance for the development of this field.

## 8. Interregional cooperation

- (a) Organization and technology of products listed in Appendix I could be transerred to other countries and especially: advise, design, project, technology, other services and cooperation in production.
- (b) Other developing countries could offer Yugoslavia all types of development services and cooperation, advise and new design.

#### 9. Role of UNIDO

- (a) Areas in which UNIDO could assist to the Yugo-slav organizations are the following:
  - 1. Advice
  - 2. Design
  - 3. Technology
  - 4. Training.
- (b) UNIDO has already rendered assistance in different aspects and fields of development of the industry producing agricultural machinery.
- (c) Technical information exchanged between Yugoslavia and UNIDO could and should be improved.

#### lo. Specific proposals and recommendations

Fields in which UNIDO could assist the development and promotion of agricultural machinery production are the following:

- (a) Production technology
- (b) Technical problems in production
- (c) Training
- (d) Exchange of experience in development.



