

TRANSFER OF IDEAS FROM RESEARCH TO INDUSTRY - THE CASE OF JAPAN

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1. The needs of mechanization for Japanese agriculture

- 1.1 History of the machinery demand in Japan**
- 1.2 Recent statistics of machinery production**
Sales, export and import
- 1.3 Rapid decrease of agricultural labour force**
Increase of aged people
Needs for safety and easy operation
- 1.4 Small scattered farmland. How to reorganize**
Needs for small robots development
- 1.5 High quality, safe foods**
Small scale but high income Agriculture.

2. Economical analysis of small scale mechanization

Successful result in Japan

**12x10¹² yen machine investment supported
1100x10¹² yen production of agriculture
and industry**

2.1 Importance of machinery in Japanese farmer

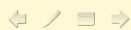
**2.2 Mechanization for the farmer who has two jobs.
Important part-time farmers in Japan.
Restricted timing of farm operations.
Needs of quick operation with high capacity
machines**



3. Cooperation by industry and public research Institutes

3.1 Public research Institutes in Japan

- 1. New independent research organization**
- 2. Institute of Agricultural Machinery**
- 3. New agricultural machinery promotion company**
- 4. Universities: new profit-based operations**



4. PROBLEMS

- 4.1 Changed words, agricultural to biological,
environmental or resources**
- 4.2 Evaluation of the value of agricultural machinery
research**
- 4.3 Difference of real interests by industry
and institutions**
 - 4.3.1 Profitable sales of new machines or publishing
new research results**
 - 4.3.2 Timing of the results**