(2) Development of a new system for commodity market forecasting

The existing world grain model has been improved. The major improvements are 1) transplantation to from MS-EXCEL VBA to VB system, 2) the development of interface and 3) an increase in the calculation speed.

In order to properly integrate the resource and environmental conditions to market analysis, a food supply and demand study by region was undertaken for China's maize and rice and Myanmar's rice. It is thought that the different supply responses in each region, reflect mostly the regions' production conditions such as climate, water availability and soil. The results of estimated supply price elasticities are shown in Table 1 to Table 3.

Research members

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Table 1. Price Elasticities by Economic Region (China, Maize)

region	price elasticity	region	price elasticity
Northeast	0.465	Central-South	0.303
Central-North	0.722	Southwest	0.240
Central-East	0.293	Northwest	0.320

Table 2. Price Elasticities by Economic Area (China, Rice)

region	price elasticity	region	price elasticity
Northeast	1.215	Central-South	0.220
Central-North	1.679	Southwest	0.115
Central-East	0.354	Northwest	0.446

Table 3. Price Elasticities by Economic Area (Myanmar, Rice)

region	price elasticity	region	price elasticity
delta	0.20	coastal	0.01
lower Myanmar	0.07	highland	0.01
central	0.09		

Research on Evaluation Methods for Policies on Recycling and reuse of Organic Materials Originating from Agriculture

The MAFF is now establishing various policies on recycling of organic materials. In regard to the food industry, a law has already been enacted, which stipulates that each industry must reduce organic wastes by 20% within 5 years. In addition, other laws were enacted to ensure that livestock farms install equipment to prevent pollutants from animal manure. However, there are still no clear and definitive methods to evaluate such policies. Although there are many aspects to be dealt with, we have classified the issue points of many past discussions into three groups. The first is to establish a systematic view toward the objectives of the policies; the second is how to evaluate policies; and the third is examining what results have actually been produced.

In the first year, we tried to clarify the concept of recycling of organic materials, especially in rural areas (Fig.1). The second task was to develop an evaluation method. This was done through benefit transfer and conjoint analysis by means of a questionnaire survey. The result shows the evaluation can be transferred from one survey site to another in some situations. It helps to evaluate environmental policies in different locations.

Research members

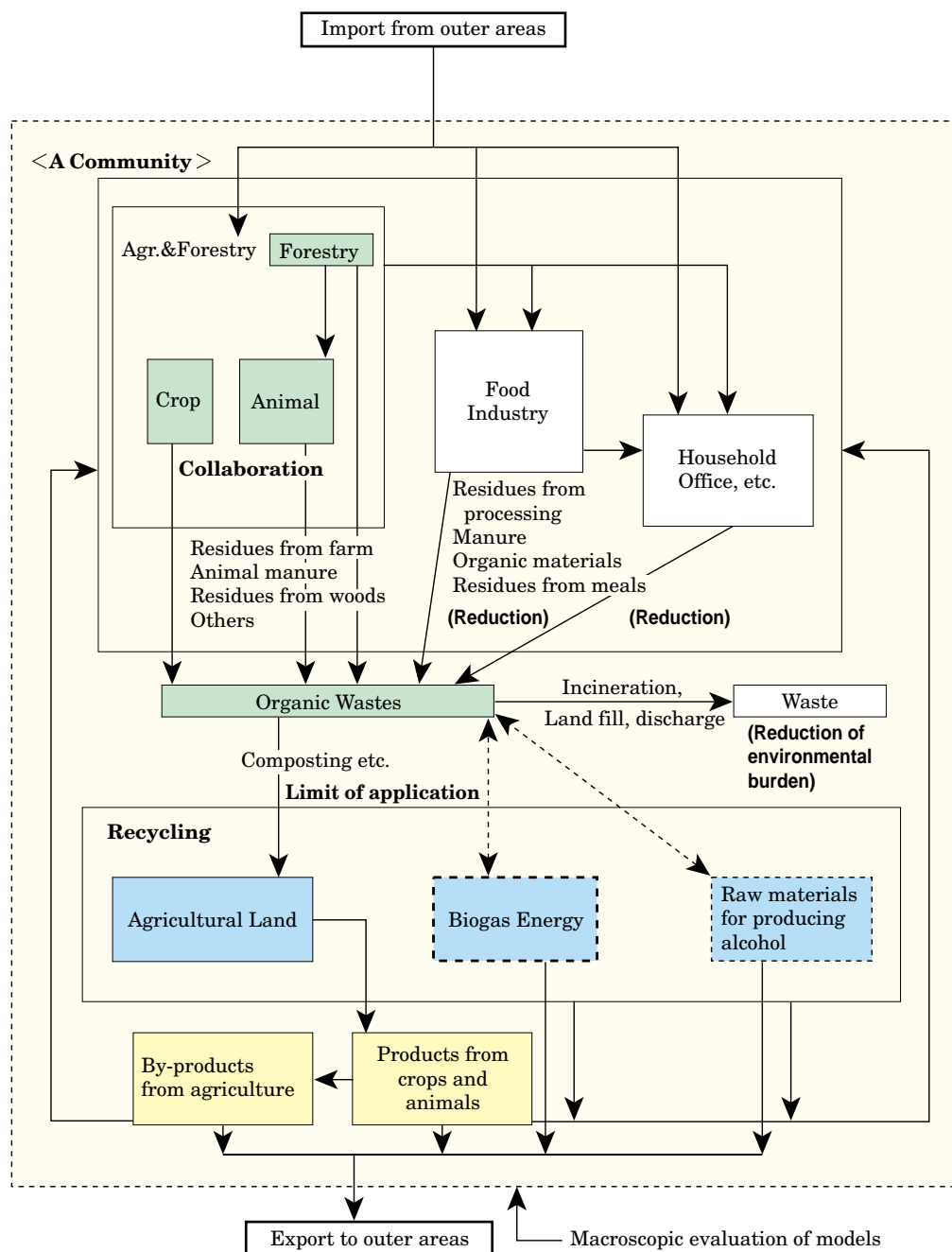Ryohei Kada, Motoyuki Goda, Kentaro Yoshida and Mitsuyasu Yabe

Import from outer areas

<A Community>

Agr.&Forestry   Forestry

Crop   Animal

Collaboration

Food
Industry

Household
Office, etc.

Residues from
processing
Manure
Organic materials
Residues from meals

(Reduction)   **(Reduction)**

Residues from farm
Animal manure
Residues from woods
Others

Organic Wastes

Incineration,
Land fill, discharge

Waste

**(Reduction of
environmental
burden)**

Composting etc.

Limit of application

Recycling

Agricultural Land

Biogas Energy

Raw materials
for producing
alcohol

By-products
from agriculture

Products from
crops and
animals

Export to outer areas   — Macroscopic evaluation of models

Fig.1. A Skeleton Recycling Model for Local Organic Materials