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SOCIO-ECONOMIC ASPECTS OF RICE BRAN
STABILIZATION IN RICE PRODUCING COUNTRIES^{1/}

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FOREWORD

In most of the rural areas of the developing countries, there is a lot of manpower working in the fields : farming, harvesting, threshing, irrigating lands, etc. Several of the farmers may leave the villages to another urban area or city where there is a preferable way to earn their living.

Giving up the work in villages to start it in other places (internal immigration), throws light on the fact that there are no facilities in rural areas to increase their modest income. For this reason, the governments try their best to make some projects in the rural areas to find suitable employment facilities in such areas.

In addition to the immigration from rural to urban areas there are groups of villagers that may possible work in other activities as follows :

- 1 - Cheese and butter making
 - 2 - Breeding cattle and poultry
 - 3 - Spinning of wool
 - 4 - Carpet making
- etc.....

RICE BRAN STABILIZATION EQUIPMENT

When small low-cost stabilizer is produced to be attached to small rice mills, there will be a good chance for the rice miller to produce stabilized bran of good keeping quality.

This bran will attract the owners of solvent extraction plants to purchase this stabilized bran even with prices which can be slightly higher than that usually paid for the untreated bran. In this case, several sites in the rural areas will use a simple technology to upgrade the cheap raw product. These sites where small-scale and low-cost stabilizers are found, will attract the villagers, whether unemployed or part-timers, to work in such new industry.

BENEFITS FOR RICE MILLERS AND WORKERS

The small rice miller will gain and increase his income year after year. The number of workers in the rural rice bran stabilization sites will rise. These two latter factors will improve the socio-economic status at the region which may constitute several stabilization sites.

BENEFITS FOR EXTRACTION PLANTS

Stabilized rice bran will be of value to extraction for producing an oil suitable for edible purposes. It is expected that the refining loss (R.L.) of the crude oil extracted will be in normal ranges. Thus if a crude oil with FFA% of 5 will be refined, it is expected that R.L. will reach 10%. This means that the lower the FFA content, the more profitable is the refining process.

Usually, the solvent extraction plants produce high acidity oil (20% FFA), its refining loss will be high too.

For this reason stabilization treatment of the bran will be of importance for solvent extraction industry.

TRANSPORT COSTS OF THE STABILIZED BRAN

Who will bear the costs of transport to the solvent extraction plant? It is expected that the extraction plant owners will have a plan to collect the stabilized bran packed in cheaper bags according to certain schedule at the same time from a number of stabilisation sites. The transportation costs will be reasonable if it is planned to collect the stabilized bran on feasible basis.

THE OIL QUALITY AND ITS UTILIZATION

The oil thus produced can be either sold in the market but with prices lower than those of the other conventional oils (e.g. cottonseed, soybean, corn oils ...etc.)

It can be blended with other oils at certain ratios of 10, 15 % ... etc. and thus substituting certain quantity of expensive oils which are usually imported from the international market. If the 8 mill tons of the rice bran product in rural areas in developing countries. are stabilised there will be 1.8 mill. tons of crude vegetable oil or 1.6 mill.tons (with 11.0% R.L. = 5.5% FFA) of edible oil could be made available for human consumption. It is known that most of the developing countries have a shortage of oils and thus they import them from the international market to meet their needs in the local consumption.

EXTRACTED RICE BRAN MEAL

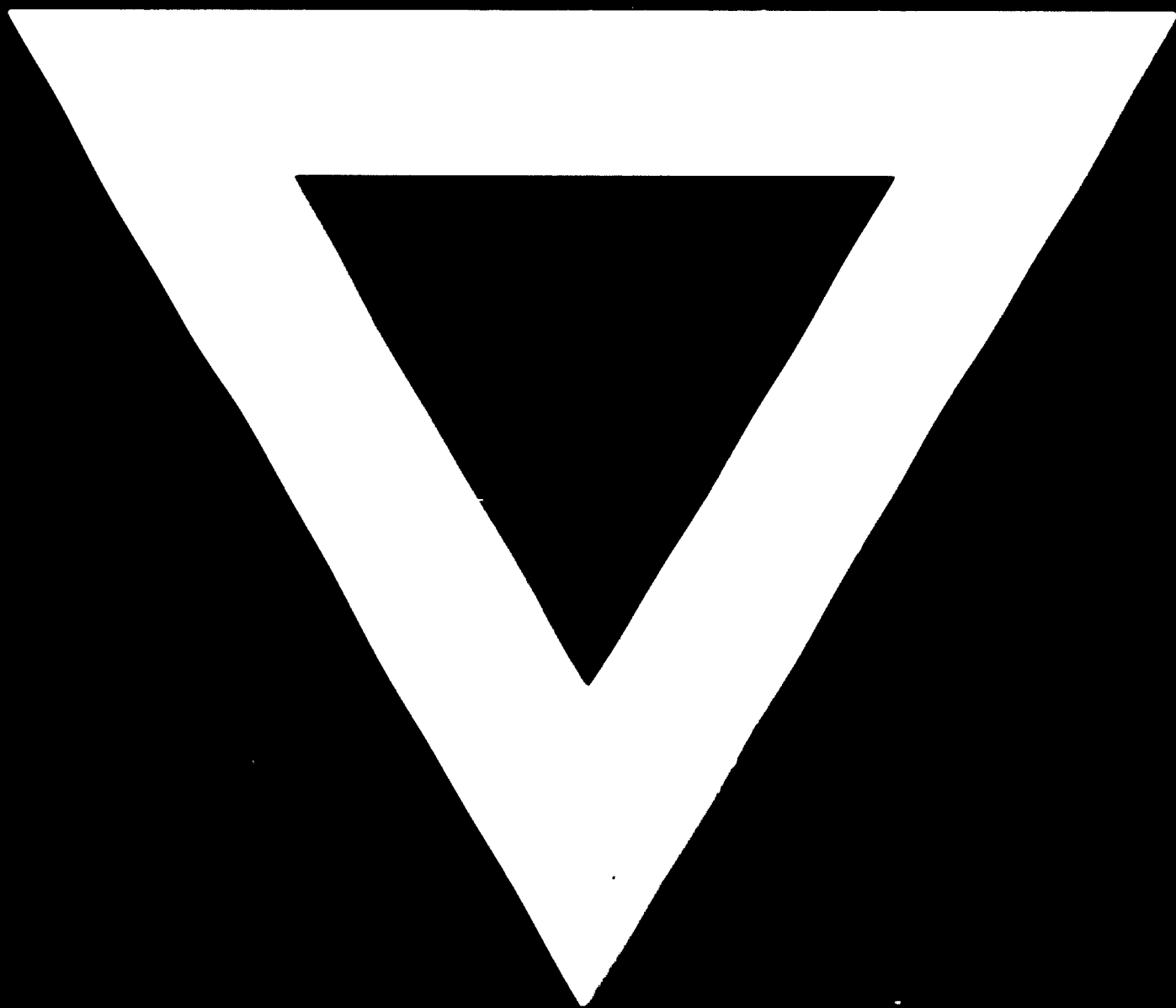
The extracted meal amounting to some 6 mill. tons can be used as an animal feed and for the preparation of protein concentrates for human consumption. The meals of some extracted seeds, especially soybean meals, are now used for the preparation of food proteins in different places.

This will create an opinion on the rural areas that stabilization process will provide :

- 1- Benefits for both the small rice millers and workers
- 2- Benefits for the owners of extraction plants to produce oil with low R.L. to find a good market
- 3- Benefits for the cattle and poultry breeder, since the high quality protein meal will give more and better production
- 4- Benefits for the country to utilize the edible rice bran oil in different industries to meet the requirements of local consumption.



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