

Seven point strategy for utilization of surplus rice

The Industrial Technology Institute (ITI) has proposed a 7-point strategy for the utilization of surplus rice in the country that has recorded a bumper harvest during the 2003 Maha season. According to available statistics, rice production after a major setback in 1996, improved steadily and has recorded a harvest of 1.93 million MT during this season. With the Yala harvest expected during August/September, it is anticipated that rice farmers will face an acute storage problem with the facilities available in 2002 being for just 2.86 million MT.

The present per capita consumption of cereal-based foods in Sri Lanka is about 150 kg. Of this the per capita rice consumption amounts to 100 kg while the balance 50 kg is met by wheat imports. Wheat imports for the year 2002 was 750,000 MT and it is thus obvious that there is a need as well as a possibility for the replacement of at least a portion of the wheat with rice and rice-based food products in order to decrease imports as well as for utilizing the surplus rice harvest.

The ITI then CISIR had the foresight to develop technologies to incorporate rice flour in bread and other bakery products as way back as the 1970s when there was surplus of rice in the country. This work was further strengthened with a UNDP/UNDO funded project in the early 1990s where with the acquisition of modern equipment, several rice-based products were developed. The CISIR also conducted several programs for bakers in different districts of the country to

popularize these technologies. However, even though these products were manufactured and sold successfully at that time the program could not be sustained due to the unavailability of a steady supply rice flour as well as due to the fact that rice production decreased significantly in the ensuing years.

The ITI 7-point strategy:

1. Incorporation of rice flour in bread and other bakery products

ITI has already developed the technology for the replacement of 10-20% of wheat flour in bread and other bakery products. Although the developed technology was transferred to several bakers in the island in the 1970s and subsequently in 1995, in association with the Department of Agriculture the program was not a success due to the unavailability of rice flour in adequate quantities. At present large scale rice millers have facilities to separate the broken-rice and this rice could easily be converted to rice flour that can be made available to bakers. This can be augmented with the excess stocks of rice, which are now available. With a 10% substitution of rice flour adequate quantities of rice will be used. ITI can play a major role in transferring the technology for the utilization of the rice flour.

2. Substitution of rice for maize in Thripasha

At present the Ministry of Health freely distributes the complementary food Thripasha for undernourished infants and pregnant and lactating mothers. The Thripasha is constituted from maize and soya. Preliminary studies carried out by ITI in collaboration with the Institute of Post Harvest Technology (IPHT) have indicated that maize could be substituted by rice to the extent of about 20%.

3. Use of rice for manufacture of a low cost infant cereal food ('Positha')

ITI has already developed the technology for the manufacture of a low cost cereal weaning food for infants and pre-school children using rice (over 50%) together with green gram and sesame. The product quality satisfies requirements as per international standards.

4. Replacement of imported Corn-Soy blend with rice-legume blends

The Ministry of Refugees, Rehabilitation

and Resettlement imports a corn-soy blend under World Food Program at present, for distribution amongst the under-nourished

ly use corn, for the manufacture of breakfast cereals that are at present imported, pasta products such as noodles & macaroni that are



population in Sri Lanka. A food with similar nutritional qualities could be prepared with rice and other legumes with the assistance of food manufacturing industries that are already manufacturing complementary food. Technologies for such products have already been developed by ITI.

5. Substitution of wheat flour with rice flour for commercial manufacture of string hoppers

Studies conducted by the ITI with UNIDO/UNDP assistance in the early 1990s identified suitable varieties of rice and have worked out the technology for preparation of flour suitable for string hoppers. Rice flour of the required quality can be prepared in bulk with the assistance of owners of large scale rice grinding mills and made available to hotels and fast food outlets where wheat flour based string hoppers are now prepared for sale.

6. Use for rice flour in other products.

The ITI has already developed technologies for the use of rice flour in the manufacture of extruded snack products that present-

ly use corn, for the manufacture of breakfast cereals that are at present imported, pasta products such as noodles & macaroni that are

7. Incorporation of rice flour in meals for estate workers

Estate workers popularly consume roti for more than one meal a day. Wheat flour is presently used for this preparation. Provision of a wheat and rice flour mix (25% rice flour) will not only provide a path for more utilization of rice but will also contribute towards better nutrition of the estate workers.

It must be stressed however that the ITI 7-point strategy can only be successfully implemented if the price of rice flour is competitive with that of wheat flour, as an appreciable price difference exists at present. This is definitely a drawback that will have to be rectified by policy makers. A focused plan for a centralized usage of broken rice will undoubtedly be one method of decreasing the price of rice flour. Yet another method

would be to utilize the waste rice bran from raw rice for food and feed manufacture. This bran, which is unstable, can be stabilized. A rice bran stabilizer has already been designed and fabricated at the ITI. There is also the possibility of using the rice bran from par-boiled rice in the manufacture of rice-based products. This bran that is presently used for animal feed is not only stable but will also contribute towards increased nutritional benefits.

It is also pertinent to mention that in 1995 as well, when there was bumper harvest of rice in the country the ITI (CISIR) conducted several programs for the use of rice flour in bread and other bakery products for bakers in different districts of the country and also for officers of the then Rice Processing Research and Development Centre (RPRDC). Even though the bakers made use of the transferred technologies and manufactured and sold the products successfully, the program could not be sustained due to the fact that rice production decreased significantly in 1996 due to adverse climatic conditions.

An 'Open day' on rice-based products has now been planned at the ITI auditorium at 363, Bauddhaloka Mawatha on 28th August 2003 where products made using rice with ITI developed technologies will be on display. This display will also emphasize the nutritional advantages and the benefits gained through substitution of rice with wheat. Pilot plant machinery that have been obtained through UNIDO/UNDP assistance such as a large scale rice grinding mill, a twin screw extruder that can be used for manufacture of extruded products such as snacks and breakfast cereals, a ribbon blender which can be used to mix rice and wheat flour and a noodle and pasta making machine will also be in operation. In addition, demonstrations will be continued during the day on the pilot plant bakery equipment use in the manufacture of rice flour based bread, biscuits etc.

All policy makers, industrialists and potential entrepreneurs are welcome to this 'Open Day' that will be held from 9.30 am to 4.00 pm on the 28th. More information can be obtained from Tel: 683127 and 697994.