

INSTITUTE OF POST HARVEST TECHNOLOGY

ANNUAL REPORT- 2013

Head office:

G-22 Ministry of Agriculture
"Govijana Mandiraya",
No:80/5, Rajamalwattha lane
Battaramulla
Sri Lanka.

Research and Development Centre :

Jayanthi Mawatha.
Anuradhapura,
Sri Lanka

Message from the Chairman

At present, post-harvest is become one of the most important subjects in the field agriculture in Sri Lanka. Because, it has shown less development in comparison to pre-harvesting practices of agriculture. Pre harvesting practices are well developed due to long time research and development effort. It can be clear that Sri Lanka reported higher agricultural productivity in comparison with other Asian countries. However, if it has higher productivity / yield, it will be wasted during the post harvest operations. It was estimated that post harvest loss of fruits and vegetables were 20-40% and it was 10-15% grains and pluses. Therefore, recently government give priority to minimize the post harvest losses of agricultural crops.

The Institute of Post Harvest Technology (IPHT) was established in year 2000 by the aim of minimizing post harvest loss and improving the quality of agricultural produce. IPHT was conducted tremendous number of research projects, training and development programmes for developing post harvest field in the country for past 10 years. Therefore, at present it has been created high demand for activities conducted in IPHT. In future it will be planed to expand the service of IPHT for better future in agricultural food production in Sri Lanka and the benefit will flow to the general public of this country which is the ultimate objective of IPHT.



Jagath Palitha Jayawarne
Chairman - IPHT

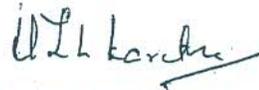
Message from the Director

The Institute of Post Harvest Technology (IPHT) has a major role to play in minimizing the loss of durable and perishable produce, in maintaining the quality and nutritional components and value addition of these agricultural commodities. The IPHT during the past few years has been reorienting its research programmes to reducing the current high loss of perishable commodities to more acceptable level by introducing rigid packages for transportation, after conducting several loss assessment surveys.

The research activities under taken by the institute are geared towards solving problems of direct application to industry. Our officers have worked hard towards minimizing loss in perishable commodities by designing and developing suitable packaging systems for fresh commodities, developing technologies to extend the shelf life fruits and tubers, control of postharvest diseases using GRAS chemicals. Moreover, several research programmes were conducted to improving and updating technologies used by rice and other grain industry and product development and waste utilization aspects.

This year IPHT widened its scope by conducting several development projects focusing effective technology disseminating, by which most of rural sector was benefitted to upgrade their income level by initiating self employments.

The IPHT needs to invest in human resource development and carry the critical mass of scientists and support staff required of an Institute of this nature, if it is to contribute effectively in the nations current and future development programmes. Given the necessary resources the IPHT will fulfill its role as a center for development adaptation and dissemination of post harvest technology for this country.



Dr.(Mrs)B.M.K.S.Thilakarathne
Director - IPHT

Institute of Post Harvest Technology
G-22, Ministry of Agriculture,
“Govijana Mandiraya”,
No:80/5, Rajamalwattha lane,
Battaramulla.
31 - 03 -2014

Hon. Minister of Agriculture
Ministry of Agriculture,
“Govijana Mandiraya”,
Battaramulla.

Hon. Minister,

ANNUAL REPORT – 2013

In terms of section 14(2) of the Finance Act No. 38 of 1971, I have the honour to submit to you the Performance Report and the Statement of Accounts of the Institute of Post Harvest Technology, for the year 2013.

Yours faithfully,

J.P.Jayawarne
Chairman
Institute of Post Harvest Technology

INSTITUTE OF POST HARVEST TECHNOLOGY

BOARD OF DIRECTORS

Name	Position	Attendance
Mr.Jagath Palitha Jayawarne	Chairman	06 days
Lawyer Gunarathne Gallage	Vice Chairman	05days
Dr. D.B.T.Wijeratne	Director	04 days
Dr.Nimal Disanayake	Director	02 days
Mr.Palitha Godagamage	Director	06 days
Mr. Ananda Abewickrama	Director	06 days
Mr.N.P.Sameera Hettiarachchi	Director	06 days
Mrs.Sumana Yapa	Director	05 days

The meeting were convened in the year on the following days

17/01/2013, 21/02/2013, 21/03/2013, 30/06/2013, 30/08/2013, 3/10/2013

AUDIT AND MANAGEMENT COMMITTEE

Name	Position	Attendance
Mrs.Sumana Yapa	Member of the Board of Directors of the IPHT (Chairman ,Audit and managemt Committee) Director,National Budjut Department	03 days
Mr.Gunarathne Gallage	Vice Chairman,IPHT	03 days
Dr.Mrs.B.M.K.S. Thilakarathne	Director –IPHT	03 days
Mr. R.K.A.P. Ramanayake	Additional Director (Admin. & Finnace) IPHT	03 days
Mr. R.M.D. Rathnayake	Internal Auditor-IPHT Convenor, Audit and Managemnt Committee	03 days
Mrs.M.K.I.Padmini	Asst. Auditor General Auditor Generals' Department Observer,Audit and Managemnt Commitee	03days
Mr.H.N.M.S.Herath	AuditManager	02 days
Mr.J.A.J.D.Perera	Auditor Generals department Observer,Audit and Management committee	01 day
Mr.W.K.L.E.Wallavita	Chief Internal Auditor Ministry of Agriculture Observer Audit and Managemnt Committee	03 days

The meeting were convened in the year on the following days:21/03/2013,30/07/2013,27/11/2013

OUR VISION

To be the Centre of excellence in Postharvest
Technology

OUR MISSION

To enhance productivity and facilitate competitiveness
of the agribusiness sector through Post Harvest
Research and Development.

INSTITUTE OF POST HARVEST TECHNOLOGY

ANNUAL REPORT - 2013

1. OVERVIEW

The Institute of Post Harvest Technology (IPHT), operating under the Ministry of Agricultural Development was established on 19th June 2000 by the Extraordinary Gazette of the Democratic Socialist Republic of Sri Lanka No. 1137/10 under the provisions of the State Agricultural Corporations Act. No. 11 of 1972 for the purpose of carrying out post harvest research and development activities pertaining to cereals, pulses, oil seeds, other field crops, fruits, vegetables and spice crops. The Institute has taken over the functions of the Rice Processing Research & Development Center (RPRDC) of the Paddy Marketing Board, which was set up with FAO/UNDP assistance in 1976. The Institute is regarded as the "apex" Institute in Sri Lanka where all areas of crop post harvest research and development activities, namely, harvesting, handling, storage and preservation, primary and secondary processing, product development, quality assurance and by-product utilization are carried out.

The Objectives of the Institute

According to the mandate given in the gazette notification, the Institute of Post Harvest Technology is supposed to serve as the coordinating body to bring together all agencies concerned for the purpose of identifying and prioritizing the research needs and implementation of programs for the development of the postharvest technology in Sri Lanka. The institute has to achieve the following objectives by conducting research and development activities pertaining to post harvest technology of perishable and durable food crops.

- a) Prevention of postharvest losses occurring in grains, field crops, fruits, vegetables and spice crops by introducing improved, cost effective technologies so that the incomes of the rural farming sector will be increased as a result of the increase in their marketable surplus. At national level, such measures would increase the quantity of essential food items available for consumption.
- b) Prevent the deterioration in quality occurring in grains, other field crops, fruits, vegetables, and spice crops due to adoption of improper postharvest handling, storage and processing techniques so that the quality of these essential food commodities reaching the market is significantly improved. Improvement of product quality will enable the farmers to sell their 'value added' produce at an attractive price in the competitive market and thereby increase their incomes from agriculture.
- c) Prevent the nutritional losses occurring in cereals, pulses and other food crops, fruits, vegetables, and spice crops due to use of improper postharvest techniques and thereby increase the nutritional status of the country.
- d) Improve farm level storage and preservation facilities to enable the farmers to sell their commodities during off seasons at attractive prices and thereby increase their incomes.

- e) Introduce improved postharvest techniques that utilize minimum labour in order to reduce production costs of agricultural commodities.
- f) Develop and transfer viable agro-based industries at rural level in order to increase income and employment opportunities of the rural farming sector and thereby improve their standard of living.
- g) Popularize the use of foods prepared from grains, pulses, fruits, vegetables, and spice crops among consumers in order to create a higher market demand for the local grain production. Increased consumption of these foods of high nutritional value will also lead to an improvement in the nutritional status of the country.

1.A brief account of IPHT activities.

Research activities

According to the research program for 2013, the research activities of the Institute, continued to solve technological problems confronting the postharvest industry, include both fundamental and applied research, although the latter predominates in the research efforts. During the year 2013, fourteen research projects(14) were initiated and three research projects were continued from year 2012. One project is funded by private sector. In addition to disseminating these research finding within the postharvest sector for it's improvement, the results of the studies were published in the proceedings of the Sri Lanka Association for the Advancement of Science, Institute of Engineers of Sri Lanka, Symposiums conducted by different universities and international journals. Following research projects were continued from year 2012 and carried out during diferent quarters of the year and completed.

On going reseach projects to 2012 to 2013

- a) Study of the use GRAS copounds to control post harvest diseases in tomato.
- b) Development of Murunga(*Moringa cleifera*) based products.
- c) Development of ready to use rice noodles.

Approved projects for the year 2013

- a) Evaluation of silo system for bulk storage of paddy
- b) Evaluation of present status of perishable transportation
- c) Study of feasibility of safe pakaging for fruits and vegetables transportation
- d) Initiation of cold chain studies to reduce post harvest losses
- e) Evaluation of losses by combine harvesters used for paddy harvesting
- f) Evaluation of handing practices and effect of hermatic conditions of coccons for storge of pulses and oil seeds
- g) Promotion of dehydration and freezing industry for fruit and vegetables
- h) formulation and popularization of extruded rice based products.
- i) Development of a vegetarian sausage
- j) Design and development of rasp millfor size reduction of maize.
- k) Enhancement of energy efficiency of Sri Lankan rice milling industry.
- l) Effluent management of rice processing industry.
- m) Survey of diet and food habits of people of CKD affected areas.
- n) Design development of a low cost hand operated grain flour blending equipment.

On going reseach projec to 2013 to 2014

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- p) Effluent masagement of rice processing industry.
- q) Survey of diet and food habits of people of CKD affected areas.
- g) design development of a low cost hand operated grain flour blending equipment
- h) Evaluation of losses by combine harvesters used for paddy harvesting
- i) Evaluation of the effect of lipid based edible coatings for shelf life extension of guava under refrigerated storage
- j) Study of feasibility of safe pakaging for fruits and vegetables transportation

Collaborative programs

The IPHT was able to arrange collaborative research programs with the National universities by providing the facilities for under graduate students to conduct final year research projects at the IPHT in the field of Agricultural Engineering and Food/ Postharvest Technology. During the period under review, one student from the universities of Ruhuna completed her final year research projects successfully under the supervision of IPHT research staff.

- a) Evaluation of rasp bar mill for Maize and corn flake production

Technology dissemination

During the year 2013 the IPHT conducted following development projects island-wide for effective dissemination of postharvest technologies developed by the institute. These projects were funded by Tresury.

- a) Establishment and modrnization of rice milling industry to improve quality of rice.
- b) Improvement of rice flour milling industry
- c) Initiation of rice based product manufacturing micro enterprises at rural level.
- d) Introduction of spice processing industry at rural level.
- e) Initiation of fruit based product manufacturing micro enterprises at rural level.
- f) Introduce of improved mobile stall for retail selling of fruit and vegetables.

Training activities

The training activities of the IPHT are production/ extension oriented, aimed towards updating the knowledge of producers, processors, traders and extension workers, from both public and private sector agencies, in the field of Post Harvest Technology of grains, cereals, root & tubers, fruits and vegetables. However, to a limited extent, research oriented courses were also conducted providing experience in the research methodology for students of universities and other academic institutions. The demand for IPHT's training increased significantly during the year 2013. During the year under report 61 residential training courses including study visits were conducted and 2105 individuals were trained. 52 non residential courses were conducted and 2959 individuals were trained. 297 non residential courses were conducted at field centres and 9288 individuals were trained.

Extension activities

Technology dissemination through field level extension work, which is one of the major activities of the institute, was continued during the year 2013. To ensure effective technology transfer activities to the large number of farmers collectors of fruits and vegetables and traders, ten (10) Field Centers were established at different district in island wide. Anuradhapura, Ampara, Polonnaruwa, Nuwara Eliya, Kandy, Lunama(Hambantota), Galle, Ambanpola (Kurunegala), Matara and Jaffna are the Field centers established under this programme.

The extension activities conducted in Ampara & Monaragala, districts covered by Ampara field center, Hambantota district activities by Lunama field center, Nuwara Eliya & Badulla districts covered by the Nuwara Eliya field center, Kandy district by the Kandy field center, Galle district by Galle field center, Kurunegala district by Ambanpola field center, Matara district by Matara field center and field extension activities of other districts including Vauniya, Mannar and Trincomallee Batticaloa, Ilinochchi, Jaffna and K were conducted by Jaffna field centre. The extension activities of Anuradhapura and Polonnaruwa districts were conducted through the Field Extension unit of the R&D centre, Anuradhapura and the extension division of the IPHT at Anuradhapura. During the period under review, 9288 farmers, processors, traders and extension workers, both from public and private sector organizations were trained under the IPHT extension programme.

Consultancy and advisory services

The IPHT has progressively been sought after for consultancy and advisory services by both public and private sector organizations, as well as the Cooperative sector, which are either directly or indirectly involved in postharvest operations. By providing these services, the institute was successful to provide 95 numbers consultancies in establishing several new processing plants, modernizing existing plants and to solve technological problems encountered by rice millers and food processors in their day-to-day operations.

Quality investigations

The Institute played an important role in exercising quality control of agro/food products in the country by analyzing samples received from both private and public sector

organizations for their physical and chemical quality. 45 samples were analyzed under the period of review.

Publications

During the year 2013, the institute continued to publish extension leaflets and handouts, to publicize the activities and new technologies of the IPHT. In this context, 24917 extension leaflets and handouts were distributed among trainees

Institutional development

Whilst continuing the primary activities of the institute, namely, research, training, extension, consultancy/advisory and other development activities in Post Harvest Technology to achieve it's goals and objectives, the 03 numbers of infrastructure facilities for research and development were improved during the period under review.

Summary

This report is a summary of the activities of the IPHT during the year 2013 and is bound to generate interest in the people who are concerned with the subject of Crop Post Harvest Technology.

2. HIGHLIGHTS OF RESEARCH ACTIVITIES

Research, being the main activity of the IPHT, was directed towards solving technological problems confronting the postharvest industry.

The following are some of the highlights of the research programs conducted by the IPHT during the year 2013

2.1 Completed research projects

2.1.1. Tresury funded projects

2.1.1.1 Postharvest technology of grains and cereals

2.1.1.1. A Design and development of rasp bar mill for size reduction of Maize

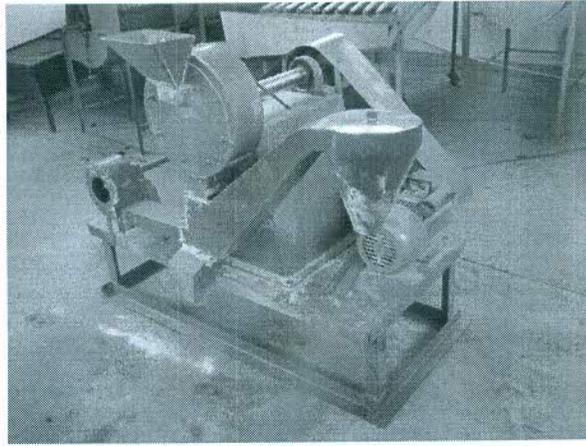


Figure 1. Rasp bar mill

Particle size affects any number of characteristics in the manufacturing process. Controlling the particle size helps to assure that the milled material will be consistent and repeatable with respect to Color, that is uniform particles assure batch-to-batch color consistency, secondly, Flowability that is critical to packaging, tableting, weighing, thirdly, Uniformity, that is consistent bulk density, fourthly, density - helps control shipping costs and minimize dust, fifthly Reconstitution, that assures the desired dissolution rate, sixthly, chemical reaction that is vital for uniform, controlled chemical change, finally, Taste that allows precise portion control for consistent taste. The aim of this project is to design and development of rasp mill for size reduction of maize seeds for different purposes. The fabricated rasp bar mill is capable of feeding maize around 60-180 kg/hr, delivering percentage of grits 60-90%, sieve effectiveness 90-100% at a power requirement of 800-1400 w, for different sieve perforation size. (i.e. 5, 6, 7, 8mm)

2.1.1.1.b Development of rice based novel snacks

In Sri Lanka, rice is consumed mainly as a staple food and commercial rice based food products are very limited and most are based on the wheat flour, which is imported. Therefore it is important to develop and introduce rice based products with respect to saving foreign exchange. Moreover, production of rice based food products is beneficial to increase the rice farmers' income by increasing value, and also considering the nutrition benefit to the human. Snack foods are a significant part of the food industry and commercial rice based snacks are very limited. Rice based snacks are very popular in foreign countries and they use low amylose and waxy rice varieties, because of its high puffing ability and soft texture characteristics.

The objective of this study was to enhance the utilization of rice grown in Sri Lanka by developing rice based snacks using local high amylose rice varieties. To achieve this objective studies were carried out to determine the most appropriate methods to produce puffed rice and rice flour suitable for different snacks and to develop puffed rice based cookie and a deep oil fried type cracker.

The study discovered that highly acceptable puffed rice based cookie and rice flour based deep oil fried cracker could be formulated with remarkable characteristics. The storability study revealed that puffed rice based cookie could be stored safely for more than three months in PP, and OPP/MCPP packaging materials and the deep oil fried cracker could be stored safely for more than three months in OPP/MCPP packaging material without altering the organoleptic characteristics.

2.1.2. Private funded projects

2.1.2.a. Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of paddy (*Oryza sativa*)

Studies conducted in Sri Lanka have shown that nearly 10% to 15% of paddy is lost during postproduction operations due to improper postharvest techniques. These studies also found, major component of these losses occurred during storage practices. Hermetically sealed cocoon storage method is one of the advance grain storage methods for commercial level storage. However, it has been found that very few research studies have been conducted in Sri Lanka in evaluation of its impacts in altering of physical properties and quality parameters of paddy under commercial scale hermetic (modified atmospheric) storage in local climatic conditions. Therefore, a research study was conducted by storing paddy in commercial scale hermetic storage conditions for 9 months and compared quality changers occurrence in paddy such as physical properties, milling characteristics and other quality parameters as against paddy stored in conventional warehouse. Moreover, oxygen level, temperature inside the hermetically sealed cocoon and warehouse were also measured. It was observed hermetically sealed cocoon took 6 weeks to reduce oxygen level from 20.5% to 3.2%. Temperature fluctuation inside the hermetic cocoon was very low in comparison with warehouse. Moisture content of initial paddy samples, warehouse samples and cocoon samples were not significantly different. Hermetically sealed cocoon paddy samples reported similar values as its initial values in terms of quality parameters such as impurities %, immature seed (*Bol*) % and damaged seed % after 9 months of storage. Whereas they significant changed in warehouse sample. Weight/mass loss of grain during storage period was significantly low in cocoon sample. Bulk density and paddy kernel hardness values were significantly reduced in both storage methods against its initial values. Rice kernel whiteness was preserved by sealed cocoon storage in comparison to conventional warehouse paddy storage. Germination percentage of paddy was significantly reduced from its initial value in both storage methods. Paddy kernel resistance against milling stress increased in hermetically sealed storage. Finally, it can be concluded that hermetically sealed cocoon storage has more advantages in comparison to conventional warehouse storage for large quantity commercial grain storage. However, hermetically sealed condition must be maintained throughout storage period to gain those advantages.

2.1.2.b Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of maize seeds (*Zea mays*)

Studies conducted in Sri Lanka have shown that nearly 13 to 18% of maize is lost during postproduction operations due to improper postharvest techniques. These studies also found, major component of these losses occurred during storage practices. Hermetically sealed cocoon storage is one of the advanced grain storage method for commercial level storage. And also many advantages reported in hermetically sealed storage method. Hence, This research is focus to study, the effect of modified atmospheric conditions of commercial cocoons for altering of physical properties and quality conditions of locally grown maize seed under local climatic conditions. Initial values of thousand kernel weight, bulk density, hardness, colour, immature seed%, damaged seed % and impurities %, of maize seed were compared with those values obtain after 8 months storage in two methods i.e. large quantity (more than 1MT) hermetic storage and conventional warehouse. Oxygen level, temperature

inside the hermetically sealed cocoon and warehouse were measured. Hermetically sealed cocoon took 2 weeks to reduce oxygen level 20.5 to 0.4%. Temperature fluctuation inside the hermetic cocoon was very low in comparison to warehouse temperature fluctuation. Moisture content of initial maize seed sample, warehouse sample and cocoon sample were not significantly change. Hermetically sealed cocoon maize seed sample reported similar values as its initial values in terms impurities %, immature seed% and damaged seed % after 8 months storages, however they were significantly change in warehouse sample. Change of thousand kernel weight maize seed during storage period was significantly low in cocoon sample. Bulk density and paddy kernel hardness values were significantly reduced in both storage methods from its initial values. Maize kernel colour was preserved by sealed cocoon samples in comparison to conventional warehouse storage. Finally, it can be concluded that hermetically sealed cocoon storage has more advantages to preserve seed quality characteristics in comparison to conventional warehouse storage for large quantity commercial storage. However, hermetically sealed condition must be maintained throughout storage period to gain those advantages.

2.1.3 Post harvest technology of oil seeds

2.1.3.1 Private funded projects

2.1.3.1. a. Performance evaluation of a screw type oil expeller for extraction of sesame oil

This study aims at evaluating the most common type of extractor available in the market with a view to improving its performance with maximum extraction efficiency achieved by sesame. Sesame, (*Sesamum indicum*) is one of the oldest and important oil seed crop in the world. The sesame seed apart from providing edible oil is also rich in protein. A study was carried out to evaluate the performance of a medium scale screw type oil expeller for extracting sesame oil. In fact, the mechanized medium scale method has not been previously applied in the oil expelling industry for sesame seed in Sri Lanka.

For this experiment, the popular screw type machine with 25 mm shaft pitch, 75x315 mm internal barrel and 4 kW three phase motor were used. The development was made in order to increase the oil expelling efficiency in terms of extract bar clearance, speed of the main spiral shaft and outer body closer to the exhaust out let. The optimum oil yield was 44% obtained under 0.2mm and 0.3mm barrel shaft clearance and the main spiral shaft speed of 75 rpm.

The quality of refined oil at maximum oil yield was analyzed out in terms of saponification value, free fatty acid and specific gravity. The results obtained for saponification value, free fatty acid and specific gravity were 182.33, 3.3.12 % and 0.917 gcm⁻³. respectively. Color of the sesame oil was closer to the yellow which revealed by the lightness value (L*) of 26 and positive value b of 8.27. The capacity and energy consumption per kilograms of refined sesame oil were 39kg/hr and 0.103kWh/kg. This study reveals that sesame oil could be obtained using the screw type oil expeller and it can be recommended for medium scale entrepreneurs relative to the traditional Sekku method.

2.1.4. Post harvest technology of fruit and vegetables

2.1.4.1 Treasury funded projects

2.1.4.1.a Application of Polysaccharide based Composite Film Wax Coating for Shelf Life Extension of Guava (var. Bangkok Giant)

The objective of this project is to find out the applicability of different concentrations of lipid based edible coating (wax) for shelf life extension of guava. The application of wax coating helps to extend the shelf life of picked guava by minimizing the weight loss due to natural migration process of moisture and gases. The present investigation relates to find out the applicability of different concentrations of edible coating (wax) for shelf life extension of guava, which include palm oil (3%), glycerol (30%), Sorbitan monooleate (tween 80) (2%) and guar gum (2%). The medium size fruits were harvested at correct maturity (green to yellow) and only disease and damage fruits were selected. The treatment solution was prepared by mixing wax formula with distilled water in 1:1 (T₁) and 1:2 (T₂) ratios and (T₃) kept as control without any treatment. The fruits were analysed for physiological weight loss, fruit firmness, titratable acidity, pectin content, pH, total soluble solid content and rate of respiration for 09 days storage. The consumer acceptability was evaluated by 30-panellist using 5 point hedonic scale. Among the treatments tested, wax solution mixed with water in 1:1 ratio (T₁) showed significantly higher performances ($p < 0.05$) compared to the other treatments tested. The selected treatment appeared to extend the shelf life of guava up to 09 days under ambient condition (29-32⁰C and 65%- 70% RH) with appreciable retention of all quality parameters tested.

2.1.4.1.b. Development of polysaccharide-lipid based composite wax formulation to enhance the storage quality of orange

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The objective of this project is to find out the effect of different concentrations of polysaccharide-lipid based edible coating (wax) for shelf life extension of citrus. quality of orange and its storage performance was evaluated. Orange after harvesting were washed with 200ppm chlorine solution and kept for air drying in shade at room temperature (25-30⁰C). The fruits were coated with different coating solutions ; Bee wax 0.5%,cassava starch 2%, corn oil 1% and sodium bicarbonate 1% (T₁); Bee wax 0.5%,cassava starch 2%, coconut oil 1% and sodium bicarbonate 1% (T₂) ; Bee wax 0.5%,cassava starch 2% and sodium bicarbonate 1% (T₃); Control(without coating) stored under ambient condition (29-32⁰C and 65%- 70%RH).The physicochemical and physiological characters (physiological weight loss, Total soluble solids contents (TSS), fruit juice content, ascorbic acid content and the respiration rate) of fruits were evaluated for 10 days storage and the coating formulations consist Bee wax 0.5%,cassava starch 2%, corn oil 1% and sodium bicarbonate 1% (T₁) showed a remarkable effects significantly ($P < 0.05$) to protect the physiological and biochemical characteristics of citrus. It extends storage life up to 10 days with appreciable retention of most of quality characteristics tested.

2.1.4.1.c. Study of the use of GRAS compounds to control postharvest diseases in Tomato (*Lycopersicon esculentum*)

A research was conducted to develop an eco-friendly, cost effective, non-hazardous postharvest and pre-harvest treatments to control Anthracnose and *Alternaria* rot diseases in tomato using GRAS chemicals, namely Sodium bicarbonate (NaHCO₃) and Ammonium bicarbonate (NH₄HCO₃). Postharvest treatments were conducted using 1%, 2%, 3%, 4% and 5% concentrations. Gras compounds were applied as dipping and spraying methods to tomato fruits. Pre-harvest treatments were done at IPHT research farm to select the best concentration of NaHCO₃ using 1%, 1.5%, 2%, 2.5% and 3% concentrations. 3% NaHCO₃ was applied to tomato flowers at 1, 2 and 3 weeks intervals after flowering. This pre harvest

treatments: applying of 3% NaHCO₃ to tomato flowers at above mentioned intervals was repeated at farmer field sin Anuradhapura and in Welimada areas.

The best postharvest treatment to control Anthracnose and *Alternaria* rot of tomato was to dipping of tomato fruits in 4% NaHCO₃. NH₄HCO₃ was not successful in controlling these diseases. But applying of 4% NaHCO₃ as pre-harvest treatment showed leaf burning of tomato plants. Therefore, 3% NaHCO₃ was found as the best concentration to control theses diseases. Spraying of 3% NaHCO₃ to tomato flowers at 1 week intervals showed as the beta pre-harvest treatment to control these diseases. This result was found in all the pre-harvest experiments conducted at IPHT model farm, Anuradhapura and Welimada farmer fields. Anthracnose and *Alternaria* rot of tomato can be controlled by dipping tomato fruits in 4% NaHCO₃ and also spraying 3% NaHCO₃ to flowers at 1 week intervals after flowering.

2.1.4.1.d. Evaluation of present status of using safe packages for perishable transportation

Fruit and vegetable cultivation plays a major role in the Sri Lankan economy. But one of the major problems in this sector is the high post harvest loss of about 30-40% which directly contributes to low income earned by farmers as well as high market prices for the consumers. Nearly 75% of the total loss is during transportation and mainly due to use of improper packages. In order to minimize this loss, the Institute of Post Harvest Technology (IPHT) conducts a development project since 2006 to promote suitable packaging methods and transportation for reduction of post harvest losses in fruits and vegetables in which plastic crates had been introduced at subsidized rates. And recently various other governmental and non governmental organizations also initiated popularization of using safe packages for fruit and vegetable transportation. The government then passed a rule in making the use of safe packages for transporting fruits and vegetables compulsory. Therefore, this study was conducted to assess the present status of the use of safe packages for fruit and vegetable transportation and to identify stages and types of safe packages used as well as the benefits and constraints of using safe packages in transporting perishables.

Data were collected using a pre tested questionnaire from farmers, collectors, transporters, whole sellers, retailers and consumers from Anuradhapura, Colombo, Matale, Nuwara Eliya, Puttlem, Badulla, Hambanthota districts based on major economic centers situated in these areas. Further data were collected using visual observations, key informant interviews and using secondary sources as well.

The study revealed that all beneficiaries were aware of the benefits such as prevention of losses, quality retention, etc. in using safe packages in perishable transportation. Unlike for vegetables safe packages were being used for packing and transporting fruits such as mango, papaya and guava. Mostly used safe packages were plastic crates, corrugated fiber board boxes and wooden boxes. The use of safe packaging was limited due to many constraints and limitations. Most common were unavailability of plastic crates for purchase, high cost of transportation, less amount of load able to be transported per journey, no assured mechanism of returning of safe packages when moved through the supply chain.

2.2 Research projects published in 2013

Following research projects completed in 2013 were published in different sources of scientific journals as mentioned below.

Local Journals:

Bandara, D.M.S.P, Dissanayake, T.M.R, Rathnayake, H.M.A.P, Swarnasiri, D.P.C,
 “Performance Evaluation of a Screw Type Oil Expeller for Extraction of Sesame Oil”

Proceedings of the International Symposium on Agriculture and Environment
2013, University of Ruhuna Sri Lanka, pp 103-106

Chandrajith, U.G., Bandara, D.M.S.P., 2013 Process development of Goraka powder.
Proceedings of The Young Scientist Forum Symposium

Dissanayake, C.A.K., De.Silva, S., Wasala, W.M.C.B., and Thilakarathne. B.M.K.S., (2013). Women Empowerment Through Self Reliance Approach in the Rice Processing Village Programme. Tropical Agricultural Research, Vol. 25.

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Dissanayake, T.M.R., Verma, R.C., Sharma, G.P. (2013), Development of Mango Dicer for Agro-Process Unit in India, Proceedings of The Young Scientist Forum Symposium,

Gunathilake D.M.C.C. Thilakarathne B.M.K.S.¹Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of paddy (*Oryza sativa*) Proceedings of International symposium 2013., Faculty of Agriculture, University of Ruhunu, Sri Lanka.

Gunathilake D.M.C.C. Thilakarathne B.M.K.S.¹Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of Maize Seeds (*Zea mays*) Proceedings of 69 th annual session, SLAAS 2013 Sri Lanka

Jayawardene, H.S., Thilakarathne, B.M.K.S., Wijewardane, R.M.N.A., Dissanayake, C.A.K., Rathnayake, R.M.R.N.K., 2013. Development of rice based ice cream and determination of its quality parameters., International symposium on Agriculture and Environment 2013, University of Ruhunu, pp 47-49.

Wijewardane R.M.N.A. , Karunathilake K.N. , Jayawardana N.W.I.A., Thilakarathne B.M.K.S. , (2013). Evaluate the effect of lipid based edible coatings for shelf life extension of guava under refrigerated storage. Proceedings of the YSF symposium

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Wijewardane, R.M.N.A. (2013). Development of polysaccharide-lipid based composite wax formulation to enhance the storage quality of orange. J. Agric. Technol. Vol. 9(2):349-356

Wijewardane, R.M.N.A. (2013). Application of polysaccharide based composite film wax coating for shelf life extension of Guava (Var. Bangkok Giant). J. Postharvest Technol. Vol. 1(01):016-026.

3. TECHNOLOGY TRANSFER

The development projects carried out by the IPHT during the year 2013 in order to ensure technology adoption, and their impact on the postharvest industry are described below:

3.1 Development projects under the Treasury funding.

3.1.1 Introduction of an improved mobile stall for retail selling of fruits and vegetables

Fruits and vegetables suffer 30-45% heavy losses of total production due to use of improper postharvest practices in Sri Lanka. It was estimated around 15% to 20% losses occurred at retail selling. Therefore, provisions of proper conditions i.e. low temperature and relatively high RH at retail selling improve the quality and shelf-life of fruits and vegetables. Improved mobile stall maintain favorable conditions for extent shelf-life of fruits and vegetables. An ice bath is used in order to cool the products. 15kg of Ice cubes per day was required to maintain the cool temperature around 23C^o - 24 C^o inside the mobile stall. And also RH 85% to 95% condition was maintained while ambient temperature was observed around 33C^o and RH 65% to 80%. Fruits and vegetables can be kept for seven days without quality deteriorations in improved stall where control samples withstand only three days. Finally it can be concluded that improved retail mobile stall can extend the shelf life of selected fruits and vegetables while minimizing the postharvest losses.

Under this program on year 2013, we trained 362 personals of beneficiaries about this technology

3.1.2. Initiation of Rice and Rice Based Products Manufacturing Micro-Enterprises at Rural Areas

This development project was started to popularize and initiate rice based food items such as rice cake, biscuit, bite (Murukku) and rice flake based food items. Consumption of rice based above food items are very low due to lack of knowledge. Technical knowledge was transferred to trainees with practical demonstration under the each training program.

Twenty training programs were conducted in nine districts such as Anuradhapura, Ampara, Galle, Matara, Kandy, Kurunegala, Puttlam, Vavuniya and Nuwaraeliya. 737 beneficiaries were trained under above twenty programs. The development project was completed with 97 % financial progress in 2013.

3.1.3. Modernization, establishment of rice mills to improve their rice quality

Rice quality improvement will become even more important in the future with Sri Lanka, like most other countries, entering into international as well as regional trade agreements and thereby opening its market to the outside world.

A recent survey conducted by the IPHT on quality of locally produced rice available in the open market has revealed that the rice quality produce from most of the rice mill is below the requirements of SLS standards.

The main factors contributing to reduction in rice quality are presence of high amounts of broken grains, paddy seeds, type admixture, impurities, damaged and discoloured grains and non-uniformity in bran removal or moisture percentage..

Taking in to consideration the importance of increasing rice recovery levels and improving rice quality in local rice mills, the Institute Post Harvest Technology (IPHT) has embarked on

a program to improve the processing techniques of existing rice mills through following activities:

Identification of deficiencies of the techniques presently adopted in the process line, Conducting a series of training programs on improved rice processing techniques, Increase the knowledge to machinery selection, proper maintenance of machinery, selection of raw materials, proper storage techniques etc. are the main activities.

As well as assisting the rice millers in the preparation of feasibility reports, Provision of process layout plans, machinery and building requirement, Continuous monitoring the performance of the mills also included in the program.

Under this program, in 2013 , IPHT has developed 22 rice mill by giving only technical advice. Arrangement of proper process line, installation new machinery like de-stoner or grader, improving parboiling technique and drying facilities are major activities conducted in these rice mills. Anuradhapura, Ampara, Kurunagala, Puttlum and Polonnaruwa are the main area that have been considered for development.

3.1.4. Improvement of rice flour milling industry.

Institute of Post Harvest Technology (IPHT) has been engaging in research, training and other development activities on production of rice flour and contributes to solve problems in rice flour industry by giving all technical supports. The project “Improvement of rice flour Industry” is such main project that IPHT is engaged to achieve above task. Under this project Rice flour processing units are established by encouraging prospective persons to initiate new rice flour processing units and modernize the existing rice flour processing units as they can be able to produce high quality rice flour.

During 2013, five awareness programmes on “high quality rice flour milling” were conducted in Mawanella, Thissamaharamaya, Chilaw, Maho and Ampara under above development programme. 190 participants were trained. Total expenditure was Rs. 79259.00. Thirty one flour mills were established/modernized in the period concerned.

3.1.5. Introduction of spice processing industry at rural level

In this project in 2013, we could transfer the technology to the entrepreneurs who need to establish this industry and those who need to upgrade their present available industry. During the year 2013, we could cover the different district organizing training programs such as Mathara, Gall, Chillaw and Ampara. At each and every place we did lectures on how to process spice product and how to pack in qualitatively along with the practical demonstration and printed books. There are many request received from different areas and we managed to organize the limited programs in limited budget allocation. There were 347 participants for the all four sessions in four districts.

3.1.6. Initiation of fruit-based products manufacturing micro enterprises at rural level

Fruit and vegetables play a vital role in human nutrition, especially as sources of vitamins, minerals, dietary fiber and antioxidants and increased consumption of variety of fruits on a daily basis is highly recommended because of associated health benefits. Although, agro climate in Sri Lanka is suitable for a wide range of tropical subtropical and some temperate fruits which have a high market potential, 30-40% of the harvest is lost at the postharvest stage due to improper supply chain and value chain activities. This amount could have been

used in reducing poverty, hunger, and malnutrition and also it can be used to increase export earnings of the country. On the other hand, low income level due to lack of knowledge on income generating methods in rural farming sector is another key issue which should be addressed immediately.

In this context, this project aimed to develop appropriate systems for improved handling and processing of fruit produced in rural areas hence, the objective of this project was initiation of income generating agro-based micro enterprises at rural level while improving handling and processing practices of fruits which ultimately leads to minimization of postharvest losses of fruits.

At the first, farming communities were selected in eight districts, namely, Anuradhapura, Polonnaruwa, Kurunegala, Hambanthota Moneragala, Jaffna, Manna and Nuwara-Eliya. Thirteen training programs were conducted. This project was conducted under “Api wawamu-Rata Nagamu” program of the Ministry of Agriculture

3.2 Student Project

a) Evaluation of rasp bar mill for Maize and corn flake production

Maize (*Zea mays*) is an important coarse grain cereal crop grown and maize milling is one of the arising agro-based industry in Sri Lanka at present. After shelling, maize gritting is the first step of dry milling which, leads to separation of bran and germ from the endosperm and passing through the screen. Electrically operated small scaled Maize Rasp Bar Mill has been developed by Institute of Post Harvest Technology which was evaluated by this study. Cornflakes are a popular breakfast cereal which does not commercially produce in Sri Lanka due to practical barriers and a study was conducted to find a practically sound methodology for cornflakes production. Performance evaluation was tested under four criteria and optimum moisture content for gritting was identified. Results indicated that storing moisture content (8% to 11.5%) is suitable for milling without causing significant influenced to the grits yield. Gritting efficiency was ranged nearly 54% to 66% without causing greater variation among the sieves. Feeding capacity was positively related with the perforation size of the sieve, ranged around 45 kg/hr to 136kg/hr. Power requirement was negatively related with the perforation size of the sieve, ranged around 0.0141 kWh/kg to 0.0461 kWh/kg. Sieve effectiveness of all 4 sieves was around 99%. Method includes steps of pressure cooking, drying, manual flaking and toasting was identified as most suitable methodology for cornflake production leading to a resource need of appropriate corn flaking machine for large scale production.

3.3 Introduction of improved of postharvest techniques

The following improved postharvest techniques were introduced to farmers island wide through field extension programs of the IPHT during the year 2013:

Improved postharvest technology	No.
a. IPHT rice parboiling vessel	98
b Mobile vegetable stalls	01

c. Tamarind pulping Machine	01
d. IPHT Hand operated maize sheller	02

4.0 TRAINING

The demand for training, especially from private and cooperative sector organizations, was continuously increasing during the period under review. The training courses conducted by the Institute were production/extension oriented, aimed towards technology transfer to personnel engaged in postharvest operations

A large number of farmers and farmwomen were also trained in collaboration with the Department of Agriculture, Provincial Councils, NGOO and Mahaweli Economic Agency.

4.1 Details of the training programs conducted:

61 were short term residential training courses of duration 1 to 6 days and 52 study visits and 297 were non-residential training/demonstrations courses conducted for farmers, traders and small and medium scale processors at Field Centres located in Ampara, Nuwara Eliya, Kandy, Ambanpola (Kurunegala), Anuradhapura, Pollonnaruwa, Galle, Matara, and Lunama(Hambantota) Vavniya and Jaffna.

a) Inplant training

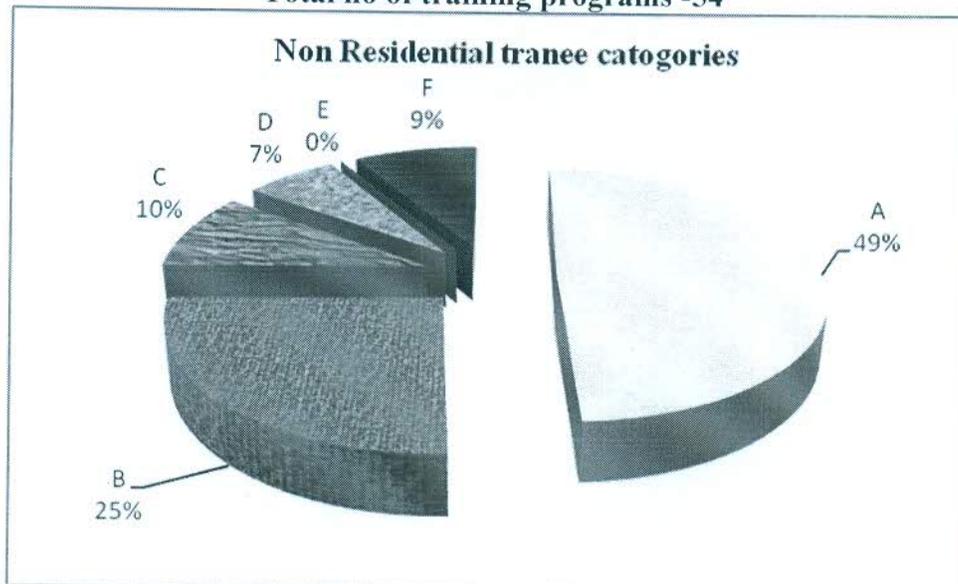
Four undergraduate students from Engineering Faculty university of Peradeniya were trained on machinery and postharvest technology during November 2013 to January 2014. In addition, two students were trained on Post Harvest Technology from Faculty of Agriculture, University of Jaffna from 21 st October to 1 st November 2013. Three students from Vocational Training Authority, Anuradhapura and Thambutegama were reported for training on 10/12/2013, 02/12/2013, 23/10/2013 and training period will be 6 months. One student were trained under the workshop machinery from Vocational Training Authority, Anuradhapura was reported on 11/02/2013. One student from Vocational Training Authority, Anuradhapura was trained on computer application from 20 th December 2012 to 20 th June 2013. One student from Vocational Training Authority, Anuradhapura was trained on computer application from 24 th October 2012 to 24 th April 2013. One student from Technical college, Anuradhapura, was trained on the computer application from April 22, 2013, to October, 23, 2013. One student from Advanced technical Institute, Nainwala was trained on Post Harvest Technology from March 2013 to 6 months.

b) Residential training:

During the year 2013, 61 short-term residential training courses were conducted and 2105 persons were trained in various disciplines of Postharvest Technology and the details are given in Fig 2.

FIG1:NON RESIDENTIAL TRAINEE CATEGORIES_OF IPHT IN THE YEAR 2013
TOTAL NUMBER TRAINED_2845

Total no of training programs -54



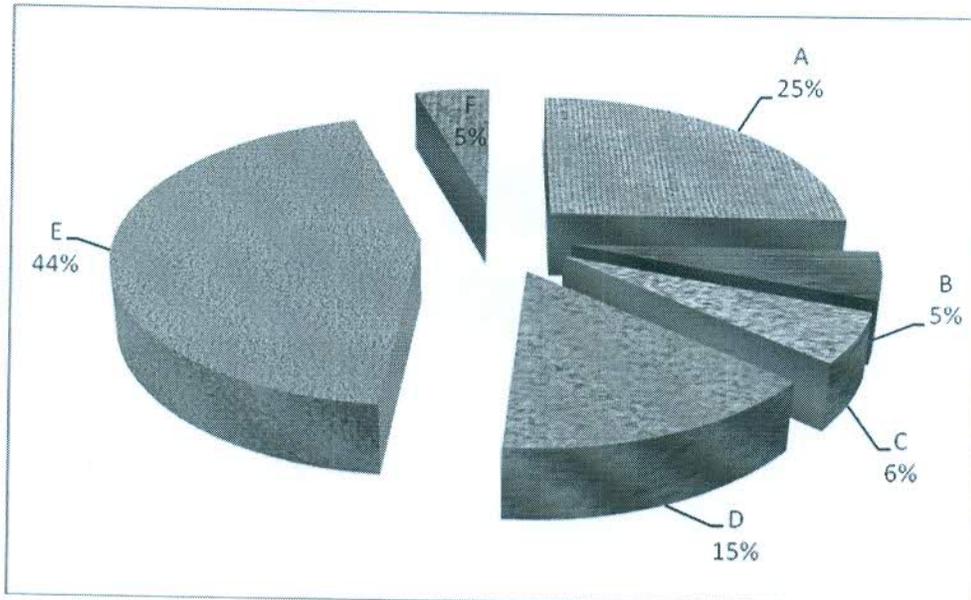
Trainee categories:

- A. Farmers, farmwomen and members of farmer organizations -1401(49%)
- B. Project beneficiaries and small/medium scale entrepreneurs -725(25%)
- C. Fruit and vegetable growers,Collectors,Traders, Rice and other grain processors-280 (10%)
- D. Extension Officers from public, co-operative, private sectors and NGO-189(7%)
- E. Students from Secondary schools, Universities, Schools of Agriculture and Technical Colleges -0(0%)
- F. Bakery owners.-250(9%)

FIG2: RESIDENTIAL TRAINEES OF IPHT

Total number of trainees- 2118

Total no of training programs -63



- A. Farmers, farmwomen and members of farmer organizations- 538(25%)
- B. Project beneficiaries and small/medium scale entrepreneurs-112(5%)
- C. Fruit and vegetable growers,Collectors,Traders, Rice and other grain processors-118(6%)
- D. Extension Officers from public, co-operative, private sectors and NGO- 316(15%)
- E. Students from Secondary schools, Universities, Schools of Agriculture and Technical Colleges-935(44%)
- F. Bakery owners.-99(5%)

c) Nonresidential training, Field level training / demonstrations

During the year 2013, the 297 non- residential training, field training programmes and demonstrations were conducted and 9288 individuals were trained. During the period under review, the institute continued it's technology transfer activities through its Field Centres effectively especially in major crop producing areas. The feild centres are located in Ampara, Nuwara Eliya, Abanpola (Kurunegala district), Kandy, Lunama (Hambantota District), Anuradhapra, Polonnaruwa Galle, Matara and Jaffna..

4.3 Participation in Exhibitions

The IPHT participated in three exhibitions held island wide during the year 2013 as follows:

- a)'Dayata Kirula Exhibition at Hardy technical college premises of Ampara district from 23-30 th March 2013..
- b) "Garbage free country-Envioronmental friendly Future" Exhibition at Deniyaya National school from 21 st May and 22nd My 2013.
- b)"2013 Farmers week" Exhibition at Wariyapola from 06 th July to 10 th July 2013
- b) "Ag-Biz-2013 North Exhibition" at Central College grounds, Kilinochchi from 26 July to 28 th July 2013
- c) "Ag-Biz-2013" exhibition at Bandranayka Memorial Internationl Convention Hall (.BMICH) from 23rd August to 25 th August 2013
- d) "Reflection of Sri Lanka"an Exhibition on Trade, tourism & Investment from 13th to 17 th November 2013

e) "Sahasak Nipaum" at Bandranayka Memorial International Convention Hall (.BMICH) from 30 th November to 02 nd December 2013

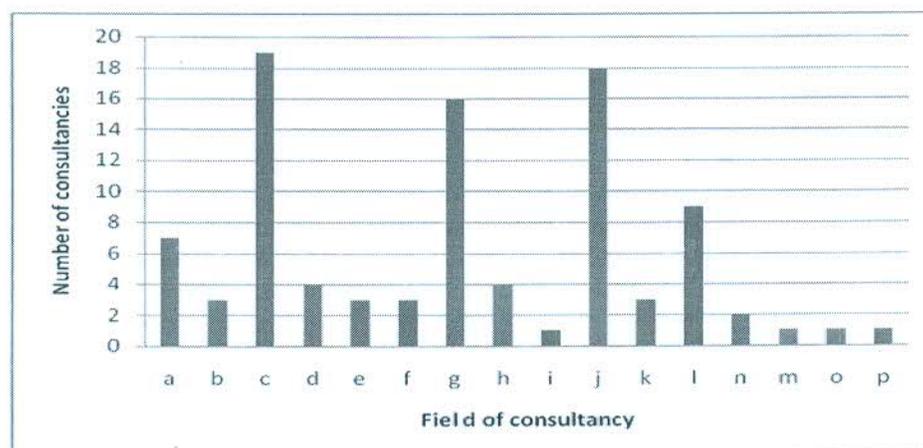
5. CONSULTANCY AND ADVISORY SERVICES

5.1 Number of consultancies carried by IPHT staff

During the year 2013 institute invented new postharvest technologies and those technologies could be send to the entrepreneurs to enhance their technologies accordingly, as a result seventy one (85) new investors, private rice millers, mill owners, co-op societies, private traders, NGO's and individuals engaged in different postharvest activities in the country have sought the assistance of the IPHT to establish new mills, to modernize already existing mills, to establish food processing plants, to establish drying units, to construct new storage structures and to solve technological problems pertaining to other postharvest activities.

The details of consultancies completed by the IPHT during the year 2013 are given in Fig.3.

Figure 3. The details of consultancies completed during the year 2013



Field of consultancy:

a. Establishment of rice processing plants	07
b. Rehabilitation and modernization of existing processing plants	03
c. Rice and other flour processing	19
d. Information on rice/grain/spice processing technology	04
e. Grain storage and construction of ware houses	03
f. Quality control and grain procurement	03
g. Drying of chili, fruits and vegetable, spices, grains/herbals	16
h. RPRDC/ IPHT postharvest machinery and equipment	04
i. Rural level rice processing	01
j. Production of rice /grain based products and weaning / infant foods.	18
k. Machinery and equipment evaluation	03
l. Processing of fruits and vegetables	09
m. Information on crop postharvest technology	02

n. Information on noodle production technology	01
o. Food packaging	01
p. information on food technology	01

Details of importnt consultancies

Consultancies carried out by Dr.B.M.K.S.Thilakarathne,Director,IPHT

- a) Assess the technical capacity and feasibility of quality upgrading of 04 large scale rice mills owned by the MPCs officers and 24 small scale rice mills owned by the millers in Kilinochchi and Mullative Districts and carried out related training programs on 29th July 2013.
- b) Advices on pest controlling of paddy and rice to M/s CBL foods international (pvt)Ltd.Habarakada Road,Ranala on 21/05/2013
- c) Information on Annual report-2012 was supplied to Dr,M.Z.M.Aazim,Deputy Director,Economic research division,Centrel Bank of Sri Lanka on 07/02/2013.

Consultancies carried out by Mr.D.P.C.Swarnasiri,Additional Director,IPHT

- a) Information on rice flour mills and number of training carried out was supplied to Mr.D.Sivanadan,Additional Secretery,Ministry of Co-operatives and Internal trade,colombo on 07/03/2013.
- b) 28 rice samples were subjected to rice milling quality assesment as a minor research part of a M.Phill research student from Faculty of Agriculture, University of Peradeniya on 22/03/2013.
- c) Information was supplied on Rice cream to Mr.Ananda Marapana,Meedeniya,Hettipola on 12/04/2013 and Mr.W.A.Sumathipala,Secretary,"Susitha Hawula",Miris Wattha,Kumburu Pitiya on 04 /06/2013.
- d) Drawings for a ash chamber was issued to Mr.K.P.Dingiri Banda,Nilanthi Rice mill,Nallachchiya,Thambuthagama on 23/04/2013.
- e) information on Rice based product was supplied to Mr.Shantha Wijesuriya,Lakeside Wattha,Walpola,Batuwattha on 04/06/2013.
- f) Assess the technical capacity and feasibility of quality upgrading of 04 large scale rice mills owned by the MPCs officers and 24 small scale rice mills owned by the millers in Kilinochchi and Mullative Districts and carried out related training programs on 29th July 2013.
- g) Specification on processing Machinery for white pepper was provided to the Assistant commissioner for Co-operative Development, Department of Co-Operative Development,Uva provincial council,Kappetipola Road,Badulla. on 14/10/2013.
- h) Information on requirments of production of quality parboiled rice was supplied to Director,Hector Kobbekaduwa Agrarian Research Institute,Colombo 07 on 07/11/2013.
- i) Valuation of Two Paddy Marketing Board namely Ambilipitiya and Hasalaka Rice mills were carried out on 10-12/12/2013.
- j) Advices on fruit preservation was supplied to Mr.D.Damayantha Puspakumara and Mr.E.M.L.Ekanayakefrom Eppawala on 04/07/2013
- k) Laboratory analysis reports were issued to Mrs.P.S.M.Charles, Government Agent, District Secretariat, Baticaloa. on 05/12/2013
- l) Information on Nutritional facts of rice consumed were provide to Miss H.L.A.A.Lunuwilage, Central College, Anuradhapura on 14-15/10/2013.
- m) Information on Postharvest industry and parboiling process to Ms.Edirisingha Nadeeshani,No:83, Poramba, Ambalangoda on 18/02/2013.

- n) Advices on pest controlling of paddy and rice to M/s CBL foods international (pvt)Ltd.Habarakada Road,Ranala on 21/05/2013
- o) Information on requirment for a rice plant to Mr.W,Roshan Fernando,No 28,Thammita Road,Negambo on 27/03/2013
- p) Information on paddy storage was provided to Mr.M.Thilakarathne,Mashishan road,Thisa wewa,Anuradhapura on 31/01/2013.
- q) Information on spice processing was provided to Ms Dayani A.Karunarathne,Horowpathana on 13/02/2013.

Consultancies carried out by Mrs.D.P.Senanayaka,Principal Mechanical Engineer,IPHT

- a) Information on requirments of production of quality parboiled rice was supplied to Director,Hector Kobbekaduwa Agrarian Research Institute,Colombo 07 on 07/11/2013.
- b) Demonstration on newly introduced paddy cleaner was carried out to Mr. B.G.Nandasena, "Sena"grinding mills,B.O.P.400,Pulasthigama on 29/10/2013.
- c) Infromation was supplied to Mr.U.M.Najeeb, on designing of fluidized bed dryer and method of heat supply from No 73.AliyarMavulavi Road,Ninthavur 12. on 01/04/2013
- d) Advices and drawings on a paddy dryer were supplied to Mr. P. A. N. Senarathne, Moragollagama on 12/02/2013.

Consultancies carried out by Mr.H.M.A.P.Rathnayake,Senior Mechanical Engineer,IPHT

- a) A valuation report for rice/grain/spices processing plant was issued to Eppawala Multi purpose co- operative society on 17/01/2013.
- b) A list of Equipment,workshop machinery,post harvest machinery and laboratory equipment was supplied to Technical college,Anuradhapura on 19/01/2013.
- c) Drawings for a ash chamber was issued to Mr.K.P.Dingiri Banda,Nilanthi Rice mill,Nallahchiya,Thambuthegama on 23/04/2013.
- d) Advisory services were extended to Karachchi South MPCS(pvt)Ltd. by inspecting the process of up grading the mill on 25/07/2013.
- e) Valuation of Two Paddy Marketing Board namely Ambilipitiya and Hasalaka Rice mills were carried out on 10-12/12/2013.
- f) Information on dryers and destoners were supplied to Mr.A.A.C.Amarasinghe from 20/A,Pahala veediya, Mawatha,Yakkala on 20/03/2013
- g) Advices on production of quality rice was supplied to Sampath Ravindraguptha,Abeysinghe from Dangolla Wattha, Udawela,Ibbagamuwa on 17/04/2013
- h) Advices on setting up a proper coconut oil mill was provided to Mr.S.Vasudev from ILO,No.30, Temple Road,Kinmarkadi,Vavniya on 08/03/2013
- i) Advices on Paddy Parboiling was supplied to Mr.A.M.L.Adikari, No:26,15 th Post,Gammadda,Eppawala on 27/09/2013.
- j) Information on Grain based product manufacturing to Mr.U.B.Abeykoon, "Mahajana" Hardware,Rambawa on 10/09/2013
- k) Information on fruit Juice production to Mr. C. C. Chandrasekara, "Indunil" multi Centre,Rambawa on 10/09/2013.
- l) Infromation on grain processing machinery to Mr.N.Jayarathne, Danapala Hardware,Rambawa on 10/09/2013
- m) Advices on the Machinery required for Rice flour and String hopper flour production to Mr.D.M.D.L.Anuradha Dissanayake from "Dilan"Rice mill,Ihalahalmillawa,Eppawala on 09/09/2013
- n) Information on rice milling was supplied to Mr.K.K.P.M.Thilakarathne,from no:21/110/061,Dadagamuwa,Veyangoda on 02/09/2013.

- o) Advices on Rice flour Machines to Mr.W.M.J.S.Wasala,from Gribawa Galgamuwa
- p) Information on paddy Parboiling was supplied to Mr.I.M.S.Anura Shantha from 258, Townhall place, Anurdhapura on 01/08/2013
- q) Advices on Capacity of paboiling and processing was supplied to Mr.I.M.Jayarathna, Eliya Divul wewa, E ppawela on 12/07/2013
- r) Information on rice processing equipment and machinery was supplied to Mr. . M.Rathnayaka, no240, Door 4.Lolugawawa, Galnewa on 26/06/2013
- s) Technical Advice for establishment of a rice mill to Ms. G. T. K. Kumudini, No 31, Nugasewana, Bulnewa, Galnewa on 26/06/2013.
- t) Advisory services were extended to Karachchi South MPCS(pvt)Ltd. by inspecting the process of up grading the mill on 25/07/2013.
- u) Infromation on paddy drying to Mr.A.G.N.L.Athula from Hendiyagala, Sandalankawa and Mr.R.M.Nalin from Janthurawela, Yogyiana, on 03/06/2013
- v) Infromation was supplied to Mr.U.M.Najeeb, on designing of fluidized bed dryer and method of heat supply from No 73.AliyarMavulavi Road, Ninthavur 12. on 01/04/2013
- w) Advices on rice processing to Mr.M.L.M.S.Madawaththa, No78, Seevali Pura, Padavi Sri-Pura on 07/02/2013

Consultancies carried out by Mr.B.D.M.P.Bandara, Mechanical Engineer, IPHT

- a) Advices on string hopper flour production and hopper flour production were supplied to Mr.H.P.D.Ranathunga from Pawakkulama ,Hidogama on 14/03/2013.
- b) Advices on rice flour production was provided to Mr.W.G.Kulathunga, from No 42C.&7th Canal Hidogama on 13/03/2013
- c) Information on paddy dryers were provided to Mr.T.D.Rathnayake, New puttalum Road, Nelum Mawatha, Pothanagama on 15/03/2013
- d) Advices on rice flour production was provided to Mr.S.A.Dharmatilaka, Galawawa Junction, Devagripura, Galgamuwa, on 13/02/2013.
- e) Advices and drawings on a paddy dryer were supplied to Mr. P. A. N. Senarathne, Moragollagama on 12/02/2013.

Consultancies carried out by Mr.T.M.R.Dissannayake, Mechanical Engineer, IPHT

- a) A list of Equipment, workshop machinery, post harvest machinery and laboratory equipment was supplied to Technical college, Anuradhapura on 19/01/2013.
- b) A technical report was issued to Sri Lanka Co-operative Marketing Federation Ltd. on 23/01/2013.
- c) Specification on processing Machinery for white pepper was provided to the Assistant commissioner for Co-operative Development, Department of Co-Operative Development, Uva provincial council, Kappetipola Road, Badulla. on 14/10/2013.
- d) Information on requirments of production of quality parboiled rice was supplied to Director, Hector Kobbekaduwa Agrarian Research Institute, Colombo 07 on 07/11/2013.
- e) Information on Paddy drying was supplied to Mr.K.G.Gunanankara from Heyleys Agricultural Holdings Ltd. 25, Poscher Lane, Colombo 10 on 05/04/2013.
- f) Advices on establishment of a rice mill was supplied to Mr.M.G.Jayarathna from Irrigation place, Mahakanadarawa, Mihinthale on 12/03/2013
- g) Information on Black lime production was supplied to Mr.U.L.Sarath Silva, no:60:Uswattha Mawatha, Ethul Kotte, Kotte on 17/10/2013
- h) Demonstration on spice steaming machine was carried out to Mr.N. Siva Shankar, Kanauda golla Estate, Thalathu Oya on 06/10/2013.
- i) Advices on rice Flour milling was supplied to Mr.Y.M.Ranjith Senadeera from Mahahendabewa, 9 th Cannal, Hidogama on 09/09/2013

- j) Information on rice production was supplied to Mr. S. A. R. S. D. Sooriyaarachchi from 53\43, Keenagahalanda, Kalagedihena on 08/08/2013
- k) Advices on paddy parboiling was supplied to Mr. W.M.H.G. Usbanda from Commerce no:5, Pallegama, Siripura. on 21/08/2013
- l) Information on rice processing equipment and machinery was supplied to Mr. . M.Rathnayaka, no240, Door 4, Lolugawawa, Galnewa on 26/06/2013
- m) Technical Advice for establishment of a rice mill to Ms. G. T. K. Kumudini, No 31, Nugasewana, Bulnewa, Galnewa on 26/06/2013.
- n) Technical Advice for establishment of a rice mill to Mr. W. N. I. G. P. Wanasinghe from no 67A, Pahala Diggala, Devapura on 20/05/2013.
- o) Information on rice mills and price of the paddy were supplied to Ms. Niranjala Premathilake from Yaya 07, Rajanganaya on 20/05/2013.
- p) Information on String Hopper production and Noodles Production were supplied to Ms S.D. Wimala, from no:9, Hedigama Road, Suwarapola, Piliyandela. on 14/05/2013
- q) Drawings of modern paddy store, was provided to Mr. W.M.M.M. Premarathne from "Udani", Rathnayake Mawatha, Wanniyankulama, Anuradhapura on 15/02/2013.

Consultancies carried out by Mrs. Srima Bandara, Mechanical Engineer

- a) valuation report for rice/grain/spices processing plant was issued to Eppawala Multi purpose co- operative society on 17/01/2013.
- b) Information on grain flour production to Mr. E. M. S. A. Ekanayaka, no 154, Hiripitiyawa, Galnewa on 10/07/2013
- c) Advices on maize flour production were provided to C.M. Dharmapala Dissanayake, from no 50, Eliyadiwulwewa, Eppawala on 04/03/2013
- d) Advices was provided to start Rice based and rice flour based enterprise to N.K. Karunasekera, Ralapanawa, Kebithigollewa, on 12/02/2013.

Consultancies carried out by Dr R.N.M.A. Wijewardene, Senior Research Officer, IPHT

- a) Advices on Dehydraton of fruit and vegetables to M.K.M.S. Lakmal Wijesiri from 806, Champa lane, AAndamkulama, Tricomalee on 01/04/2013
- b) Information on dehydration of vegetables to Mr. Nimal Perera from Kesel watta, Dambulu pura, Thmbutegama and Gamini Pradeepa Kumara no.282, Danduyaya 4, Galewela on 01/02/2013.
- c) Advices on fruit and vegetable dehydriaion were provided to Mr. L.B.S. Perera from "Chandrani Niwasa" Gorakawella, Pitabaddhara on 18/03/2013.

Consultancies carried out by Mr. Chaminda Gunawardene, Research Officer, IPHT

- a) A list of Equipment, workshop machinery, post harvest machinery and laboratory equipment was supplied to Technical college, Anuradhapura on 19/01/2013.

Consutancies carried out by Mr. W.M.C.B. Wasala, Research Officer IPHT

- a) A report was submitted on the evaluation of Rice Processing Village to Dr. I. Rupasena, Additional Director, HARTI, Colombo 07 on 13/03/2013
- b) Drawings of modern paddy store, was provided to Mr. W.M.M.M. Premarathne from "Udani", Rathnayake Mawatha, Wanniyankulama, Anuradhapura on 15/02/2013.

Consultancies carried out by Mrs.Hemanthika Jayawardene,Research Officer,IPHT

- a) Information was supplied on Rice cream to Mr.Ananda Marapana,Meedeniya,Hettipola on 12/04/2013 and Mr.W.A.Sumathipala,Secretary,"Susitha Hawula",Miris Wattha,Kumburu Pitiya on 04/06/2013.

Consultancies carried by Mrs.Chamindhi Dissanayake,Extension Officer,IPHT

- a) information on Rice based product was supplied to Mr.Shantha Wijesuriya,Lakeside Wattha,Walpola,Batuwattha on 04/06/2013.
- b) A letter on all the technical support received from IPHT, was issued on request to Mr.D.Sunil Jayalath,Girithale on 07/08/2013.
- c) A report was submitted on the evaluation of Rice Processing Village to Dr.I.Rupasena,Additional Director,HARTI,Colombo 07 on 13/03/2013

Consultancies carried out by Mr.U.G.Chandrajith, Research Officer, IPHT

- a) Information on spice processing was provided to Ms Dayani A.Karunaratne, Horowpathana on 13/02/2013

Consultancies carried out by Mr.Ranjith Palipane,Senior Laboratory Technician,IPHT

- a) A list of Equipment,workshop machinery,post harvest machinery and laboratory equipment was supplied to Technical college,Anuradhapura on 19/01/2013.
- b) Laboratory analysis reports were issued to Mrs.P.S.M.Charles,Government Agent,District Secretariat,Baticaloa. on 05/12/2013

Consultancies carried out by Mr J.K.Paranawithane,Technical Officer,IPHT

- a) Information on String Hopper production and Noodles Production were supplied to Ms S.D.Wimala, from no:9, Hedigama Road, Suwarapola, Piliyandela. on 14/05/2013

Consultancies carried out by Mr.K.M.G.Saman Kumara,Field Officer Ampara.

- a) Advices on sesame sweets products were provided to Mr.H.G.Wasantha Kumara,No.217, Ralapanawa colony, Nochchiyagama on 03/06/2013.

Consultancies carried out by Ms. Suneka Damayanti,Lab Assistant,IPHT

- a) 28 rice samples were subjected to rice milling quality assesment as a minor research part of a M.Phill research student from Faculty of Agriculture, University of Peradeniya on 22/03/2013.

Consultancies carried out by Ms.Padmini Herath,Lab Assistant,IPHT

- a) 28 rice samples were subjected to rice milling quality assesment as a minor research part of a M.Phill research student from Faculty of Agriculture, University of Peradeniya on 22/03/2013.

Consultancies carried out by Mr.Nimal Ranasinghe, Maintenance Assistant

- a) Advices on rice Flour milling was supplied to Mr.Y.M.Ranjith Senadeera from Mahahendabewa,9 th Cannal,Hidogama on 09/09/2013

- b) Information on Post Harvest Technology and Food Technology were provided to Mr.S.Fernando,Jayawardene Mawatha,Medakatiya,Thangalle on 04/06/2013. Advices on maize flour production were provided to C.M.Dharmapala Dissanayake,from no 50,Eliyadiwulwewa,Eppawala on 04/03/2013

5.2 Analysis of grain samples

Name	Type of sample	No. of samples	Analysis done
Wasantha products Nochchiyagama	Rice flour	01	Quality anlysis
CIC,Thalawa	Soya bean	01	Quality analysis
GA,Baticaloa	paddy	02	Quality analysis
Ayurweda Hospital Anuradhapura	Gingerly oil	04	Quality analysis
Paddy Marketing Board, Anuradhapura	paddy	01	Quality analysis
Deputy Director,Dept.of Agriculture,Baticaloa	paddy	16	Quality analysis
CWE	Rice	20	Quality analysis

6. PUBLICITY/ PUBLICATIONS

6.1 Publicity programmes on Post harvest technology.

- a) Mr,C.R.Gunawardene and Mr.U.G.Chandrajith, Research Officers, participated in a live radio programme on “Harvesting ,Processing and storage” from 18.35 pm to 19.35 p.m.on 15.08.2013 at “Swadeseea Sevaya” “Govijanamandala” in Evening broad cast.
- b) Video clips on each technology developed by IPHT were taken for preparation of CD’s on Post Harvest technology

6.2 Paper articles/news items

During the period under review, publicity to IPHT activities were given through mass media and the details are as follows:

Articles appererd on the daily news papers

- 1.””Quality of our rice Then and now”In the “Dinamina” news paper on 08 th Monday July 2013 by Mr.D.P.C.Swarnasiri,Additional Director ,IPHT.
2. “Quality of our rice Then and now”In the “Dinamina” news paper on 17th Monday June 2013 by Mr.D.P.C.Swarnasiri,Additional Director ,IPHT.

- 3."Wax treatment for long lie of fruits" In the "Dinamina" news paper on 02 th Thursday July 2013 by Dr,Nilanthi Wijewardene,Senior Research officer,IPHT.
- 4."Introducing improved post harvest technology to increase storage life of B-oniion in order to obtain higher income for stake holders" In the "Lankadeepa" news paper on 24 th Thursday July 2013 by Dr.Champthi Gunathilake Senior Research officer,IPHT.
- 5."A New machine for paddy cleaning"appered on "Lankadeepa" on ---th November 2013 by Eng. Dumindra Senanayka,Principal Mechanical Engineer,IPHT
- 6."Consume rice flour for healthy life"appered on"Dinamina"on 25 th October 2013by Dr.(Mrs.)Swarnashika Thilakerathne.Director,IPHT

6.3 Circulation of IPHT Publications

During the period under review 24917 copies of hand-outs, leaflets and other information bulletin of the IPHT pertaining to Post Harvest Technology improvement published both in Sinhala and English languages were issued to beneficiaries of the institute.

7.0 IPHT FACILITIES USED BY OTHER INSTITUTES

- 1) IFAD Institute
- 2) Ceylon Electricity Board
- 3) Sri Lanka Institute of Local Governance
- 4) Heylys incorporated "SunProp" institute
- 5) Regional Development Bank
- 6) Institute of Engineers
- 7) Dryzone livelihood support and partnership Program
- 8) National institute of social Development
- 9) Central Environmental Authority
- 10) Office of the Assitant comissioner of excise
- 11) Nationl Water Supply and Drainage Board-North Central
- 12) Ceylon Transport Board-Rajarata Branch
- 13) Human Rights Commission of Sri Lanka
- 14) Road Passenger Transport Service Authority
- 15) Mahaweli Authority of Sri Lanka-Kiuloya ReservoierProject-system "L"
- 16) Berendina development services (Gurrantee)Limited
- 17) Ayrvedic commiunity health Promotion Services
- 18) Ministry of Child Development and Women's affairs
- 19) Postal and Telegram Officers society
- 20) Ministry of Public Management reforms
- 21) Rajarata University of Sri Lanka
- 22) MBSL insuvarance corporation
- 23) Nature Farm.

8. IMPROVEMENT OF FACILITIES FOR RESEARCH AND TRAINING/ EXTENSION

- 1) Colour washing Rice based noodles production plant buildings of IPHT.
- 2) Repair if Mechanical Workshop
- 3) Repair of ceiling of the old Laboratory buiding.

9. PROFESSIONAL DEVELOPMENT OF IPHT STAFF

The following officer of the Research and Training staff of the IPHT underwent training in the fields pertaining to Post Harvest Technology during the year 2013:

a) *Post-graduate Degree Programme*

- | | |
|---|---|
| 1) Mrs. W.A.H. Champa
Research Officer | Ph.D. in Horticulture
Panjab Agricultural University
Ludhiana Panjab 11/01/2011 to 11/01/2014 |
| Mrs.R.M.R.K. Rathnayake
Research Officer | Ph.D. in Plant sciences
Post Graduate Institute of science(PGIS)
University of Peradeniya
01/05/2012 to 01/05/2015 |
| 4) Mrs. K.G.L.R. Jayathunge
Research Officer | Ph.D. in food Science & Technology
Queen's University, Belfast
United Kingdom. |

b) Short term programmes

- | | |
|---|---|
| 1) Dr.(Mrs.)B.M.K.S.Thilakarathna
(Director) | Invitation for delivering Key note address in 1st
Information Conference and work shop of
Niftem-India 10/01/2013 to 12/01/2013 |
| 2) Dr.(Mrs)B.M.K.S.Thilakarathna
(Director) | Workshop on Emerging Post Harvest Technologies
for fruit and vegetables-Bali, Indonesia
23/08/2013 to 27/08/2013 |

10. STAFF POSITION AS AT 31st DECEMBER 2013

Post	Name
Director	Dr. (Mrs). B.M.K.S. Thilakarathne BSc.Sp.(Agric. Food Sci.& Tech.) Sri Lanka, MSc.(Food Sci.& Tech.), Sri Lanka PhD.(Postharvest Tech. Horticulture), India Dip.in rice sciences(China) Dip.in Post harvest biology of fruit and veg.(Israel)

Additional Director (R&TT)	Mr. D. P. C. Swarnasiri BSc. (Agric), Sri Lanka Dip. in Agric.(China) MSc. (Agric), Sri Lanka PGDM, Sri Lanka
Additional Director (Admn & Finance)	Mr. R.K.A.P. Ramanayake B.Sc. Management (Sri Lanka), Licentiate Certificate ICA, MIPFDA
Principal Mechanical Engineer	Mrs. D. P. Senanayake B.Sc. Mech. Eng. (Sri Lanka) M. Phil.Chem. Eng (Sri Lanka) AM(IESL)
Senior Mechanical Engineer	Mr.H.M.A.P.Rathnayake B.Sc. Prod.. Eng. (Sri Lanka) M.Tech in Agriculture process Engineering (INDIA) AM(IESL)
Senior Research Officer	Dr. D.M.C.C.Gunathilake BSc.Sp.(Agric.Eng), Sri Lanka MSc. (Agric. Eng.), Sri Lanka PhD. (Process & Food Eng.), India NDT (Agric), Sri Lanka, ASAE (USA)
Senior Research Officer	Mrs. W.A H. Champa BSc. Sp. (Horticulture), Sri Lanka M.Phil (Crop Sci.), Sri Lanka
Research Officer	Mr. W.M.C.B. Wasala B.Sc. Sp. Agric. (Sri Lanka)
Mechanical Engineer	Mr. B.D.M.P. Bandara Dissanayake BSc. (Eng.) Sri Lanka, M.Eng.(Processing & Food Eng.) India, AMIE(Sri Lanka)
Research Officer	Mrs. K.G.L.R. Jayathunge B.Sc. Sp. Agric. (Sri Lanka) M.Phill. Food Sci.& Tech. (Sri Lanka)
Research Officer	Mrs. R.M.R.N.K. Rathnayake BSc.Sp. (Botany),Sri Lanka MSc. (Postharvest Tech. of Fruit & Vegetables), Sri Lanka
Senior Research Officer	Dr. (Mrs.) R.M.N.A. Wijewardane BSc. (Agric.) Sri Lanka, MSc. (Agric.) Sri Lanka, PhD. (Horticulture postharvest Technology), India

Research Officer	Mr. C.R. Gunawardane B.Sc. Special Chemistry (Sri Lanka)
Mechanical Engineer	Mr. T.M.R. Dissanayake BSc. (Eng.), Sri Lanka MEng.(India), AMIE (Sri Lanka)
Research Officer	Mrs. H.S. Jayawardane BSc. (Applied Sci.), Sri Lanka. MSc. (Food Sci. & Tech.)
Extension Officer	Mr. P.G. Lalith Wasantha B.Sc. Sp.Agric. (Sri Lanka)
Extension Officer	Mrs. C.A.K. Dissanayake B.Sc.Sp. Agric. (Sri Lanka) PGDipl. Agric.(Sri Lanka)
Mechanical Engineer	Mrs. D.M.Srima Priyangika Bandara B.Sc. Chem. Eng.(Sri Lanka), MEng Manf. Syst. Eng (Sri Lanka)
Extension Officer	Mr. M.M. Herath B.Sc Sp. Agric. (Sri Lanka), Dip. in Counselling
Research officer	Mr.U.G.Chandrajith B.Sc.(Sp.)Botany MSc.Food Sc.& Tech
Accountant	Mr.I.M.N.P.Ilangasinghe B.Com(Sp.)
Administrative Officer	Mr Janaka Subasinghe
Senior Laboratory Technician	Mr. P.E.M.R. Palipane
Personal assistant to the Chairman	Mrs.H.D.K.D.Wickramasinghe

Supporting staff:

Technical Officer	01
Draughtsman	01
Building Inspector	01
Management Assistant (Steno/ Typist)	01
Management Assistant (Typist (Sinhala / English)	03
Field Officer	03
Laboratory Assistant	03
Management Assistant	08
Hostel Keeper	01
Welder	01
Technician	01
Electrician	01
Mill Operator	02
Boiler Operator	02
Driver	08
Workshop Operator	01
Maintenance Assistant	05
Cook	01
Security Guard	06
Ronio Operator	01
Canteen Labourer	01
Seva Sahayaka	01
Sanitary Labourer	01

Summary of Research work

Name	position	Research/development project	Reference page no of the Annual Report
Dr. (Mrs). B.M.K.S. Thilakarathne	Director	a) Overall administrative work b) Published Research: i)Dissanayake, C.A.K.,De.Silva, S., Wasala, W.M.C.B., and Thilakarathne. B.M.K.S. , (2013). Women Empowerment Through Self Reliance Approach in the Rice Processing Village Programme. Tropical Agricultural Research, Vol. 25. ii) Dissanayake, C.A.K.,Wasala, W.M.C.B.,Rathnayake, R.M.R.N.K, Wijewardhane, R.M.N.A., Gunawardhane, C.R, Jayawardhane. H.S., and. Thilakarathne B.M.K.S , (2013). Present Status of On-Farm Storage Conditions of Paddy in North	

		<p>Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna.</p> <p>iii) Gunathilake D.M.C.C. Thilakarathne B.M.K.S. Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of paddy (<i>Oryza sativa</i>) Proceedings of International symposium 2013., Faculty of Agriculture, University of Ruhunu, Sri Lanka.</p> <p>iv) Gunathilake D.M.C.C. Thilakarathne B.M.K.S. Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of Maize Seeds (<i>Zea mays</i>) Proceedings of 69 th annual session, SLAAS 2013 Sri Lanka</p> <p>v) Jayawardene, H.S., Thilakarathne, B.M.K.S., Wijewardane, R.M.N.A., Dissanayake, C.A.K., Rathnayake, R.M.R.N.K, 2013. Development of rice based ice cream and determination of its quality parameters., International symposium on Agriculture and Environment 2013, University of Ruhunu, pp 47-49.</p> <p>vi) Wijewardane R.M.N.A. , Karunathilake K .N. , Jayawardana H.S. , Thilakarathne B.M.K.S. , (2013). Evaluate the effect of lipid based edible coatings for shelf life extension of guava under refrigerated storage. Proceedings of the Young Scientists Forum symposium</p>	
Mr. D. P. C. Swarnasiri	Additional Director	<p>a) Sectional Administrative work b) Published reports Bandara, D.M.S.P, Dissanayake, T.M.R, Rathnayake, H.M.A.P, Swarnasiri, D.P.C, "Performance Evaluation of a Screw Type Oil Expeller for Extraction of Sesame Oil" Proceedings of the International Symposium on Agriculture and Environment 2013, University of Ruhuna Sri Lanka, pp 103-106</p>	

Mrs. W.A.H. Champa	Senior Research officer	<p>of Agriculture, University of Ruhuna, Sri Lanka.</p> <p>ii), Gunathilake D.M.C.C. Thilakarathne B.M.K.S., Effect of modified atmospheric conditions of hermetically sealed large capacity cocoons for storage of Maize Seeds (<i>Zea mays</i>) Proceedings of 69 th annual session, SLAAS 2013 Sri Lanka</p> <p style="text-align: center;">On study leave</p>	
Mr. W.M.C.B. Wasala	Research officer	<p>1) Research Project</p> <p>i) Evaluation of silo system for bulk storage of paddy</p> <p>ii) Study of the use of GRAS compounds to control postharvest diseases in Tomato (<i>Lycopersicon esculentum</i>)</p> <p>b) Published research</p> <p>i) Dissanayake, C.A.K., De.Silva, S., Wasala, W.M.C.B., and Thilakarathne. B.M.K.S., (2013). Women Empowerment Through Self Reliance Approach in the Rice Processing Village Programme. Tropical Agricultural Research, Vol. 25.</p> <p>ii) Dissanayake, C.A.K., Wasala, W.M.C.B., Rathnayake, R.M.R.N.K., Wijewardhane, R.M.N.A., Gunawardhane, C.R., Jayawardhane. H.S., and Thilakarathne B.M.K.S., (2013). Present Status of On-Farm Storage Conditions of Paddy in North Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna.</p>	13
Mr. B.D.M.P. Bandara Dissanayake	Mechanical Engineer	<p>1) Research Project:</p> <p>a) Design and development of rasp mill for size reduction of maize</p> <p>b) Evaluation of losses by combine harvesters used for paddy harvesting</p> <p>2) Development Project</p> <p>a) Improvement of rice flour milling industry.</p> <p>b) Development of rice flour mills under the world food program</p> <p>c) Development of rice flour mills under the Dayata kirula program.</p> <p>d) Scientific storage of rice under the Food Commissioner Department.</p>	17

		<p>Private funded project: Design development of a low cost hand operated grain flour blending equipment.</p> <p>Publications: Bandara.,B.D.M.P.,Jayawardene H.S.,Modification of existing rice noodles process line(IPHT) to reduce cost of production,IPHT research bulletin Bandara.,B.D.M.P.,Jayawardene H.S.,Introduction of medium scale method to manufacture noodle from Finger millet. IPHT research bulletin</p>	
Mrs. K.G.L.R. Jayathunge	Research officer	On study leave	
Mrs. R.M.R.N.K. Rathnayake	Research officer	<p>b)Published research ; i) Dissanayake, C.A.K., Wasala, W.M.C.B.,Rathnayake, R.M.R.N.K., Wijewardhane, R.M.N.A., Gunawardhane, C.R, Jayawardhane. H.S., and. Thilakarathne B.M.K.S, (2013). Present Status of On-Farm Storage Conditions of Paddy in North Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna. ii) Jayawardene,H.S., Thilakarathne.,B.M.K.S., Wijewardane.,R.M.N.A., Dissanayake.,C.A.K., Rathnayake., R.M.R.N.K., 2013. Development of rice based ice cream and determination of its quality parameters.,International symposium on Agriculture and Environment 2013,University of Ruhunu,pp 47-49.</p>	
Mr. C.R. Gunawardane	Research officer	<p>1)Research project i)Study of feasibility of safe packaging for fruits and vegetables transportation 2)Development project ii) Initiation of fruit-based products manufacturing micro enterprises at rural level b)Published research; i)Dissanayake, C.A.K., Wasala, W.M.C.B.,Rathnayake, R.M.R.N.K., Wijewardhane, R.M.N.A.,</p>	17

		Gunawardhane, C.R , Jayawardhane. H.S., and.Thilakarathne B.M.K.S, (2013). Present Status of On-Farm Storage Conditions of Paddy in North Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna.	
Dr. (Mrs.) R.M.N.A. Wijewardane	Senior Research officer	<p>1)Research projects</p> <p>i. Application of Polysaccharide based Composite Film Wax Coating for Shelf Life Extension of Guava (var. Bangkok Giant)</p> <p>ii. Development of polysaccharide-lipid based composite wax formulation to enhance the storage quality of orange</p> <p>5)Published projects</p> <p>i)Wijewardane,R.M.N.A. (2013). Development of polysaccharide-lipid based composite wax formulation to enhance the storage quality of orange. J.Agric. Technol. Vol. 9(2):349-356</p> <p>ii)Wijewardane,R.M.N.A. (2013). Application of polysaccharide based composite film wax coating for shelf life extension of Guava (Var. Bangkok Giant). J. Postharvest Technol. Vol. 1(01):016-026.</p> <p>iii) Wijewardane R.M.N.A. , Karunathilake K .N. , Jayawardana H.S. ,Thilakarathne B.M.K.S. , (2013).Evaluate the effect of lipid based edible coatings for shelf life extension of guava under refrigerated storage. Proceedings of the Young Scientists Forum symposium</p> <p>iv) Jayawardene,H.S., Thilakarathne.,B.M.K.S., Wijewardane.,R.M.N.A., Dissanayake.,C.A.K., Rathnayake., R.M.R.N.K, 2013. Development of rice based ice cream and determination of its quality parameters.,International symposium on Agriculture and Enviornment 2013,University of Ruhunu,pp 47-49.</p>	<p>12</p> <p>13</p> <p>15</p> <p>15</p>
Mr. T.M.R. Dissanayake	Mechanical Engineer	<p>a)Research projects:</p> <p>i Enhancement of energy efficiency of Sri Lankan rice milling industry.</p> <p>b)Published Research:</p> <p>1. Dissanayake, T.M.R., Verma,R.C.,</p>	14

		<p>Sharma, G.P. (2013), Development of Mango Dicer for Agro-Process Unit in India, Proceedings of The Young Scientist Forum Symposium</p> <p>2. Bandara, D.M.S.P, Dissanayake, T.M.R, Rathnayake, H.M.A.P, Swarnasiri, D.P.C, "Performance Evaluation of a Screw Type Oil Expeller for Extraction of Sesame Oil" Proceedings of the International Symposium on Agriculture and Environment 2013, University of Ruhuna Sri Lanka, pp 103-106</p>	
Mrs. H.S. Jayawardane	Research Officer	<p>1)Research project Development of rice based novel snacks</p> <p>5)Published Research: i)Jayawardane,H.S., Thilakarathne.,B.M.K.S., Wijewardane.,R.M.N.A., Dissanayake.,C.A.K., Rathnayake., R.M.R.N.K, 2013. Development of rice based ice cream and determination of its quality parameters.,International symposium on Agriculture and Environment 2013,University of Ruhunu,pp 47-49. ii) Dissanayake, C.A.K., Wasala, W.M.C.B.,Rathnayake, R.M.R.N.K, Wijewardane, R.M.N.A., Gunawardhane, C.R, Jayawardhane. H.S., and.Thilakarathne B.M.K.S, (2013). Present Status of On-Farm Storage Conditions of Paddy in North Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna. iii) Wijewardane R.M.N.A. , Karunathilake K .N. , Jayawardana H.S. ,Thilakarathne B.M.K.S. , (2013).Evaluate the effect of lipid based edible coatings for shelf life extension of guava under refrigerated storage. Proceedings of the Young Scientists Forum symposium</p>	10
Mr. P.G. Lalith Wasantha	Extension Officer		

Mrs. C.A.K. Dissanayake	Extension Officer	<p>1)Research project: a) Evaluation of present status of using safe packages for perishable transportation b) Evaluation of present status of perishable transportation</p> <p>5)Published Research: i) Dissanayake, C.A.K.,De.Silva, S., Wasala, W.M.C.B., and Thilakarathne. B.M.K.S., (2013). Women Empowerment Through Self Reliance Approach in the Rice Processing Village Programme. Tropical Agricultural Research, Vol. 25.</p> <p>ii)Dissanayake, C.A.K., Wasala, W.M.C.B. ,Rathnayake, R.M.R.N.K, Wijewardhane, R.M.N.A., Gunawardhane, C.R, Jayawardhane. H.S., and.Thilakarathne B.M.K.S, (2013). Present Status of On-Farm Storage Conditions of Paddy in North Central Province, International Symposium on Agriculture and Environment, Faculty of Agriculture, University of Ruhuna.</p> <p>iii) Jayawardene,H.S., Thilakarathne., B.M.K.S., Wijewardane.,R.M.N.A., Dissanayake.,C.A.K., Rathnayake., R.M.R.N.K, 2013. Development of rice based ice cream and determination of its quality parameters.,International symposium on Agriculture and Enviornment 2013,University of Ruhunu,pp 47-49.</p>	<p>13</p> <p>14</p> <p>14</p>
Mrs. D.M.Srima Priyangika Bandara	Mechanical Enginner	<p>2) Development project Introduction of spice processing industry at rural level</p> <p>3)Private funded project Performance evaluation of a screw type oil expeller for extraction of sesame oil</p> <p>5)Published project i) Bandara, D.M.S.P, Dissanayake, T.M.R, Rathnayake, H.M.A.P, Swarnasiri, D.P.C, "Performance</p>	<p>17</p> <p>12</p>

		<p>Evaluation of a Screw Type Oil Expeller for Extraction of Sesame Oil” Proceedings of the International Symposium on Agriculture and Environment 2013, University of Ruhuna Sri Lanka, pp 103-106</p> <p>ii.) Bandara, D.M.S.P, Jayawardane, H.S., Thilakarathne, B.M.K.S., 2013, Design of soup cube cutter. Proceedings of The Young Scientist Forum Symposium</p> <p>14</p> <p>14</p> <p>iii) Chandrajith, U.G., Bandara, D.M.S.P, ,2013 Process development of Goraka powder. Proceedings of The Young Scientist Forum Symposium</p>	
Mr. M.M. Herath	Extension Officer		
Mr. U.G. Chandrajith	Research officer	<p>1) Research project</p> <p>i) Evaluation of losses by combine harvesters used for paddy harvesting</p> <p>2) Development Project Initiation of Rice and Rice Based Products Manufacturing Micro Enterprises at Rural Areas</p> <p>5) Published project: Chandrajith, U.G., Bandara, D.M.S.P., ,2013 Process development of Goraka powder. Proceedings of The Young Scientist Forum Symposium</p>	<p>16</p> <p>14</p>

**INSTITUTE OF
POST HARVEST TECHNOLOGY
FINAL ACCOUNTS
2013**

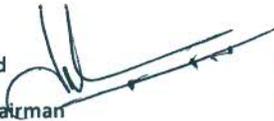
INSTITUTE OF POST HARVEST TECHNOLOGY

STATEMENT OF FINANCIAL POSITION FOR THE YEAR ENDED DECEMBER 31, 2013

	Notes	2013 RS.	2012 Rs.	2012 Adjusted Rs.
ASSETS				
Current Assets				
Cash and cash equivalents	2	8,606,877.99	9,189,856.85	
Receivables	3	4,217,267.12	4,684,697.45	4,686,527.45
Inventories	4	2,387,749.45	2,984,342.27	2,950,282.57
Prepayments	5	640,907.20	716,137.80	715,739.58
Other current assets	6	22,708.75	22,708.75	
		15,875,510.51	17,597,743.12	17,565,115.20
Non-current assets				
Investments	7	50,000,000.00	54,748,000.00	
Infrastructure, plant and equipment	8	15,041,538.47	20,613,561.60	20,740,554.83
Land and buildings	9	66,679,763.54	69,182,071.63	69,296,136.88
Intangible assets	10	7,840.00	7,840.00	
Other non-current assets	11	10,699,342.96	7,756,717.10	7,757,717.10
		142,428,484.97	152,308,190.33	152,550,248.81
Total assets		158,303,995.48	169,905,933.45	170,115,364.01
LIABILITIES				
Current liabilities				
Payables	12	24,407,871.84	24,573,539.47	24,587,409.47
Employee benefits	13	18,670,156.53	13,734,660.35	
		43,078,028.37	38,308,199.82	38,322,069.82
Non-current liabilities				
Total liabilities		43,078,028.37	38,308,199.82	38,322,069.82
NET ASSETS/EQUITY		115,225,967.11	131,597,733.63	131,793,294.19

Sgd

Chairman



Sgd

Director



Sgd

Accountant



I.M.N.P. ILLANGASINGHE
Accountant
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ANURADHAPURA

Dr (Mrs) B.M.K.S. Tilakaratne
B.Sc (Agri), M.Sc.(Food Tec.) Ph.D.(Postharvest Tes.)
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JAGATH PALITHA JAYAWARNE
CHAIRMAN
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RESEARCH AND DEVELOPMENT CENTRE
JAYANTHI MAWATHA,
ANURADHAPURA.

INSTITUTE OF POST HARVEST TECHNOLOGY

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED DECEMBER 31, 2013

		2013	2012	2012 Adjusted
	Notes	RS.	Rs.	Rs.
REVENUE				
Transfers from general treasury	14	58,859,049.00	46,601,500.00	
Transfers from other government entities	15	1,456,882.90	6,181,309.49	
Other revenue	16	10,556,408.99	20,917,075.24	20,891,716.04
Rise based food dev. Plant noodles P/L Acc.	17	-	(128,293.36)	
Total Revenue		70,872,340.89	73,571,591.37	73,546,232.17
EXPENSES				
Wages, salaries and employee benefits	18	53,015,408.01	45,221,277.78	45,235,147.78
Supplies and consumables used	19	15,497,292.09	10,278,994.85	10,288,495.35
Depreciation and amortization expense	20	8,924,733.45	8,939,931.57	8,953,153.09
Other expenses	21	9,967,427.02	13,992,917.93	13,989,686.15
Finance costs	22	34,807.40	32,307.20	
Total expenses		87,439,667.97	78,465,429.33	78,498,789.57
Surplus/(deficit) for the period		(16,567,327.08)	(4,893,837.96)	(4,952,557.40)

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INSTITUTE OF POST HARVEST TECHNOLOGY

STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED DECEMBER 31, 2013

Attributable to owners of the controlling entity										Total net assets
				Notes	Initiate capital	Gov. grant	Foreign loan	Funds from Gen. Trea.	Accumulated surpluses/(deficitts)	
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Balance at December 31, 2012 B/F					69,907,594.42	72,750,229.02	8,368,214.00	30,509,250.00	(49,937,553.81)	131,597,733.63
Adjustments to the opening balance				23					195,560.56	195,560.56
									(49,741,993.25)	131,793,294.19
Change in net assets for 2013										-
										-
Surplus / (Deficit) for the period									(16,567,327.08)	(16,567,327.08)
Balance at December 31, 2013 C/F					69,907,594.42	72,750,229.02	8,368,214.00	30,509,250.00	(66,309,320.33)	115,225,967.11

Sgd 
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CASH FLOW STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2013

	Notes	2013 RS.	2012 Rs.
CASH FLOWS FROM OPERATING ACTIVITIES			
Surplus /(Deficit)		(16,567,327.08)	(4,893,837.96)
Non - Cash Movements			
Depreciation		8,937,954.97	
Previous year adjustments - profit & loss A/C		195,560.56	347,743.98
Interest Income		(7,596,981.48)	(7,506,372.21)
Interest Expenses		578,943.73	570,288.00
Increase/(Decrease) in payables	24	4,769,828.55	(21,581,531.42)
(Increase)/Decrease in other current assets	25	(510,989.37)	27,591,046.04
Net cash flows from operating activities		(10,193,010.12)	(5,472,663.57)
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of plant, and equipment		(609,343.75)	(4,454,619.18)
Previous year adjustments		(254,280.00)	(752,160.00)
(Increase)/Decrease non current assets	26	1,805,374.14	7,718,624.51
Net interest Received		7,018,037.75	6,936,084.21
Net cash from investing activities		7,959,788.14	9,447,929.54
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from borrowings		-	-
Repayment of borrowings		-	-
Net cash flows from financing activities		-	-
Net increase/(decrease) in cash equivalents		(2,233,221.98)	3,975,265.97
Cash and cash equivalents at beginning of period	27	4,891,269.60	916,003.63
Cash and cash equivalents at end of period	28	2,658,047.62	4,891,269.60

Sgd
ChairmanSgd
DirectorSgd
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1. Summary of Significant Accounting Policies.

1.1 General Accounting Policies

1.1.1 Compliance with the Sri Lanka Public Sector Accounting Standards.

1.1.2 The published results and the financial position of the Institute have been Prepared in accordance with the generally accepted accounting principles.

1.1.2 Taxation

Liable for Income Tax.

1.2 Assets and Basis of their Valuation

1.2.1 Accounts Receivable

Accounts receivable are stated as without providing for bad and doubtful debts, because most of the balances were brought forward from Paddy Marketing Board Accounts as at the transfer of assets and liabilities etc.

1.2.2. Stocks

Stocks have been valued at FIFO Method

Stocks have been valued at the lowest cost or realizable value.

1.2.3 Fixed Assets

The cost of fixed assets is the cost of acquisition or construction together with the incidental expenses therein. The fixed assets are recorded at cost, less accumulated depreciation which is provided for, on the basis specified below.

Depreciation of fixed assets is provided from the preceding year of purchase or construction of assets. Depreciation of written off or disposed off assets are provided in the current year fully. To depreciate assets straight line method is adopted.

1.2.4 Depreciation

Depreciation Rates have changed in the year 2004

	Useful life (Years)	Rate % per annum	New Rate % per annum
1. Building	40	2.5%	2.5%
2. Plant, machinery and equipment	13.3	7.5%	7.5%
3. Equipment	10	10%	10%
4. Furniture and Fittings	10	10%	10%
5. Electricity, & Fittings	10	10%	10%
6. Library Books	10	10%	10%
7. Vehicles	5	20%	20%
8. Telephone & Fittings	5		20%
9. Computers	4		25%
10. Agro – Farm	4		25%

In all cases the basis of depreciation is consistent with those of previous year. No depreciation provided for land.



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According to the decision of the Board of Directors on 21.1.2005, (Vide Board paper No. 172)

Utilization of capacity of Buildings and plant and machinery for Research and Development purpose and commercial purposes were categorized. Based on that decision depreciation of plant and machinery and buildings have been calculated since 2005.

For the current years depreciation rate of 33% of the total capacity of buildings and 45% of plant and machinery are to be considered. However, based on the actual number of days utilized for commercial purposes depreciation was calculated and the balance capacity was absorbed to Research and Development purposes.

1.3. Liabilities

As per the Gratuity Act. No. 12 of 1983 , Gratuity fund is Rs 18,670,156.53 up to end of 31.12.2013



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INSTITUTE OF POST HARVEST TECHNOLOGY
ANURADHAPURA

Notes	Year Ended	Year Ended
	31 st December	31 st December
	2013	2012
	Rs	Rs
2 Cash & Cash equivalents		
Bank of Ceylon - Torinton	1,020,688.52	4,703,885.18
People's Bank -Anuradhapura	1,632,359.10	182,384.42
Patty Cash	5,000.00	5,000.00
National Saving Bank 1- 0005- 04-9129-2-Anurad	2,497,425.41	2,365,849.99
National Saving Bank 1- 0001- 07-32087-Kollupitiy	3,451,404.96	1,932,737.26
	8,606,877.99	9,189,856.85
3 Receivables		
Debtors Control Account	1,249,535.35	1,367,329.98
Accrued Income	2,967,731.77	3,317,367.47
	4,217,267.12	4,684,697.45
3.1 Debtors Control Account		
Rice	100,183.75	100,183.75
By-product	6,069.50	6,069.50
Others	1,142,063.10	1,198,734.99
Sale -stole	1,219.00	1,219.00
Agriculture Ministry	0.00	61,122.74
World food program	0.00	0.00
Govibara fund	0.00	0.00
	1,249,535.35	1,367,329.98
3.2 Accrued Income		
General	2,887,436.40	3,237,072.10
Regional Economic Advancement Project 1 -Matal	49,354.70	49,354.70
Sri Lanka Council forAgricultural Research Policy	30,940.67	30,940.67
	2,967,731.77	3,317,367.47
4 Inventries		
Noodles	321,297.54	349,486.74
Rice Mill -Rice	1,606.50	45,892.10
Broken & other	0.00	2,758.00
Stores -Paddy	43,511.42	324,892.52
Research projects	415,468.00	155,200.00
Machinery - Raw material	70,369.25	13,658.27
Machinery	519,745.00	1,062,075.00
Diesel - Factory	111,434.48	111,434.48
- Generator	34,941.00	34,941.00
Packing material - Noodles	869,376.26	884,004.16
	2,387,749.45	2,984,342.27
5 Prepayments		
Festival	141,594.03	147,094.03
Traveling	121,318.41	242,497.01
Half monthly	150.00	150.00
Interring Advance -General R&D	158,885.16	255,678.16
Interring Advance -General - Head Office	17,106.60	70,718.60
Special Salary	201,853.00	
	640,907.20	716,137.80



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ANURADHAPURA

	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
6 Other current assets		
Services	675.00	675.00
Other	22,033.75	22,033.75
	<u>22,708.75</u>	<u>22,708.75</u>
7 Investments		
Deposits		
National Saving Bank 2- 0001- 17-99606 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99568 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99541 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99584 -Kollupiti	0.00	2,000,000.00
National Saving Bank 2- 0001- 17-99550 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99576 -Kollupiti	0.00	2,748,000.00
National Saving Bank 2- 0001- 15-77794 -Kollupiti	10,000,000.00	10,000,000.00
	<u>50,000,000.00</u>	<u>54,748,000.00</u>
8 Infrastructure, plant and equipment (8.1)	<u>15,041,538.47</u>	
9 Land and building (9.1)	<u>66,679,763.54</u>	
10 Patent Certificate for the production of "Rice Based Instant Soup Cube", inovated by Mrs Hemanthik Jayawardhana.		
11 Other Non - Current Assets		
Workers Loan	5,662,242.73	5,340,969.09
Workers Loan -Special	538,833.34	463,500.00
Flood Loan	0.00	245,620.95
Work in Progress - Office Building	4,498,266.89	1,706,627.06
	<u>10,699,342.96</u>	<u>7,756,717.10</u>
Current Liabilities		
12 Payables		
Advances	12.1 947,345.62	520,086.00
Accrued Expenses	12.2 5,464,374.01	5,291,643.44
Deposits	12.3 461,939.00	454,439.00
Retention	12.4 3,322,988.22	2,953,395.09
Creditors Control Account	12.5 14,211,224.99	15,353,975.94
	<u>24,407,871.84</u>	<u>24,573,539.47</u>
12.1 Advances		
Suspense Account Salary	2,819.58	2,819.58
Suspense Account - General	944,526.04	491,619.42
Special Salary	0.00	25,647.00
	<u>947,345.62</u>	<u>520,086.00</u>
12.2 Accrued Expenses		
Accrued Tax for Interest	161,478.72	188,130.75
Accrued Expenses - R & D	5,291,929.85	5,080,992.55
Accrued Expenses - Head office	10,835.44	22,390.14
Head Office creditor	130.00	130.00
	<u>5,464,374.01</u>	<u>5,291,643.44</u>


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 ANURADHAPURA

	Balance as at 31.12. 2012 Rs.	Balance as at 31.12. 2013 Rs.
12.3 Deposits		
Contract Supplies	5,665.00	5,665.00
Tender - R&D	176,420.00	168,920.00
Tender - Head Office	279,854.00	279,854.00
	<u>461,939.00</u>	<u>454,439.00</u>
12.4 Retention		
Contract Works	2,773,480.65	2,425,079.71
Unpaid - salary	275,716.20	248,476.01
Unpaid - salary - Head office	200.00	200.00
Unpaid - wages	16,067.57	16,067.57
Cancelled cheques	118,251.80	124,299.80
Regional Economic Advancement Project 2 -Matal	139,272.00	139,272.00
	<u>3,322,988.22</u>	<u>2,953,395.09</u>
12.5 Creditors Control Account		
Other creditors	802,295.00	328,295.00
12.5.1 Plastic crates-Fund	9,201,545.95	12,675,600.00
Paboling Vassals-Fund	4,207,384.04	2,350,080.94
	<u>14,211,224.99</u>	<u>15,353,975.94</u>
12.5.1 Plastic crates-Fund		
Balance as at 01.01.2013	12,675,600.00	36,735,040.00
paid to ministry	4,527,624.05	25,000,000.00
	<u>8,147,975.95</u>	<u>11,735,040.00</u>
Plastic crates sales	1,053,570.00	940,560.00
	<u>9,201,545.95</u>	<u>12,675,600.00</u>
13 Employee benefits		
Gratuity fund	18,670,156.53	13,734,660.35
	<u>18,670,156.53</u>	<u>13,734,660.35</u>


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	Year Ended 31 st December 2013 Rs	Year Ended 31 st December 2012 Rs
14 Funds Received from General Treasury - Recurrent		
Income and expenditure Account	<u>58,859,049.00</u>	<u>46,601,500.00</u>
15 Funds Received from Other Agencies		
Api wawmu rata nagamu Project	0.00	3,274,063.00
World Food Project	0.00	380,797.75
modal village	0.00	2,061,122.74
Daytakirula	1,456,882.90	465,326.00
	<u>1,456,882.90</u>	<u>6,181,309.49</u>
16 Other Revenue		
Rice Sales Profit	16.1 (89,747.30)	(3,605.51)
Machinery Sales	16.2 63,859.98	420,953.35
Hostel Income	16.3 1,183,943.59	1,167,049.03
Training Program	16.4 758,346.00	1,091,752.33
Auditorium fees	244,275.00	326,015.00
House Rent	371,358.34	573,519.37
General Income	350,079.39	283,271.58
Consultancy fees	16.5 427,327.95	900,195.00
Sale of Publications	67,990.00	71,130.00
No Pay	26,400.73	
farm	10,385.00	23,427.50
Vehicle damage Charges	10,917.31	35,919.18
Rice icecream sale	16.6 68,044.00	96,220.00
Interest Income	16.7 7,018,037.75	6,936,084.21
Charges -Agreement	4,800.00	1,800.00
Paddy Milling	40,391.25	
	<u>10,556,408.99</u>	<u>20,917,075.24</u>


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	Rs	Rs
16.1 Rice Sales Profit and Loss Account		
Sales - Rice		261,766.40
Sales - Broken and Brings Rice		9,111.00
Rice Packet Sale		<u>270,877.40</u>
Cost of sale		
Paddy		
Balance as at 1.1.2013		
Stores -Paddy	324,892.52	
Form Research -Rice & kurakkan	155,200.00	
Add: Purchases Paddy	<u>292,468.00</u>	
	772,560.52	
Less :		
For Research	<u>772,560.52</u>	
damage	<u>772,560.52</u>	
Balance as at 31.12.2013		
Stores -Paddy	43,511.42	
Research -Paddy	<u>415,468.00</u>	
	458,979.42	
issue for Rice mill	313,581.10	
Paddy		
Balance as at 1.1.2013	0.00	
Add:Stors	<u>313,581.10</u>	
	313,581.10	
Less :		
For Research	<u>313,581.10</u>	
Issue for Rice mill		
Paddy milling	313,581.10	
Add:Parboling Cost	<u>313,581.10</u>	
	313,581.10	
Balance as at 31.12.2013		
Paddy	<u>313,581.10</u>	
Cost of milled Rice	313,581.10	
Rice mill Rice		
Balance as at 1.1.2013		
Rice mill Rice	45,892.10	
Broken rice and other	2,758.00	
Received from Rice mill	<u>313,581.10</u>	
	362,231.20	
Balance as at 31.12.2013		
Rice mill Rice	0.00	
Broken rice and other	<u>1,606.50</u>	
	1,606.50	
Cost of Production - Sale of Rice	360,624.70	360,624.70
Rice Sales Profit / lost		<u><u>(89,747.30)</u></u>


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	Rs	Rs
16.2 Machinery Manufacturing Trading		
Profit & Loss Account		
Machinery Sales		
Machinery Sales Parboiling Vessels	639,200.00	
Machinery Sales bottle sealer	3,950.00	
Other Machinery Sales	0.00	<u>643,150.00</u>
Machinery Cost Sales		
Raw Material Balance as at 1.1.2013	13,658.27	
Add: Purchases Raw material	<u>93,671.00</u>	
	107,329.27	
For Research		
	<u>107,329.27</u>	
Raw Materials Balance as at 31.12.2013	<u>70,369.25</u>	
Machinery Manufacturing Cost C/F	<u><u>36,960.02</u></u>	
Machinery Balance as at 1.1.2013	1,062,075.00	
Machinery Manufacturing Cost B/F	<u>36,960.02</u>	
	<u>1,099,035.02</u>	
Add: Purchases of Machineries	0.00	
	<u>1,099,035.02</u>	
Machinery Balance as at 31.12.2013	<u>519,745.00</u>	
Production Cost -Sale of Machinery	<u>579,290.02</u>	<u>579,290.02</u>
Profit		<u><u>63,859.98</u></u>

Note	Rs	Rs
16.3 Hostel Income		
Income	2,425,003.50	
Expenditure	<u>1,241,059.91</u>	<u>1,183,943.59</u>
16.4 Training Program		
Income	1,391,649.00	
Expenditure	<u>633,303.00</u>	<u>758,346.00</u>
16.5 Consultancy fees		
Income	541,508.00	
Expenditure	<u>114,180.05</u>	<u>427,327.95</u>
16.6 Rice Icecream Sale		
Income	76,720.00	
Expenditure	<u>8,676.00</u>	<u>68,044.00</u>



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	Rs	Rs
16.7 Interest Income		
National Saving Bank 2- 0001- 17-99606 -Kollupiti	1,326,712.32	
National Saving Bank 2- 0001- 17-99568 -Kollupiti	1,326,712.32	
National Saving Bank 2- 0001- 17-99541 -Kollupiti	1,326,712.32	
National Saving Bank 2- 0001- 17-99592 -Kollupiti	0.00	
National Saving Bank 2- 0001- 17-99584 -Kollupiti	174,657.54	
National Saving Bank 2- 0001- 17-99550 -Kollupiti	1,326,712.32	
National Saving Bank 2- 0001- 15-77794 -Kollupiti	1,375,342.47	
National Saving Bank 2- 0001- 17-99576 -Kollupiti	244,575.01	
National Saving Bank 1- 0005- 04-9129-2-Anuradl	125,203.46	
National Saving Bank 1- 0001- 07-32087-Kollupiti	131,575.42	7,358,203.18
With Holding Tax		
National Saving Bank 2- 0001- 17-99606 -Kollupiti	106,136.99	
National Saving Bank 2- 0001- 17-99568 -Kollupiti	106,136.99	
National Saving Bank 2- 0001- 17-99541 -Kollupiti	106,136.99	
National Saving Bank 2- 0001- 17-99592 -Kollupiti	0.00	
National Saving Bank 2- 0001- 17-99584 -Kollupiti	13,972.61	
National Saving Bank 2- 0001- 17-99550 -Kollupiti	106,136.99	
National Saving Bank 2- 0001- 15-77794 -Kollupiti	110,027.40	
National Saving Bank 2- 0001- 17-99576 -Kollupiti	20,884.80	
National Saving Bank 1- 0005- 04-9129-2-Anuradl	9,510.96	
National Saving Bank 1- 0001- 07-32087-Kollupiti	0.00	578,943.73
		<u>6,779,259.45</u>
Banks Net Interest Income		
Interest Income Other		
Special advance Interest	7,408.26	
Distress Loan Interest	212,255.95	
Special Loan Interest	19,114.09	238,778.30
		<u><u>7,018,037.75</u></u>


I.M.N.P. ILLANGASINGHE
 Accountant
 INSTITUTE OF POST HARVEST TECHNOLOGY
 ANURADHAPURA

**RICE BASED FOOD PRODUCT DEVELOPMENT AND
DEMONSTRATION PILOT PLANT (NOODLES)**

Note	Note	Year Ended	Year Ended
		31 st December 2013 Rs	31 st December 2012 Rs
		0.00	1,054,025.00
			-
		<u>0.00</u>	<u>1,054,025.00</u>
		0.00	
		0.00	
		0.00	
		0.00	0.00
			<u>0.00</u>
		<u>0.00</u>	<u>0.00</u>
		0.00	
		<u>0.00</u>	<u>0.00</u>
		0.00	
		<u>0.00</u>	<u>0.00</u>
		0.00	51,905.00
	17.1	0.00	24,000.00
		0.00	1,457.45
		0.00	17,274.40
		<u>0.00</u>	<u>94,636.85</u>
		0.00	187,464.77
		0.00	42,733.76
	17.2	0.00	61,126.83
		0.00	73,051.11
		0.00	2,350.00
		0.00	
		0.00	
		0.00	127,663.50
		0.00	77,116.00
		0.00	27,832.93
	17.3	<u>0.00</u>	<u>693,975.75</u>
		321,297.54	837,829.35
		0.00	
		0.00	693,975.75
		<u>321,297.54</u>	<u>1,531,805.10</u>
		321,297.54	349,486.74
		0.00	1,182,318.36
		0.00	1,182,318.36
		<u>0.00</u>	<u>(128,293.36)</u>



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ANURADHAPURA

Note	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
17.1 Packing Material		
Balance as at 1.1.2013	870,153.66	884,004.16
Add: Purchase	0.00	51,905.00
Rice Packets	0.00	
	870,153.66	935,909.16
Less: Rice Flour Mill	777.40	
	869,376.26	935,909.16
Balance as at 31.12.2013	869,376.26	884,004.16
Noodles Manufacturing Account	0.00	51,905.00
17.2 Diesel		
Boiler	0.00	61,126.83
Generator	0.00	0.00
	0.00	61,126.83
2.1 Boiler		
Balance as at 1.1.2013	111,434.48	194,786.16
Add: Purchase	0.00	
	111,434.48	194,786.16
Research projects	0.00	22,224.85
	111,434.48	172,561.31
Balance as at 31.12.2013	111,434.48	111,434.48
	0.00	61,126.83
2.2 Generator		
Balance as at 1.1.2013	34,941.00	34,941.00
Add: Purchase	0.00	
	34,941.00	34,941.00
Balance as at 31.12.2013	34,941.00	34,941.00
	0.00	0.00
17.3 Depreciation		
Building		27,832.93
Machinery		0.00
		27,832.93
17.4 Flood Damage		
noodles stock		
Packing Material		
Machinery Maintenance		
Building Maintenance		
		0.00



I.M.N.P. ILLANGASINGHE
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INSTITUTE OF POST HARVEST TECHNOLOGY
ANURADHAPURA



	Note	Head Office Rs	Research and Development Centre Rs	Year Ended 31 st December 2013 Rs	Year Ended 31 st December 2012 Rs
EXPENSES					
18 Wages, salaries and employee benefits					
Salaries & Wages-monthly paid staff		2,741,537.08	34,050,574.10	36,792,111.18	29,085,038.71
Daily paid staff		0.00	3,808,020.27	3,808,020.27	7,330,353.42
E.P.F.		220,605.33	3,574,594.40	3,795,199.73	3,236,471.80
E.T.F.		55,151.32	887,224.43	942,375.75	809,117.90
Overtime and Holiday Pay		0.00	1,412,586.16	1,412,586.16	1,217,870.32
Other allowance		0.00	488,711.94	488,711.94	268,664.00
Incentives			200,363.55	200,363.55	189,948.88
Gratuity			5,576,039.43	5,576,039.43	3,083,812.75
		<u>3,017,293.73</u>	<u>49,998,114.28</u>	<u>53,015,408.01</u>	<u>45,221,277.78</u>
19 Supplies and consumables used					
Printing and Stationery		46,770.00	483,782.40	530,552.40	669,740.18
Office Requisites, Sundry expenses		126,309.58	937,260.75	1,063,570.33	1,027,549.87
Consumable for Research projects			249,944.52	249,944.52	489,652.51
Running expenses of Hostel and kitchen			300,806.00	300,806.00	163,145.70
Research Projects			929,994.04	929,994.04	687,940.84
Running expenses vehicles		893,749.80	2,353,595.33	3,247,345.13	2,980,529.10
Vehicles maintenance		410,191.80	1,638,770.07	2,048,961.87	2,218,956.75
Buildings and Structures		1,927.00	6,634,636.30	6,636,563.30	961,899.91
Buildings and Structures-Special			0.00	0.00	312,168.42
Machinery			489,554.50	489,554.50	518,771.57
Farm Research Expenses			0.00	0.00	248,640.00
		<u>1,478,948.18</u>	<u>14,018,343.91</u>	<u>15,497,292.09</u>	<u>10,278,994.85</u>

I.M.N.P. ILLANGASINGHE
 Accountant
 INSTITUTE OF POST HARVEST TECHNOLOGY
 ANURADHAPURA

	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
20 Depreciation	20.1	8,924,733.45	8,939,931.57	
20.1 Depreciation				
Building				
Plant, machinery and equipment		1,636,071.16		
Rice Based Products		2065783.06		
- Building		1,015,902.18		
Equipment		277,161.64		
Furniture and Fittings		548,955.84		
Electricity & Fittings		24,585.30		
Library Books		60,801.00		
Computers		259,735.75		
Telephone & Fittings		46,972.52		
Vehicles		2,988,765.00		
		8,924,733.45		
			Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
21 Other Expenses				
Traveling expenses-Domestic	35,197.50	1,016,373.69	1,051,571.19	900,988.27
Traveling expenses-Foreign	214,810.00	140,647.74	355,457.74	211,669.42
Staff tea	30,974.00	595,152.75	626,126.75	628,199.81
Periodicals, journals and news papers	49,001.50	41,320.00	90,321.50	73,725.00
Seminars		26,002.00	26,002.00	361,036.13
Training Programs	25,200.00	587,559.95	612,759.95	572,863.51
Entertainment	47,451.73	289,809.63	337,261.36	286,743.93
Contract Labour		27,550.00	27,550.00	131,100.00
Welfare		0.00	0.00	1,490.00
Insurance and licenses	20,865.00	441,977.78	462,842.78	507,846.40
Telecommunication	198,724.47	668,382.59	867,107.06	761,359.95
Postal charges	1,250.00	73,822.00	75,072.00	87,683.50
Electricity		1,241,728.59	1,241,728.59	956,656.76
Water,		654,392.17	654,392.17	579,656.12
Rent		216,204.00	216,204.00	184,168.00
Rates and Taxes		345,822.48	345,822.48	257,611.20
Exhibition		948,800.63	948,800.63	838,044.84
Publication		150,818.92	150,818.92	138,660.00
Human Resources Development		161,080.00	161,080.00	82,105.60
Audit fees		250,000.00	250,000.00	250,000.00
Farm Expenses		9,625.00	9,625.00	0.00
Deyata Kirula	21.1	1,456,882.90	1,456,882.90	5,800,511.74
World Food funded Project		0.00	0.00	380,797.75
		623,474.20	9,343,952.82	9,967,427.02
			13,992,917.93	

22 Finance Costs

		Balance as at		Balance as at	
		31.12. 2013		31.12. 2012	
		Rs.		Rs.	
	34,807.40	34,807.40		32,307.20	
	34,807.40	0.00	34,807.40	0.00	32,307.20

23 Adjustments to the opening balance

J.NO.	
13	-13,870.00
99	-28,189.20
100	-13,850.50
89	-170
92	-3,630.00
101	7,980.00
14	3,231.78
28	1,000.00
108	2,000.00
37	254,280.00
	<u>-13,221.52</u>
	<u>195,560.56</u>


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 INSTITUTE OF POST HARVEST TECHNOLOGY
 ANURADHAPURA

		Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
24 Payables			
Advances	24.1	947,345.62	520,086.00
Accrued Expenses	24.2	5,464,374.01	5,291,643.44
Deposits	24.3	461,939.00	454,439.00
Retention	24.4	3,322,988.22	2,953,395.09
Creditors Control Account	24.5	14,211,224.99	15,353,975.94
Gratuity fund	24.6	18,670,156.53	13,734,660.35
		<u>43,078,028.37</u>	<u>38,308,199.82</u>
Balance as at 1.1.2013		38,308,199.82	59,889,731.24
Less : Balance as at 31.12.2013		<u>43,078,028.37</u>	<u>38,308,199.82</u>
Increase / Decrease Liabilities		<u>(4,769,828.55)</u>	<u>(21,581,531.42)</u>
24.1 Advances			
Suspense Account Salary		2,819.58	2,819.58
Suspense Account - General		944,526.04	491,619.42
Special Salary		0.00	25,647.00
		<u>947,345.62</u>	<u>520,086.00</u>
24.2 Accrued Expenses			
Accrued Tax for Interest		161,478.72	188,130.75
Accrued Expenses - R & D		5,291,929.85	5,080,992.55
Accrued Expenses - Head office		10,835.44	22,390.14
Head Office creditor		130.00	130.00
		<u>5,464,374.01</u>	<u>5,291,643.44</u>
24.3 Deposits			
Contract Supplies		5,665.00	5,665.00
Tender - R&D		176,420.00	168,920.00
Tender - Head Office		279,854.00	279,854.00
		<u>461,939.00</u>	<u>454,439.00</u>
24.4 Retention			
Contract Works		2,773,480.65	2,425,079.71
Unpaid - salary		275,716.20	248,476.01
Unpaid - salary - Head office		200.00	200.00
Unpaid - wages		16,067.57	16,067.57
Cancelled cherubs		118,251.80	124,299.80
Regional Economic Advancement Project 2 -Matal		139,272.00	139,272.00
		<u>3,322,988.22</u>	<u>2,953,395.09</u>
24.5 Creditors Control Account			
Other creditors		802,295.00	328,295.00
Plastic crates-Fund		9,201,545.95	12,675,600.00
Paboling Vasals-Fund		4,207,384.04	2,350,080.94
		<u>14,211,224.99</u>	<u>15,353,975.94</u>
24.6 Gratuity fund		<u>18,670,156.53</u>	<u>13,734,660.35</u>


I.M.N.P. ILLANGASINGHE
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 INSTITUTE OF POST HARVEST TECHNOLOGY
 ANURADHAPURA

		Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
25 Current Assets			
Stocks	23.1	2,387,749.45	2,984,342.27
Advances	23.2	640,907.20	716,137.80
Deposits	23.3	22,708.75	22,708.75
Debtors Control Account	23.4	1,249,535.35	1,367,329.98
Accrued Income	23.5	2,967,731.77	3,317,367.47
Savings	23.6	5,948,830.37	4,298,587.25
		<u>13,217,462.89</u>	<u>12,706,473.52</u>
Balance as at 1.1.2013		12,706,473.52	40,297,519.56
Less : Balance as at 31.12.2013		<u>13,217,462.89</u>	<u>12,706,473.52</u>
Increase / Decrease Current Assets		<u>(510,989.37)</u>	<u>27,591,046.04</u>
25.1 Current Assets			
Stocks			
Noodles		321,297.54	349,486.74
Rice Mill -Rice		1,606.50	45,892.10
Broken & other		0.00	2,758.00
Stores -Paddy		43,511.42	324,892.52
Research projects		415,468.00	155,200.00
Machinery - Raw material		70,369.25	13,658.27
Machinery		519,745.00	1,062,075.00
Diesel - Factory		111,434.48	111,434.48
- Generator		34,941.00	34,941.00
Packing material - Noodles		869,376.26	884,004.16
		<u>2,387,749.45</u>	<u>2,984,342.27</u>
Note			
25.2 Advances			
Festival		141,594.03	147,094.03
Traveling		121,318.41	242,497.01
Half monthly		150.00	150.00
Interring Advance -General R&D		158,885.16	255,678.16
Interring Advance -General - Head Office		17,106.60	70,718.60
Suspense Account General - Head Office		0.00	0.00
Special Salary		201,853.00	
		<u>640,907.20</u>	<u>716,137.80</u>
25.3 Deposits			
Services		675.00	675.00
Other		22,033.75	22,033.75
		<u>22,708.75</u>	<u>22,708.75</u>
25.4 Debtors Control Account			
Rice		100,183.75	100,183.75
By-product		6,069.50	6,069.50
Others		1,142,063.10	1,198,734.99
Sale -stole		1,219.00	1,219.00
Agriculture Ministry		0.00	61,122.74
		<u>1,249,535.35</u>	<u>1,367,329.98</u>


I.M.N.P. ILLANGASINGHE
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 INSTITUTE OF POST HARVEST TECHNOLOGY
 ANURADHAPURA

	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
25.5 Accrued Income		
Geranial		
National Saving Bank 1- 0005- 04-9129-2-Anuradti	2,887,436.40	3,237,072.10
Regional Economic Advancement Project 1 -Matal	49,354.70	49,354.70
Sri Lanka Council for Agricultural Research Policy	30,940.67	30,940.67
	<u>2,967,731.77</u>	<u>3,317,367.47</u>
25.6 Savings		
National Saving Bank 1- 0005- 04-9129-2-Anuradti	2,497,425.41	2,365,849.99
National Saving Bank 1- 0001- 07-32087-Kollupiti	3,451,404.96	1,932,737.26
	<u>5,948,830.37</u>	<u>4,298,587.25</u>

	Balance as at 31.12. 2013 Rs.	Balance as at 31.12. 2012 Rs.
Note		
26 Investment		
Deposits		
National Saving Bank 2- 0001- 17-99606 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99568 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99541 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99584 -Kollupiti	0.00	2,000,000.00
National Saving Bank 2- 0001- 17-99550 -Kollupiti	10,000,000.00	10,000,000.00
National Saving Bank 2- 0001- 17-99576 -Kollupiti	0.00	2,748,000.00
National Saving Bank 2- 0001- 15-77794 -Kollupiti	10,000,000.00	10,000,000.00
	<u>50,000,000.00</u>	<u>54,748,000.00</u>
Other Non - Current Assets		
Workers Loan	5,662,242.73	5,340,969.09
Workers Loan -Special	538,833.34	463,500.00
Flood Loan	0.00	245,620.95
Work in Progress - Office Building	4,498,266.89	1,706,627.06
	<u>10,699,342.96</u>	<u>7,756,717.10</u>
Total Non - Current Assets	<u>60,699,342.96</u>	<u>62,504,717.10</u>
Balance as at 1.1.2013	62,504,717.10	70,223,341.61
Less : Balance as at 31.12.2013	60,699,342.96	62,504,717.10
Increase / Decrease Non Current Assets	<u>1,805,374.14</u>	<u>7,718,624.51</u>
27 Cash & Cash equivalents at the beginning of period		
Cash at Bank		
Bank of Ceylon - Torinton	4,703,885.18	789,487.44
People's Bank -Anuradhapura	182,384.42	121,516.19
Patty Cash	5,000.00	5,000.00
Cash & Cash equivalents as at 01.01.2013	<u>4,891,269.60</u>	<u>916,003.63</u>
28 Cash & Cash equivalents at the ending of period		
Cash at Bank		
Bank of Ceylon - Torinton	1,632,359.10	4,703,885.18
People's Bank -Anuradhapura	1,020,688.52	182,384.42
Patty Cash	5,000.00	5,000.00
Cash & Cash equivalents as at 31.12.2013	<u>2,658,047.62</u>	<u>4,891,269.60</u>


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 ANURADHAPURA

29 Note - That plastic crates given to farmers traders and collectors at 50% subsidy for promote packaging methods to transportation reduction to Post Harvest Losses in Fruits and Vegetables

That stock not yet given to them

Plastic crate stock 2013.12.31 at Cost

3,551,576.00

30 Note

30.1 Following deductions have been made when computing the operational profit
Gratuity

30.2 E.P.F. - Employee Contributes 10% Employer Contributes 12%

30.3 E.T.F. Employer Contributes 3%

31 Note

Payment of income tax has not been included in cash payment
However with holding tax has been deducted from the interest
received on fixed deposits and savings. We have
submitted income tax reports to the in Land Revenue.

32 Assets transferred from the Paddy Marketing Board to the I.P.H.T. on
25 th October 2006. However, the Accounts shown in book values of
the P.M.B. transferred Assets . The transferred Assets are being
revalued

33 One of our building Contractors Ms K.D Ebert & Sons Holding (pvt) Limited
have signed two agreements to contract building at Anuradhapura office
They have done some extra work un authored the agreement.
After stopping payment for the un authored extra work. They have sent two
letter of demand on 28 th November 2006 demanding to pay Rs 30,806,979.10 .
One being Rs 5,329,344.62 as payment of extra work and the other
Rs 5,477,634.48. Total payment 10,806,979.10 and their loss and damages
Rs 20,000,000.00 the total amount Rs 30,806,979.10 requesting to pay
whiting 14 days if not action will be taken
But we have not responded the request neither they have not filed
action against us according to the letter of demand

34 The initiate Capitals of the INSTITUTE OF POST HARVEST
TECHNOLOGY shown Rs 500,000,000.00

35 The institute has received from the treasury on capital expenditure
from 2000 to 2013 Rs. 30,509,250.00

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ANURADHAPURA

Note

8 & 9 PROPERTY, PLANT & EQUIPMENT

Descriptions	Building		Plant, Machinery & Equipment		Equipment	Furniture & Fittings	Electricity & Fittings	Library Books	Computers	Telephone & Fittings	Vehicles	Agro - Farm	Total
	Laboratory Workshop Mill	Rice Based Products Food Plants	Office, Laboratory Workshop Mill	Rice Based Products Food Plants									
COST													
Balance as at 1.1.2013	65,290,256.25	40,636,087.00	40,972,172.47	29,110,000.00	5,024,973.77	10,264,434.07	1,348,520.37	1,481,078.55	5,930,701.06	403,342.41	28,505,413.82	1,253,934.22	230,220,913.99
Adjustment	116,980.00		137,290.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	254,280.00
Additions	35,600.00	0.00	55,280.00	0.00	193,090.00	14,300.00	22,250.00	0.00	240,800.00	48,023.75	0.00	0.00	609,343.75
Disposal													
Balance as at 31.12.2013	65,442,846.25	40,636,087.00	41,164,742.47	29,110,000.00	5,218,063.77	10,278,734.07	1,370,770.37	1,481,078.55	6,171,501.06	451,366.16	28,505,413.82	1,253,934.22	231,084,537.74
DEPRECIATION													
Balance as at 1.1.2013	14,394,423.78	22,349,847.85	34,085,250.56	29,109,999.00	3,651,998.61	7,768,912.66	1,184,354.31	1,185,717.19	5,523,773.31	328,672.47	19,578,396.82	1,253,934.22	140,425,280.78
Adjustment	2,924.75	0.00	10,296.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13,221.52
Charges for the Year	1,636,071.16	1,015,902.18	2,065,783.06	0.00	277,161.64	548,955.84	24,585.30	60,801.00	259,735.75	46,972.52	2,988,765.00	0.00	8,924,733.45
Depreciation on Disposals													
Balance as at 31.12.2013	16,033,419.69	23,365,750.03	36,161,330.37	29,109,999.00	3,929,160.25	8,317,868.50	1,218,939.61	1,246,518.19	5,783,509.06	375,644.99	22,567,161.82	1,253,934.22	149,363,235.73
WRITTEN DOWN VALUE													
Balance as at 31.12.2013	49,409,426.56	17,270,336.98	5,003,412.10	1.00	1,288,903.52	1,960,865.57	151,830.76	234,560.36	387,992.00	75,721.17	5,938,252.00	0.00	81,721,302.01
Balance as at 1.1.2013	50,895,832.47	18,286,239.15	6,886,921.91	1.00	1,372,975.16	2,495,521.41	154,166.06	295,381.36	406,927.76	74,669.94	8,927,017.00	0.00	89,795,633.21

Note

Depreciation	Rates
Building	2.5%
Plant, Machinery & Equipment	7.5%
Equipment	10%
Furniture & Fittings	10%
Electricity & Fittings	10%
Telephone & Fittings	10%
Library Books	10%
Vehicles	20%
Telephone	20%


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 ANURADHAPURA

Note 8 & 9 - A

Descriptions	No	Balance as at 1.1.2013		Additions During the Year	Disposed	Adjustment to Opening Balance		Aggregated Depreciation as at 1.1.2013	Disposal	Depreciation for the Year		Aggregated Depreciation as at 31.12.2013	Balance as at 31.12.2013	
		Rs	Rs			Rs	Rs			Rs	Rs		Rs	Rs
Buildings														
Office, Laboratory Workshop & Mill		5,249,014.85				116,990.00		4,724,113.35		131,225.37	4,855,338.72	393,676.13	524,901.50	
Boundary wall		1,674,695.65					2,924.75	361,452.96		44,792.14	409,169.85	1,382,515.90	1,313,242.69	
P.V.C Fence		3,032,578.28						303,257.84		75,814.46	379,072.30	2,653,505.98	2,729,320.44	
Bachelor Quarters	1	959,227.75						311,748.98		23,980.69	335,729.67	623,498.08	647,478.77	
Workshop Extension	1	1,933,992.81						26,523.28		46,349.82	471,873.10	1,462,119.71	1,510,469.53	
Cycle Hut	1	116,054.52						26,112.24		2,901.35	29,013.59	89,940.93	89,940.93	
Twin Quarters	8	10,734,760.80						1,724,778.90		268,369.02	1,993,147.92	8,741,612.88	9,009,981.90	
Room-Partician	1	50,150.00						13,791.25		1,253.75	15,045.00	35,105.00	36,358.75	
Twin Quarters Water Tanks	8	484,288.30		35,600.00				96,384.46		12,107.21	108,491.67	375,796.63	387,903.84	
Water Tanks	10	298,526.00						334,126.00		8,353.15	342,479.15	281,468.85	254,221.81	
Room-Partician -Extinction office	1	97,155.00						19,431.03		2,428.88	21,859.92	75,295.09	77,723.97	
Vehicle Garage	1	345,205.60						69,041.12		8,630.14	77,671.26	267,534.35	276,164.48	
Office, Laboratory & Hosial		37,632,639.96						5,976,968.77		940,816.00	6,917,784.77	30,714,855.18	31,655,671.18	
Slage		402,260.00						70,395.50		10,056.50	80,452.00	321,808.00	331,864.50	
Cantina		689,103.60						120,593.13		17,227.60	137,820.73	551,282.87	568,510.47	
Road Development		550,093.60						82,514.04		13,752.34	96,266.38	453,827.22	467,579.56	
Gate		378,251.18						9,456.28		9,456.28	18,912.56	359,338.62	368,794.90	
Gurd room		638,128.35						15,953.21		15,953.21	31,906.42	606,221.93	622,175.14	
Garage		24,130.00						603.25		603.25	1,206.50	22,923.50	23,526.75	
Sub Total		65,290,256.25		35,600.00	0.00	116,990.00	2,924.75	14,394,423.78	0.00	1,636,071.16	16,033,419.70	49,409,426.55	50,895,832.46	
Buildings		40,636,087.00						22,349,847.85		1,015,902.18	23,365,750.03	17,270,336.98	18,286,239.16	
Rice Based Food Products Plant		40,636,087.00		0.00	0.00	0.00	0.00	22,349,847.85		1,015,902.18	23,365,750.03	17,270,336.98	18,286,239.16	
Plant, machinery & Equipment														
Office, Laboratory Workshop & Mill		12,507,979.26						12,507,979.26		10,940.57	12,507,979.26	0.00	0.00	
Copy Printer	1	437,625.00						426,684.43		22,000.00	404,684.43	0.00	10,940.57	
Paper Cutter	1	22,000.00						21,450.00		6,206.70	27,656.70	0.00	550.00	
Typewriter (English)	2	82,756.00						67,250.94		937.50	83,988.44	0.00	15,505.06	
Gas Welding Set	1	37,500.00						36,562.50		937.50	37,500.00	0.00	937.50	
Spot Welding plant	1	200,000.00						180,000.00		15,000.00	195,000.00	0.00	20,000.00	
Grass cutter	1	76,500.00						74,587.50		1,912.50	76,500.00	0.00	1,912.50	
Laboratory waterde-ionizer	1	192,404.44						187,594.29		4,810.15	192,404.44	0.00	4,810.15	
Auto clave	1	774,675.00						755,308.18		19,366.82	774,675.00	0.00	19,366.82	
UV- lamp	1	70,279.11						68,522.09		1,757.02	70,279.11	0.00	1,757.02	
Facsimile machine	6	122,093.75		55,280.00				94,408.58		10,378.03	104,786.61	72,587.14	27,685.17	
Multimedia Projector	2	702,375.00						436,837.55		52,678.13	489,515.68	212,859.33	265,537.45	
Photocopy machine	5	720,500.00						509,587.50		54,037.50	563,625.00	156,875.00	210,912.50	
Emboss Seal	1	28,125.00						25,312.54		2,108.38	27,420.92	703.08	2,812.46	
Refrigerator	1	49,504.00						44,553.60		3,712.80	48,266.40	1,237.60	4,950.40	
Bread cutter	1	57,500.00						51,750.00		4,312.50	56,062.50	1,437.50	5,750.00	
Vacuum Sealer	1	180,000.00						162,000.00		13,500.00	175,500.00	4,500.00	18,000.00	
Colour soarting machine	1	5,736,788.83						5,163,109.84		430,259.16	5,593,369.00	143,419.83	573,678.99	
Uprighter Freezer	2	75,000.00						67,500.00		5,625.00	73,125.00	1,875.00	7,500.00	
Refrigerator	5	167,900.01						134,347.50		12,592.50	146,940.00	20,960.01	33,552.51	
Freezer	2	79,000.00						71,100.00		5,925.00	77,025.00	1,975.00	7,900.00	
Typewriter (Sinhala)	3	78,813.00						70,931.73		5,910.98	76,842.71	1,970.30	7,881.27	
Mycro soil Hot air oven	1	75,960.00						62,667.00		5,697.00	68,364.00	7,586.00	13,283.00	
Universal oven	1	184,500.00						152,212.50		13,837.50	166,050.00	18,450.00	32,287.50	
Laboratory Oven	2	342,000.00						282,150.00		25,650.00	307,800.00	34,200.00	59,850.00	
Rotary Evaporator	3	559,776.00						461,815.20		41,963.20	503,778.40	55,977.60	97,960.80	
P.H. meter - hand held	4	187,264.00						154,492.80		14,044.80	168,537.60	18,726.40	32,771.20	
- Bench Top	3	181,518.00						149,752.35		13,613.85	163,366.20	18,151.80	31,765.65	
Gas Analyser	1	4,250,400.00						2,869,020.00		318,780.00	3,187,800.00	1,062,600.00	1,381,380.00	
Balance C/F		28,180,736.40		55,280.00	0.00	0.00	0.00	25,289,487.88	0.00	1,096,128.58	26,385,616.46	1,850,399.94	2,891,248.52	


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 ANURADHAPURA

Note
8 & 9 - A

No	Descriptions	Balance as at 1.1.2013		Adjustment to Opening Balance	Disposd		Additions During the Year		Balance as at 31.12.2013		Aggregated Depreciation as at 1.1.2013		Adjustment to Opening Balance	Disposd		Depreciation for the Year		Aggregated Depreciation as at 31.12.2013		Balance as at 31.12.2013		
		Rs	Rs		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
	Balance BIF	28,180,736.40	0.00	0.00	0.00	55,280.00	28,235,016.40	25,289,487.88	0.00	1,096,128.58	26,385,616.46	1,850,399.94	2,891,248.52	1,850,399.94	32,167.85	18,361.65	2,913,458.41	2,913,458.41	32,167.85	18,361.65	2,913,458.41	2,913,458.41
6	Heating mantles - 500ml	183,816.00					183,816.00	151,648.15		13,786.20	165,434.35	18,361.65	32,167.85	18,361.65			14,943.60	173,923.20	19,324.80	33,816.40	19,324.80	33,816.40
6	Heating mantles - 1000ml	193,248.00					193,248.00	159,249.60		14,498.60	173,923.20	19,324.80	33,816.40	19,324.80			9,831.60	117,979.20	13,108.80	22,940.40	13,108.80	22,940.40
3	Heating mantles - 2000ml	131,088.00					131,088.00	105,147.60		11,745.00	140,940.00	15,660.00	27,405.00	15,660.00			7,931.25	95,175.00	10,575.00	18,506.25	10,575.00	18,506.25
6	Soxhlet Extraction set - 1000ml	156,600.00					156,600.00	129,195.00		14,905.00	171,500.00	20,000.00	37,500.00	20,000.00			14,905.00	156,600.00	17,500.00	34,100.00	17,500.00	34,100.00
3	Soxhlet Extraction set - 2000ml	105,750.00					105,750.00	87,243.75		7,931.25	113,683.75	13,165.00	26,518.75	13,165.00			7,931.25	105,750.00	12,615.00	21,165.00	12,615.00	21,165.00
7	Laboratory Balance	1,967,760.00					1,967,760.00	1,623,402.00		147,582.00	1,770,984.00	196,776.00	344,358.00	196,776.00			7,931.25	1,770,984.00	204,707.25	344,358.00	204,707.25	344,358.00
1	Computer printer	105,750.00					105,750.00	87,243.75		14,905.00	129,195.00	15,660.00	34,100.00	15,660.00			7,931.25	105,750.00	12,615.00	21,165.00	12,615.00	21,165.00
1	Bush cutter	41,970.00					41,970.00	34,625.25		3,147.75	38,773.00	4,197.00	7,344.75	4,197.00			15,373.13	184,477.54	20,487.47	35,870.59	20,487.47	35,870.59
1	Welding transformer	204,975.00					204,975.00	169,104.41		15,373.13	184,477.54	20,487.47	35,870.59	20,487.47			49,552.31	594,627.69	66,069.73	115,622.04	66,069.73	115,622.04
1	Rice Polishing machine	660,697.42					660,697.42	545,075.38		4,657.50	55,890.00	6,210.00	10,867.50	6,210.00			6,690.00	79,200.00	8,920.00	15,400.00	8,920.00	15,400.00
1	Computer printer	9,900.00					9,900.00	8,167.50		742.50	8,910.00	990.00	1,732.50	990.00			6,690.00	79,200.00	8,920.00	15,400.00	8,920.00	15,400.00
2	Pentrometer	62,100.00					62,100.00	51,232.50		4,657.50	55,890.00	6,210.00	10,867.50	6,210.00			12,300.53	147,606.34	16,400.67	28,701.19	16,400.67	28,701.19
1	Laboratory waterbath with racks	89,200.00					89,200.00	73,590.00		6,690.00	80,280.00	8,920.00	15,400.00	8,920.00			5,760.00	69,120.00	7,680.00	13,440.00	7,680.00	13,440.00
1	Sterep zoom microscope	88,000.00					88,000.00	72,600.00		6,690.00	79,200.00	8,920.00	15,400.00	8,920.00			19,364.94	232,379.26	25,819.94	45,184.88	25,819.94	45,184.88
1	Microscope with Photography & Display	164,007.00					164,007.00	135,305.81		12,300.53	147,606.34	16,400.67	28,701.19	16,400.67			5,920.13	65,121.39	8,313.62	19,733.74	8,313.62	19,733.74
1	Microscpe	104,700.00					104,700.00	86,377.50		1,291.50	14,206.50	3,013.50	4,305.00	3,013.50			3,742.25	4,116.75	873.25	1,247.50	873.25	1,247.50
1	Colony Counter	76,800.00					76,800.00	63,360.00		16,503.75	181,541.25	38,508.75	55,012.50	38,508.75			16,503.75	181,541.25	38,508.75	55,012.50	38,508.75	55,012.50
1	Brookfield	258,199.20					258,199.20	213,014.32		18,393.00	183,930.00	61,310.00	79,703.00	183,930.00			39,528.45	434,812.95	52,233.05	131,761.50	52,233.05	131,761.50
1	Turbidity Meter	78,935.00					78,935.00	59,201.26		10,955.25	120,507.75	25,562.25	36,517.50	25,562.25			10,955.25	120,507.75	25,562.25	36,517.50	25,562.25	36,517.50
1	Calibration kit set	17,220.00					17,220.00	12,915.00		14,892.20	163,814.09	34,748.41	49,640.61	163,814.09			18,750.00	206,250.00	43,750.00	62,500.00	43,750.00	62,500.00
1	Sample cuvettes	4,980.00					4,980.00	3,742.50		996.75	1,993.50	1,296.50	1,296.50	1,993.50			18,393.00	183,930.00	61,310.00	79,703.00	61,310.00	79,703.00
1	Shaker	220,050.00					220,050.00	165,037.50		24,192.20	24,192.00	8,064.00	10,483.20	24,192.00			51,405.00	399,835.00	325,565.00	376,970.00	325,565.00	376,970.00
2	Moisture Balance	527,046.00					527,046.00	395,284.50		18,393.00	183,930.00	61,310.00	79,703.00	183,930.00			39,528.45	434,812.95	52,233.05	131,761.50	52,233.05	131,761.50
1	Cooled Incubator	146,070.00					146,070.00	109,552.50		10,955.25	120,507.75	25,562.25	36,517.50	25,562.25			51,405.00	399,835.00	325,565.00	376,970.00	325,565.00	376,970.00
1	Automatic Kjeldhal Apparator	686,070.00					686,070.00	514,552.50		37,523.93	262,667.52	237,651.49	275,175.42	237,651.49			37,523.93	262,667.52	237,651.49	275,175.42	237,651.49	275,175.42
1	Melting Point Apparator	198,562.50					198,562.50	148,921.89		18,172.50	109,035.00	133,265.00	151,437.50	133,265.00			31,773.92	158,869.96	264,782.61	296,556.53	264,782.61	296,556.53
1	Dryer	250,000.00					250,000.00	187,500.00		18,750.00	206,250.00	43,750.00	62,500.00	206,250.00			18,750.00	206,250.00	43,750.00	62,500.00	43,750.00	62,500.00
1	Deep Dryer	13,290.00					13,290.00	996.75		996.75	1,993.50	1,296.50	1,296.50	1,993.50			6,480.00	71,280.00	15,120.00	21,600.00	15,120.00	21,600.00
1	Diive Gear Motor	245,240.00					245,240.00	165,537.00		18,393.00	183,930.00	61,310.00	79,703.00	183,930.00			3,123.75	34,361.25	7,288.75	10,412.50	7,288.75	10,412.50
1	REAP - Stark moisture detector receiver	32,256.00					32,256.00	21,772.80		2,419.20	24,192.00	8,064.00	10,483.20	24,192.00			51,405.00	399,835.00	325,565.00	376,970.00	325,565.00	376,970.00
1	Sieve Shaker	685,400.00					685,400.00	308,430.00		18,824.00	14,193.00	3,311.70	4,731.00	14,193.00			9,900.00	9,900.00	2,100.00	3,000.00	2,100.00	3,000.00
1	Rubber Roll Sheller	255,500.00					255,500.00	114,975.00		12,600.00	12,600.00	2,940.00	4,200.00	12,600.00			26,437.50	277,875.00	74,625.00	101,062.50	74,625.00	101,062.50
1	Fume Cupboard	500,319.00					500,319.00	225,143.58		10,950.00	9,900.00	2,100.00	3,000.00	9,900.00			10,950.00	10,950.00	2,100.00	3,000.00	2,100.00	3,000.00
1	Abrasive flour mill	242,300.00					242,300.00	90,862.50		18,172.50	109,035.00	133,265.00	151,437.50	109,035.00			31,773.92	158,869.96	264,782.61	296,556.53	264,782.61	296,556.53
1	power hack show	423,652.17					423,652.17	127,095.64		124,000.00	9,300.00	105,400.00	141,700.00	9,300.00			6,480.00	71,280.00	15,120.00	21,600.00	15,120.00	21,600.00
2	vibro meter	86,400.00					86,400.00	64,800.00		6,480.00	18,600.00	4,200.00	5,880.00	18,600.00			3,123.75	34,361.25	7,288.75	10,412.50	7,288.75	10,412.50
2	Whiteness meter	41,650.00					41,650.00	31,237.50		3,123.75	34,361.25	7,288.75	10,412.50	34,361.25			1,419.30	15,612.30	3,311.70	4,731.00	3,311.70	4,731.00
2	Welding plant	18,924.00					18,924.00	14,193.00		9,900.00	9,900.00	2,100.00	3,000.00	9,900.00			1,419.30	15,612.30	3,311.70	4,731.00	3,311.70	4,731.00
2	Digital Thermometer	12,000.00					12,000.00	9,000.00		9,900.00	9,900.00	2,100.00	3,000.00	9,900.00			1,419.30	15,612.30	3,311.70	4,731.00	3,311.70	4,731.00
2	Dial Thermometer	16,800.00					16,800.00	12,600.00		12,600.00	12,600.00	2,940.00	4,200.00	12,600.00			9,900.00	9,900.00	2,100.00	3,000.00	2,100.00	3,000.00
2	Turbine ventilation	352,500.00					352,500.00	251,437.50		26,437.50	277,875.00	74,625.00	101,062.50	277,875.00			26,437.50	277,875.00	74,625.00	101,062.50	74,625.00	101,062.50
4	Thermometers	146,000.96					146,000.96	54,900.22		10,950.00	9,900.00	2,100.00	3,000.00	9,900.00			10,950.00	10,950.00	2,100.00	3,000.00	2,100.00	3,000.00
6	Moisture meter	6,275.00					6,275.00	4,706.26		6,275.00	4,706.26	1,096.11	1,568.74	4,706.26			4					

Note
8 & 9 - A

Descriptions	No	Balance as at 1.1.2013		Adjustment to Opening Balance	Disposed	Additions During the Year	Balance as at 31.12.2013		Aggregated Depreciation as at 1.1.2013	Adjustment to Opening Balance	Disposed	Depreciation for the Year	Aggregated Depreciation as at 31.12.2013		Balance as at 31.12.2013	
		Rs	Rs				Rs	Rs					Rs	Rs	Rs	Rs
Equipments																
Office Laboratory Workshop & Mill		51,377.84					51,377.84	51,377.84					51,377.84			0.00
Stores		2,600.00					2,600.00	2,600.00					2,600.00			0.00
Weighing machine	4	2,550.00					2,550.00	2,550.00					2,550.00			0.00
Moisture meter	84	237,676.56					237,676.56	237,676.56					237,676.56			0.00
Stainless Steel Vessel Planties	10,10	8,550.00					8,550.00	8,170.00				190.00	8,360.00			380.00
Kitchen knife, Spoons, Chopping Board	6,25,3	9,092.00					9,092.00	8,692.00				200.00	8,892.00			400.00
Dial Thermometer	6	8,100.00					8,100.00	8,100.00					8,100.00			0.00
National Gas cooker	4	17,000.00					17,000.00	17,000.00					17,000.00			0.00
Bottle Sealer	1	2,250.00					2,250.00	2,250.00					2,250.00			0.00
Poly Sealer	2	4,395.00					4,395.00	3,896.00				249.50	4,145.50			499.00
Plastic Vessel	11	3,760.00					3,760.00	3,760.00					3,760.00			0.00
Electric Kettle -	3	13,540.00					13,540.00	7,745.00				1,065.00	8,810.00			5,795.00
Food Processign machine	1	117,450.00					117,450.00	117,450.00					117,450.00			0.00
Food Processor	2	25,000.00					25,000.00	25,000.00					25,000.00			0.00
Deep fryer	2	19,000.00					19,000.00	19,000.00					19,000.00			0.00
Electric Oven	4	31,790.00					31,790.00	26,762.00				1,584.00	28,346.00			5,028.00
Kitchen Grinder	2	4,392.00					4,392.00	4,392.00					4,392.00			0.00
Kitchen Beeler	2	3,240.00					3,240.00	3,240.00					3,240.00			0.00
Cooking pot / Pans	2	3,600.00					3,600.00	3,600.00					3,600.00			0.00
Cutlery set	8	5,472.00					5,472.00	5,472.00					5,472.00			0.00
Kenwood Food Processor	1	36,300.00					36,300.00	36,300.00					36,300.00			0.00
Gas Silinder & House and others	2	30,448.00					30,448.00	30,448.00					30,448.00			0.00
Gas Cookers with tube	8,7	37,400.00					37,400.00	19,785.00				3,140.00	22,925.00			14,475.00
Microwave Oven	2	23,800.01					23,800.01	23,800.00					23,800.00			0.00
Pressure Cooker	2	6,350.00					6,350.00	6,350.00					6,350.00			0.00
Caste Recorder	1	3,720.00					3,720.00	3,720.00					3,720.00			0.00
Gas Silinders	5	17,299.00					17,299.00	17,299.00					17,299.00			0.00
Burner	1	3,850.00					3,850.00	3,850.00					3,850.00			0.00
Moisture Meter	1	25,875.00					25,875.00	25,875.00					25,875.00			0.00
Emergency light with table lamp	1	4,000.00					4,000.00	4,000.00					4,000.00			0.00
Codiang machine	1	10,811.25					10,811.25	10,811.25					10,811.25			0.00
Calculator	20	19,182.50			6,000.00		25,182.50	15,573.51				1,314.00	16,887.51			3,608.99
Digital Multimeter & power controller	1	44,050.00					44,050.00	44,050.00					44,050.00			0.00
Time machine - small	1	34,000.00					34,000.00	34,000.00					34,000.00			0.00
Cellular Phone	2	84,000.00					84,000.00	84,000.00					84,000.00			0.00
Stapler	4	26,700.00					26,700.00	26,700.00					26,700.00			0.00
Wall clock	5	4,954.00					4,954.00	4,954.00					4,954.00			0.00
Digital clock	1	8,159.00			2,990.00		11,149.00	4,200.00				1,073.50	5,273.50			3,959.00
Puncher	8	7,340.00					7,340.00	2,936.00				734.00	3,670.00			4,404.00
Oasis quat sntrizer	1	1,405.00			820.00		2,225.00	662.50				164.50	827.00			1,398.00
Micro - Chlor	1	6,727.50					6,727.50	6,727.50					6,727.50			0.00
Digital Themeler	4	6,750.00					6,750.00	6,750.00					6,750.00			0.00
Immersion probe	2	112,769.50					112,769.50	68,764.75				8,800.95	77,565.70			44,004.75
Speas temperature probes	2	7,510.00					7,510.00	7,510.00					7,510.00			0.00
Thermometers - General 10 - 360	3	10,124.00					10,124.00	10,124.00					10,124.00			0.00
Thermometers - General 10 - 250	3	1,950.00					1,950.00	1,950.00					1,950.00			0.00
Thermometers - General 10 - 110	3	1,665.00					1,665.00	1,665.00					1,665.00			0.00
Thermometers - Murcury enclosed scale	1	5,900.00					5,900.00	5,900.00					5,900.00			0.00
Drill Machine	1	40,750.00					40,750.00	24,460.00				4,075.00	28,525.00			16,300.00
Cutoff Machine	1	64,032.49					64,032.49	38,419.51				6,403.25	44,822.76			25,612.98
Air Babal Selear	4	14,500.00					14,500.00	8,700.00					10,150.00			5,800.00
Blenders	4	20,699.00					20,699.00	7,019.80				2,069.90	9,089.70			13,679.20
Pricing Machine	1	1,950.00					1,950.00	1,170.00				195.00	1,365.00			780.00
Balance C/F		1,297,756.65		0.00	9,810.00		1,307,566.65	1,149,148.22			0.00	32,708.60	1,181,856.82			148,606.42


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 ANURADHAPURA

Note 8 & 9 - A

No	Descriptions	Balance as at 1.1.2013		Adjustment to Opening Balance	Disposed		Additions During the Year	Balance as at 31.12.2013		Aggregated Depreciation as at 1.1.2013		Adjustment to Opening Balance	Disposed		Depreciation for the Year	Aggregated Depreciation as at 31.12.2013		Balance as at 31.12.2013	
		Rs	Rs		Rs	Rs		Rs	Rs	Rs	Rs		Rs	Rs		Rs	Rs	Rs	Rs
	Equipments																		
	Balance C/F	1,297,756.65	0.00	0.00	0.00	0.00	9,810.00	1,307,566.65	1,149,148.22	0.00	0.00	0.00	0.00	32,708.60	1,181,856.82	125,709.82	148,608.42		
3	Timer Programmable	8,370.00						8,370.00	8,370.00						8,370.00		0.00		
1	Water distill plant	29,700.00						29,700.00	29,700.00						29,700.00		0.00		
2	Refractometer Fan	74,870.00						74,870.00	74,870.00						74,870.00		0.00		
1	Eblimometer with Roplaement Thermometer	54,900.00						54,900.00	54,900.00						54,900.00		0.00		
6	Bunsan burner	2,700.00						2,700.00	2,700.00						2,700.00		0.00		
1	Electric Bunsan burner	43,353.60						43,353.60	43,353.60						43,353.60		0.00		
1	Heidolpeh	69,669.60						69,669.60	69,669.60						69,669.60		0.00		
3	Alipheh 7645 rectangular	40,924.80						40,924.80	40,924.80						40,924.80		0.00		
10	Alipheh 7550 rectangular	101,376.00						101,376.00	101,376.00						101,376.00		0.00		
1	Duplo Spare Drum of	104,500.00						104,500.00	104,500.00						104,500.00		0.00		
1	Food Dehydrator	1,494.99						1,494.99	1,494.99						1,494.99		0.00		
18	Airconditioners	1,345,890.41						1,345,890.41	994,097.73					72,935.67	1,067,033.40	278,857.01	351,792.69		
2	Hot Plate	60,876.00						60,876.00	60,876.00						60,876.00		0.00		
2	Cooking pot / Pans	4,750.00						4,750.00	4,750.00						4,750.00		0.00		
9	Water Filter	37,650.00						37,650.00	27,090.00					3,520.00	30,610.00	7,040.00	10,560.00		
1	T V buster	2,971.00						2,971.00	2,971.00						2,971.00		0.00		
2	Sealers	5,990.00						5,990.00	4,154.00					459.00	4,613.00	1,377.00	1,836.00		
3	Calculator	4,783.00						4,783.00	4,423.50					359.50	4,783.00		359.50		
1	Micro Phone stand	1,525.00						1,525.00	510.00						1,525.00		0.00		
1	Micro Phone	510.00						510.00	510.00						510.00		0.00		
3	Thermometer	25,499.97						25,499.97	25,499.96					25,499.96	25,499.96		0.00		
1	Chromatography columns	39,620.00						39,620.00	39,620.00						39,620.00		0.00		
1	Staining Trough Glass	1,980.00						1,980.00	1,980.00						1,980.00		0.00		
1	Mouse	650.00						650.00	650.00						650.00		0.00		
1	Lamp	1,794.00						1,794.00	1,794.00						1,794.00		0.00		
6	Magi Boards	12,820.00						12,820.00	5,872.00					1,282.00	7,154.00	5,666.00	6,948.00		
4	Over head Projector	107,410.00						107,410.00	80,344.75					10,741.00	91,085.75	16,324.25	27,065.25		
3	Cash Box	6,500.00						6,500.00	2,715.00					650.00	3,365.00	3,135.00	3,785.00		
1	Tape	575.00						575.00	517.50					57.50	575.00		57.50		
6	Water Pump	204,205.00						204,205.00	114,522.50					20,420.50	134,943.00	69,262.00	89,682.50		
1	Vacuum cleaner	7,700.00						7,700.00	6,930.00					770.00	7,700.00		770.00		
1	Wall Fans	17,700.00						17,700.00	11,870.00					1,770.00	13,640.00	4,060.00	5,830.00		
5	Fans	45,740.00						45,740.00	16,058.00					4,574.00	20,632.00	25,108.00	29,682.00		
8	Staplers	15,800.00					1,100.00	15,800.00	5,580.00					1,980.00	7,160.00	8,640.00	9,120.00		
5	Tape Recorder	15,500.00					125,000.00	33,440.00	6,003.00					3,344.00	9,347.00	24,093.00	11,937.00		
2	finger print machine	17,940.00					1,250.00	125,000.00	125,000.00					125,000.00	125,000.00	112,500.00	112,500.00		
1	F. M. Modulator	2,500.00						2,500.00	2,250.00					125.00	1,250.00		1,125.00		
1	Kee Box	15,093.75						15,093.75	13,584.35					250.00	2,500.00		250.00		
1	CARP- Blender	3,633.00						3,633.00	3,269.70					1,509.38	15,093.72	0.03	1,509.40		
1	Pressure Cooker	475.00						475.00	380.00					363.30	3,633.00		363.30		
1	Kitchen Scalar	7,225.00						7,225.00	5,020.00					47.50	47.50		95.00		
3	Hand mixer	4,600.00						4,600.00	3,680.00					722.50	5,742.50	1,482.50	2,205.00		
1	Over head Projector Screen	2,900.00						2,900.00	2,030.00					460.00	4,140.00	460.00	920.00		
2	Hand Light	61,490.00					15,500.00	76,990.00	25,349.00					290.00	2,320.00	870.00	580.00		
5	Grass Cutter	11,582.00					15,500.00	11,582.00	8,107.41					7,699.00	33,048.00	43,942.01	36,141.00		
1	Rice Flour Product Machine	172,360.00						172,360.00	172,360.00					1,159.20	9,265.60	2,316.40	3,474.59		
1	Incubator	66,000.00						66,000.00	39,600.00					6,600.00	46,200.00	19,800.00	26,400.00		
2	Weighing machine	21,600.00						21,600.00	8,790.00					2,160.00	10,950.00	10,950.00	12,810.00		
3	Rice Cookers	6,670.00						6,670.00	4,002.00					667.00	4,669.00	2,001.00	2,668.00		
1	Datesstamp	4,175,523.77	0.00	0.00	0.00	0.00	168,160.00	4,343,683.77	3,389,783.61					189,723.64	3,579,507.23	764,176.54	785,740.15		
	Balance C/F	4,175,523.77	0.00	0.00	0.00	0.00	168,160.00	4,343,683.77	3,389,783.61	0.00	0.00	0.00	0.00	189,723.64	3,579,507.23	764,176.54	785,740.15		


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Descriptions	No	Balance as at 1.1.2013		Adjustment to Opening Balance	Disposed		Additions During the Year	Balance as at 31.12.2013		Aggregated Depreciation as at 1.1.2013		Adjustment to Opening Balance	Disposed		Depreciation for the Year	Aggregated Depreciation as at 31.12.2013		Balance as at 31.12.2013		Balance as at 31.12.2012		
		Rs	Rs		Rs	Rs		Rs	Rs	Rs	Rs		Rs	Rs		Rs	Rs	Rs	Rs	Rs	Rs	Rs
Equipments																						
Balance C/F		4,175,523.77		0.00		0.00	168,160.00	4,343,683.77	3,389,783.61	0.00		0.00		0.00	188,723.64	3,579,507.23	764,176.54	785,740.15				
Floor Polisher	1	21,826.00						21,826.00	10,913.00						2,182.60	13,095.60	8,730.40	10,913.00				
Buffer set with spoon	2	98,120.00						98,120.00	49,060.00						9,812.00	58,872.00	39,248.00	49,060.00				
Balance	2	5,480.00						5,480.00	2,740.00						548.00	2,751.00	2,729.00	2,740.00				
Ventilator	1	17,000.00						17,000.00	8,500.00						1,700.00	10,200.00	6,800.00	8,500.00				
Exhaust fan	1	12,000.00						12,000.00	6,000.00						1,200.00	7,200.00	4,800.00	6,000.00				
Rechargeable Torch	1	2,375.00						2,375.00	1,187.50						237.50	1,425.00	950.00	1,187.50				
Juck	2	980.00						980.00	490.00						98.00	588.00	392.00	490.00				
Tray	1	990.00						990.00	495.00						99.00	594.00	396.00	495.00				
Tee cups	18	2,100.00					2,500.00	4,600.00	1,050.00						460.00	1,510.00	3,090.00	1,050.00				
Spoon	2	110.00						110.00	55.00						11.00	66.00	44.00	55.00				
Sound system	1	160,000.00						160,000.00	80,000.00						16,000.00	96,000.00	64,000.00	80,000.00				
Stickes printer	1	12,500.00						12,500.00	4,750.00						1,250.00	6,000.00	4,250.00	4,750.00				
polli celear	1	37,100.00						37,100.00	11,130.00						3,710.00	14,840.00	22,260.00	25,970.00				
Flour mixture	1	2,500.00						2,500.00	500.00						250.00	750.00	1,750.00	2,000.00				
mixture	1	50,736.00						50,736.00	10,147.20						5,073.60	15,220.80	35,515.20	40,588.80				
stirhopper machine	1	2,300.00						2,300.00	460.00						230.00	690.00	1,610.00	1,840.00				
table hand grinder	1	12,550.00						12,550.00	2,510.00						1,255.00	3,765.00	8,785.00	10,040.00				
scaaner	2	15,500.00					7,500.00	23,000.00	1,550.00						2,300.00	3,850.00	19,150.00	13,950.00				
digital cammera with memory chip	3	40,630.00					11,900.00	52,530.00	4,063.00						5,253.00	9,316.00	43,214.00	36,567.00				
Vedio Cammera items	1	33,200.00						33,200.00	3,320.00						3,320.00	6,640.00	26,560.00	29,880.00				
spray	1	10,500.00						10,500.00	1,050.00						1,050.00	2,100.00	8,400.00	9,450.00				
farm equipment	7	10,770.00						10,770.00	1,077.00						1,077.00	2,154.00	8,616.00	9,693.00				
seasor	3	465.00						465.00	46.50						46.50	93.00	372.00	418.50				
extention cords	2	5,300.00						5,300.00	530.00						530.00	1,060.00	4,240.00	4,770.00				
brix hydrometer	1	3,360.00						3,360.00	1,008.00						336.00	1,344.00	2,016.00	2,352.00				
charger torch	2	3,800.00						3,800.00	1,140.00						380.00	1,520.00	2,280.00	2,660.00				
shifter	1	46,000.00						46,000.00	9,200.00						4,600.00	13,800.00	32,200.00	36,800.00				
Icecream machien Power gurd	1	189,950.00						189,950.00	18,995.00						18,995.00	37,990.00	151,960.00	170,955.00				
string hoppers machine	1	250.00					250.00	250.00	25.00						25.00	275.00	225.00	250.00				
themo flask	1	2,780.00					2,780.00	2,780.00	278.00						278.00	2,502.00	2,502.00	2,502.00				
Promote Packaging Methods Project																						
Electrical Equipment		51,308.00						51,308.00	30,784.80						5,130.80	35,915.60	15,392.40	20,523.20				
Balance		5,024,973.77		0.00		0.00	193,090.00	5,218,063.77	3,651,998.61		0.00	0.00		0.00	277,161.64	3,929,160.23	1,288,903.54	1,372,975.15				


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Note 8 & 9 - A

Descriptions	No	Balance as at 1.1.2013		Additions During the Year	Disposed	Adjustment to Opening Balance	Disposed	Depreciation for the Year	Aggregated Depreciation as at 1.1.2013	Adjustment to Opening Balance	Balance as at 31.12.2013	
		Rs	Rs								Rs	Rs
Furniture & Fittings												
Office Laboratory Workshop & Mill	1	3,912,102.58	3,912,102.58						3,912,102.58			0.00
Office Equipment - Conference Table	25	42,000.00	42,000.00						42,000.00			0.00
Office Equipment - Conference Chairs	2	118,750.00	118,750.00						118,750.00			0.00
AI 1400 writing table	2	15,149.91	15,149.91						15,149.91			0.00
AI 135 Side returns	2	11,362.44	11,362.44						11,362.44			0.00
AI S2 drawers	2	7,574.97	7,574.97						7,574.97			0.00
500 TGA chairs	2	15,926.85	15,926.85						15,926.85			0.00
6404 EA Vchairs	4	13,207.62	13,207.62						13,207.62			0.00
Utility writing table	2	15,981.23	15,981.23						15,981.23			0.00
Utility armchairs	2	4,721.73	4,721.73						4,721.73			0.00
Utility chairs W/outarms	4	9,080.25	9,080.25						9,080.25			0.00
Standard Steel cupboard	3	6,658.78	6,658.78						6,658.78			0.00
Filling cabinet - for drawers	1	22,950.00	22,950.00						22,950.00			0.00
Filling cabinet	8	65,558.64	65,558.64						65,558.64			0.00
Side unit 30*20*13 with brown tap	1	4,347.98	4,347.98						4,347.98			0.00
Cash Box - Standard	1	1,289.19	1,289.19						1,289.19			0.00
Table Fans	5	24,540.00	24,540.00						24,540.00			0.00
Computer table	2	20,200.00	20,200.00						20,200.00			0.00
Cupboards	6	59,860.00	59,860.00						59,860.00			0.00
Aluminium Cupboards	1	30,000.00	30,000.00						30,000.00			0.00
Tables	31	235,791.25	235,791.25						235,791.25			0.00
Steel Table	9	96,670.00	96,670.00						96,670.00			0.00
Cupboards	1	14,500.00	14,500.00						14,500.00			0.00
Steel filling cabinet	11	88,618.82	88,618.82						88,618.82			0.00
Steel writing tables	7	46,850.00	46,850.00						46,850.00			0.00
Wooden tables	5	17,500.00	17,500.00						17,500.00			0.00
Computer table	18	117,400.00	117,400.00						117,400.00			0.00
Laboratory - Tables	2	8,000.00	8,000.00						8,000.00			0.00
- Stools	18	14,910.00	14,910.00						14,910.00			0.00
Conference - Chairs	46	99,418.00	99,418.00						99,418.00			0.00
Library Cupboards	2	24,829.06	24,829.06						24,829.06			0.00
Tender Box	1	2,125.00	2,125.00						2,125.00			0.00
Filling rack	2	9,850.00	9,850.00						9,850.00			0.00
Dining Table	1	3,000.00	3,000.00						3,000.00			0.00
Tea Table	1	1,500.00	1,500.00						1,500.00			0.00
Chairs	27	85,188.25	85,188.25						85,188.25			0.00
Arm Chair	10	35,120.00	35,120.00						35,120.00			0.00
Plastic Chairs	138	87,991.00	87,991.00						87,991.00			0.00
Steel chairs	4	13,814.00	13,814.00						13,814.00			0.00
Typing Tables	2	9,980.00	9,980.00						9,980.00			0.00
Conference - Tables	1	29,200.00	29,200.00						29,200.00			0.00
- Chairs	10	77,900.00	77,900.00						77,900.00			0.00
Steel Cupboard	7	52,950.00	52,950.00						52,950.00			0.00
Racks	4	22,625.00	22,625.00						22,625.00			0.00
Stand Fans	5	21,650.00	21,650.00						21,650.00			0.00
Mitress	51	142,622.00	142,622.00						142,622.00			0.00
Stools	2	5,050.00	5,050.00						5,050.00			0.00
Pillows	14	2,750.00	2,750.00						2,750.00			0.00
Nets	2	1,500.00	1,500.00						1,500.00			0.00
Bad	4	23,150.00	23,150.00						23,150.00			0.00
mage boards	2	3,850.00	3,850.00						3,850.00			0.00
Mahogani Bads	4	83,200.00	83,200.00						83,200.00			0.00
Mahogani Cupboard	1	64,000.00	64,000.00						64,000.00			0.00
Sub Total		5,944,764.55	5,944,764.55	0.00	0.00	0.00	0.00	115,558.90	5,569,136.63	0.00	260,069.02	375,627.92


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 INSTITUTE OF POST HARVEST TECHNOLOGY
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Note
8 & 9 - A

Descriptions	No	Balance as at 1.1.2013	Adjustment to Opening Balance	Disposed	Additions During the Year	Balance as at 31.12.2013	Aggregated Depreciation as at 1.1.2013	Adjustment to Opening Balance	Disposed	Depreciation for the Year	Aggregated Depreciation as at 31.12.2013	Balance as at 31.12.2013	Balance as at 31.12.2012
		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
Furniture & Fittings													
Balance C/F		5,944,764.55	0.00	0.00	0.00	5,944,764.55	5,569,136.63	0.00	0.00	115,558.90	5,684,695.53	260,069.02	375,627.92
Filling cabinet	16	260,205.00				260,205.00	122,914.00			26,020.50	148,934.50	111,270.50	137,291.00
Kitchen cupboards	1	203,320.00				203,320.00	121,992.00			20,332.00	142,324.00	60,996.00	81,328.00
Computer tables	9	65,556.00				65,556.00	21,805.50			6,555.60	28,361.10	37,194.89	43,750.50
Plastic chairs	40	25,960.00				25,960.00	14,666.00			2,596.00	17,262.00	8,698.00	11,294.00
Computer chairs	5	29,505.20				29,505.20	12,092.07			2,950.52	15,042.59	14,462.60	17,413.13
Chairs	88	338,973.00				338,973.00	203,383.80			33,897.30	237,281.10	101,691.90	135,589.20
Execative chairs	25	175,492.13			10,250.00	185,742.13	105,295.21			18,574.20	123,869.40	61,872.72	70,196.92
Auditorium chairs	140	986,125.00				986,125.00	591,675.00			98,612.50	690,287.50	295,837.50	394,450.00
Tables	36	510,903.36				510,903.36	280,384.36			51,090.34	331,474.70	179,428.66	230,519.00
Reading tables	8	97,472.41				97,472.41	38,988.96			9,747.24	48,736.20	48,736.21	58,483.45
Clark table	7	54,900.00				54,900.00	21,960.00			5,490.00	27,450.00	27,450.00	32,940.00
Mira table	2	13,200.00				13,200.00	5,280.00			1,320.00	6,600.00	6,600.00	7,920.00
Dining tables	3	57,960.00				57,960.00	34,776.00			5,796.00	40,572.00	17,388.00	23,184.00
Head table	1	87,400.00				87,400.00	52,440.00			8,740.00	61,180.00	26,220.00	34,960.00
Board room table	1	149,500.00				149,500.00	89,700.00			14,950.00	104,650.00	44,850.00	59,800.00
OHP Stands	3	60,030.00				60,030.00	36,018.00			6,003.00	42,021.00	18,009.00	24,012.00
Podium	1	19,435.00				19,435.00	11,661.00			1,943.50	13,604.50	5,830.50	7,774.00
Beads	12	103,500.00				103,500.00	62,100.00			10,350.00	72,450.00	31,050.00	41,400.00
Book racks	2	38,640.00				38,640.00	23,184.00			3,864.00	27,048.00	11,592.00	15,456.00
Sofa Set	1	129,892.50				129,892.50	50,544.25			12,989.25	63,533.50	66,359.00	79,348.25
Sofa set stool	1	6,500.00				6,500.00	3,250.00			650.00	3,900.00	2,600.00	3,250.00
Noties board	1	23,300.00				23,300.00	11,650.00			2,330.00	13,980.00	9,320.00	11,650.00
Fin board	2	29,160.00				29,160.00	14,580.00			2,916.00	17,496.00	11,664.00	14,580.00
reading chair	32	140,492.80				140,492.80	56,197.14			14,049.28	70,246.42	70,246.38	84,295.65
Office chair	12	38,400.00				38,400.00	15,360.00			3,840.00	19,200.00	19,200.00	23,040.00
Dressing table	1	15,580.00				15,580.00	7,790.00			1,558.00	9,348.00	6,232.00	7,790.00
High back chairs	7	56,267.75				56,267.75	16,880.34			5,626.78	22,507.13	33,760.64	39,387.40
Ex- Tables	5	79,395.75				79,395.75	14,226.98			7,939.58	22,166.56	57,229.21	65,168.76
Side tables	2	17,280.00				17,280.00	5,184.00			1,728.00	6,912.00	10,368.00	12,096.00
Movable cabinet	2	16,200.00				16,200.00	4,860.00			1,620.00	6,480.00	9,720.00	11,340.00
moveble cabinet for UPS CPU	2	5,940.00				5,940.00	1,782.00			594.00	2,376.00	3,564.00	4,158.00
Ex- high back chairs	2	19,620.00				19,620.00	5,886.00			1,962.00	7,848.00	11,772.00	13,734.00
Ex - law back chairs	7	58,850.00				58,850.00	12,257.00			5,885.00	18,142.00	40,708.00	46,593.00
off- cupboards	1	13,800.00				13,800.00	4,140.00			1,380.00	5,520.00	8,280.00	9,660.00
Filling cabinet -4 draw	1	17,500.00				17,500.00	5,250.00			1,750.00	7,000.00	10,500.00	12,250.00
Wrating tables	3	39,900.00				39,900.00	6,220.00			3,990.00	10,210.00	29,690.00	33,680.00
Cabinet	1	15,950.00				15,950.00	1,595.00			1,595.00	3,190.00	12,760.00	14,355.00
glass pade	1												
catalog box	1	3,655.22			4,050.00	4,050.00				405.00	405.00	3,645.00	
Exhbition hut	1	92,180.00				92,180.00	1,462.06			365.52	1,827.58	1,827.65	2,193.16
Book racks	4	80,326.40				80,326.40	27,654.00			9,218.00	36,872.00	55,308.00	64,526.00
display racks	4	89,152.00				89,152.00	32,130.56			8,032.64	40,163.20	40,163.20	48,195.84
Taval racks	19	43,750.00				43,750.00	35,660.80			8,915.20	44,576.00	44,576.00	53,491.20
Exhbition board	1	8,500.00				8,500.00	11,500.00			4,375.00	15,875.00	27,875.00	32,250.00
										850.00	4,250.00	4,250.00	5,100.00
										0.00			
Sub Total		10,264,434.07	0.00	0.00	14,300.00	10,278,734.07	7,768,912.66	0.00	0.00	548,955.84	8,317,868.50	1,960,865.57	2,495,521.38

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Note
8 & 9 - A

Descriptions	No	Balance as at 1.1.2013		Additions During the Year	Disposed	Adjustment to Opening Balance		Depreciation for the Year	Aggregated Depreciation as at 31.12.2013		Disposal	Adjustment to Opening Balance		Balance as at 31.12.2013	
		Rs	Rs			Rs	Rs		Rs	Rs		Rs	Rs	Rs	Rs
Electric & Other Fittings															
Office Laboratory Workshop & Mill	4	522,917.41						980.00	522,917.41					522,917.41	0.00
Sink & fittings	1	21,050.00							14,190.00					15,170.00	5,880.00
Screen	11	67,000.00							67,000.00					67,000.00	0.00
Ceiling fan	9	50,240.00		19,500.00				4,219.00	24,507.00					25,733.00	29,952.00
Name Board	1	181,100.00		2,750.00				7,860.00	150,365.00					50,235.00	38,595.00
power casing	1	112,512.96						275.00	275.00					2,475.00	0.00
Cartan - Colombo office		393,700.00						11,251.30	45,005.19					67,507.78	78,759.07
Electrical fittings for Generator									393,700.00					0.00	0.00
Sub total		1,348,520.37		22,250.00	0.00	0.00	0.00	24,585.30	1,218,939.60		0.00	0.00	151,830.78	154,166.07	
Books															
Library		1,481,078.55						60,801.00	1,246,518.19					234,560.36	295,361.36
Sub Total		1,481,078.55		0.00	0.00	0.00	0.00	60,801.00	1,246,518.19		0.00	0.00	234,560.36	295,361.36	
Computer															
Note Book Computer	9	1,283,251.75		64,000.00				56,500.00	1,242,751.75					104,500.00	97,000.00
Computer U.P.S.	49	284,107.44		63,050.00				29,904.50	281,102.94					66,054.50	32,909.00
DVD Writer	7	27,400.00		15,550.00				9,112.50	27,500.00					15,450.00	9,012.50
Computer Monitors	12	84,750.00		69,750.00				26,087.50	88,575.00					65,925.00	22,262.50
Computer & Printers	26,32	3,642,118.12						107,725.00	3,558,868.12					83,250.00	190,975.00
Computer Software-Thibus	2	39,768.75							39,768.75					0.00	0.00
Computer Modem	1	20,790.00							20,790.00					0.00	0.00
Flash memory	43	124,765.00		18,050.00				19,618.75	112,802.50					30,012.50	31,581.25
hard disk	3	29,250.00		8,000.00				7,312.50	18,375.00					10,875.00	18,187.50
Dual core processor	2	8,500.00		2,400.00				2,125.00	6,375.00					10,125.00	4,250.00
speaker set	4	3,000.00						1,350.00	3,600.00					1,800.00	750.00
Plotter with computer	1	383,000.00							383,000.00					0.00	0.00
Sub Total		5,930,701.06		240,800.00	0.00	0.00	0.00	259,735.75	5,783,509.06		0.00	0.00	387,992.00	406,927.75	
Telephone & Fittings															
Telephone	14	105,244.86		9,183.75				8,358.52	95,183.45					19,245.16	18,419.94
Intercom Phone	19	151,307.55		4,650.00				2,418.00	148,423.55					7,534.00	5,302.00
mobial phone	7	59,440.00		32,390.00				18,366.00	56,092.00					35,738.00	21,714.00
Mobial internet system	2	20,790.00		1,800.00				4,158.00	23,756.00					-2,966.00	1,192.00
net work switch	1	1,800.00													
inter net network	9	66,560.00						13,672.00	52,190.00					14,370.00	28,042.00
Sub Total		403,342.41		48,023.75	0.00	0.00	0.00	46,972.52	375,645.00		0.00	0.00	73,921.16	74,669.94	
Vehicles															
Jeeps	2	410,667.72							410,667.72					2.00	2.00
Van	2	9,589,850.00						1,820,000.00	5,949,849.00					3,640,001.00	5,460,001.00
Lorry	2	464,554.67							464,552.67					2.00	2.00
Cycle	1	1,250.00							1,250.00					0.00	0.00
Cycle	2	13,900.00							13,900.00					0.00	0.00
Motor Cycle	7	440,060.15							440,060.15					0.00	0.00
Double Cab, 4 WD	2	4,725,000.00							4,724,998.00					2.00	2.00
Double Cab, 4 WD	3	8,457,725.00						1,148,120.00	4,724,998.00					2,298,242.00	3,447,362.00
Motor Car	1	1,450,000.00							1,449,999.00					1.00	1.00
Jeeps	1	2,800,000.00							2,800,000.00					0.00	0.00
Gas conation	1	98,225.00						19,645.00	98,225.00					0.00	0.00
Land Rower	1	42,731.28							42,730.28					1.00	1.00
Kubota tractor	1	11,450.00							11,449.00					1.00	1.00
Sub Total		28,505,413.82		0.00	0.00	0.00	0.00	2,988,765.00	22,567,161.82		0.00	0.00	5,938,252.00	8,927,017.00	
Agro-Farm															
Farm- Garden		302,948.93							302,948.92					0.00	0.00
Farm- Garden -Water System		542,829.55							542,829.56					0.00	0.00
Farm		408,155.74							408,155.74					0.00	0.00
Sub Total		1,253,934.22		0.00	0.00	0.00	0.00	0.00	1,253,934.22		0.00	0.00	1,253,934.22	0.00	0.00


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 ANURADHAPURA



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கணக்காய்வாளர் தலைமை அபிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



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எனது இல. }
My No. }

NC/AP/E/IPHT/01/13/31

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Your No. }

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திகதி }
Date }

30 March 2015

The Chairman

Institute of Post-Harvest Technology .

Report of the Auditor General on the Financial Statements of the Institute of Post-Harvest Technology for the year ended 31 December 2013 in terms of Section 14(2) (c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the Institute of Post-Harvest Technology for the year ended 31 December 2013 comprising the statement of financial position as at 31 December 2013 and the statement of financial performance , statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory notes to the financial statements was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971. My comments and observations which I consider should be published with the Annual Report of the Institute in terms of Section 14(2)(c) of the Finance Act, appear in this report. A detailed Report in terms of Section 13(7)(a) of the Finance Act was issued to the Chairman of the Institute on 13 November 2014.

1:2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the Sri Lanka Public Sector Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements whether due to fraud or error.

1:3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards

2:2 Comments on Financial Statements

2.2.1 Accounting Deficiencies.

The following observations are made.

- (a) The interest of Rs.10,561 received during the year under review had not been brought to accounts.
- (b) A capital asset (Submersible Aerated Pump) valued at Rs.146,893 purchased for the research projects during the year under review had been written off against the revenue in considering as an expenditure under research projects instead of showing under the fixed assets.
- (c) Seven equipment valued at Rs. 3,325,000 received by the institute as donations under the World Food Programme in 2011 and 2012 and 05 equipment the value of which had not been estimated, had not been accounted.
- (d) Without rectifying 04 items of income and expenditure of Rs. 259,880 pointed out by the report of the Auditor General on the financial statements for the year 2012, the financial statements for the year under review had been prepared.
- (e) Even though fully depreciated fixed assets valued at Rs.62,736,724 pertaining to 08 items had been utilized during the year under review, those assets had not been revaluated and brought to the accounts.
- (f) The condemned and obsolete machine meant for the removal of black seeds from rice to the book value of Rs.5,736,788 which had not contributed to the operations during the period had not been removed from the financial statements and depreciation thereon amounting to Rs.430,259 for the year under review had been debited to the Income and Expenditure Account.
- (g) Adjustments of Rs.195,560 pertaining to the preceding year had been made to the cumulative profit of the statement of equity instead of making adjustments retrospectively in the financial statements.

- (h) Action had not been taken to recover a sum of Rs.588,825 receivable for the rent of hostels and supply of foods to the outside parties and it had not been accounted as a receivable amount. Nevertheless, the expenses incurred for this purpose had been treated as the expenditures of the institute.

2.2.2 Accounts Receivable and Payable

The following observations are made.

- (a) Even though 125 plastic crates valued at Rs. 74,500 and 50 plastic crates valued at Rs. 19,000 had been given to the National Food Promotion Board and Mahiluppallama Agro Crops Research and Development Institute respectively on credit basis in 2012, action had not been taken either to recover the relevant money or get back those plastic crates.
- (b) Even though assets and liabilities of the Paddy Marketing Board as at 30 June 2000 had been legally transferred to the Institute of Post-Harvest Technology in October 2006, action had not been taken for the settlement of 14 debit balances totalling Rs.6,133,917 and 11 credit balances totalling Rs. 1,088,851 remaining over a long period.

2.2.3 Lack of Evidence for Audit

For the purpose of carrying out investigation and monitoring activities, an officer had been appointed to a post, which is not included in the approved cadre of the institute, without the approval of the Board of Control and a sum of Rs. 95,400 had been paid for fuel expenses in 8 instances during the year under review. Nevertheless, reports confirming that the said officer had carried out monitoring activities of the institute had not been furnished to audit.

2.3 Non-compliance with Laws, Rules, Regulations and Management Decisions

The following instances of non-compliance were observed.

Reference to Laws, Rules, Regulations, Non-compliance
etc.

- | ----- | ----- |
|---|--|
| (a) Financial Regulations 571 of the Democratic Socialist Republic of Sri Lanka | Even though a period of 2 to 19 years had elapsed, action had not been taken to credit 8 deposits balances totalling Rs.2,169,713 to the revenue. |
| (b) Treasury circular No. PED 58 (2), dated 15 September 2011 | Recovery of PAYEE-Tax of Rs.18,000 for the month of November and December during the year under review from two officers whose monthly salary exceeded Rs.50,000 had been suspended without an approval. |

2.4 Transactions not supported by adequate authority.

The following observations are made

- (a) A female officer entitled to monthly fuel allowance had obtained an allowance of Rs.328,270 for 2040 liters of fuel obtained at 170 liters of fuel per month as approved for the year under review. Apart from this allowance, an additional 767.5 liters of fuel valued at Rs.109,386 had been obtained for her official vehicle, but the approval of the Chairman of the institute had not been obtained in terms of paragraph 04 of the Circular No.PED/50 dated 28 June 2008.
- (b) Contrary to the objectives set out in the Gazette pertaining to the establishment of the institute, a sum of Rs.47,623 had been spent without the approval of the Board of Control in respect of expenditures irrelevant to the operations of the institute.

3. Financial Review

Financial Results

According to the financial statements presented, the operations of the Institute for the year ended 31 December 2013 had resulted in a deficit of Rs.16,567,327 as compared with the corresponding deficit of Rs.4,893,838 for the preceding year, thus indicating an increase of Rs.11,673,489 in the financial results of the year under review as compared with the preceding year. The decrease in other income by Rs.10,360,667 during the year under review as compared with the preceding year had mainly attributed to the above position.

4. Operating Review

4:1 Performance of Research Projects

The following observations are made.

- (a) Although it was proposed to purchase a cool house valued at Rs.2.5 million under a special project during the year under review for the minimization of damages caused to fresh vegetables and fruits, it had not been implemented.
- (b) A sum of Rs.1,179,938 had been incurred for the research projects carried out by the institute. Even though the results of those researches had been published through the newspaper advertisements, distribution of leaflets, conduct of research symposiums, it had not been established whether the results of the relevant researches had been utilized in the field of post-harvest.
- (c) Since the inception of the institute an accounting policy for accounting the value of machines invented under various projects through the identification of their cost using an appropriate method had not been determined. Action had not been taken to preserve the right of inventions by obtaining patents for recording in the stock registers and bring them to accounts with the identification of life span of the machines.

- (d) The institute had not maintained an adequate database on the utilization of relevant technology by the beneficiaries of the development projects implemented in the institute.

4.2 Identified Losses

A shortage of 1993 plastic crates valued at Rs.1,190,814 and stocks purchased for the research activities valued at Rs.257,708 existed at the field centres and noodle stores of the institute was observed.

4.3 Management Inefficiencies

The following observations are made.

- (a) It was observed that 5,849 crates valued at Rs.1,754,700 purchased prior to 9 years under the Programme for Popularizing the Use of Plastic Crates for Minimizing the Damage caused to Vegetables and Fruit during transport and 04 mobile stalls valued at Rs.350,000 built for the distribution under the Programme for Distribution of Equipment at 50 per cent beneficiary contribution had remained without being distributed even by the end of the year under review.
- (b) The income of Rs.9,201,546 earned from the sale of plastic crates under the Programme for Popularizing the Use of Plastic Crates for Minimizing the Damage caused to Vegetables and Fruit during transport had been retained in the accounts without being utilized for the popularization of this programme.

4.4 Resources of the Institute supplied to other Government Institutions

- (a) Contrary to Section 9.4 of the Public Enterprises Circular No. PED/12 of 02 June 2003, three officers of the Institute had been attached to the Minister's Office of the Ministry of Agriculture in the year 2010. The approval of the Cabinet of Ministers had not been obtained in this connection and the Institute had paid a sum of Rs.990,627 as the salaries and allowances for the year under review and Rs.1,654,388 for the preceding year.

(b) In terms of the Public Enterprises Circular No.116 of 24 January 2007, although resources owned by the Public Enterprises should not be utilized for the activities of the other Ministries, contrary to that a vehicle of the Institute had been issued to the Ministry of Agriculture in the year 2011. The Institute had incurred a sum of Rs.140,181 in respect of the year under review and Rs.143,256 for the preceding year for this vehicle.

4.5 Personnel Administration

The approved cadre as at 31 December of the year under review was 153 and the actual cadre amounted to 111. As such the number of vacancies as at that date was 42.

4.6 Idle and Underutilized Assets.

Even though 06 motor vehicles valued at Rs.932,457 belonging to the Institute had been lying idle over periods ranging from 03 to 11 years, suitable action had not been taken for the disposal of those motor vehicles.

5 Accountability and Good Governance

5.1 Procurement Plan.

Goods valued at Rs.526,533 which had not been included in the procurement plan pertaining to the year 2013 had been purchased during the year.

5.2 Budgetary Control

When comparing the variances of the budgeted and actual values, there were excess 43 of per cent in 16 Objects and 82 per cent savings in 9 Objects and as such the budget had not been made use of as an effective instrument of financial control.



6. Systems and Controls

Deficiencies in systems and controls observed during the course of audit were brought to the attention of the Chairman of the Institute from time to time. Special attention is needed in respect of the following areas of control.

- (a) Income control
- (b) Budgetary control
- (c) Motor Vehicle control
- (d) Personnel Administration
- (e) Implementation of Research and Development projects.

W.C.P. Wickramaratne
Acting Auditor General