

and quality analysis for coffee of different regions, dehydration technology for ginger and large cardamom.

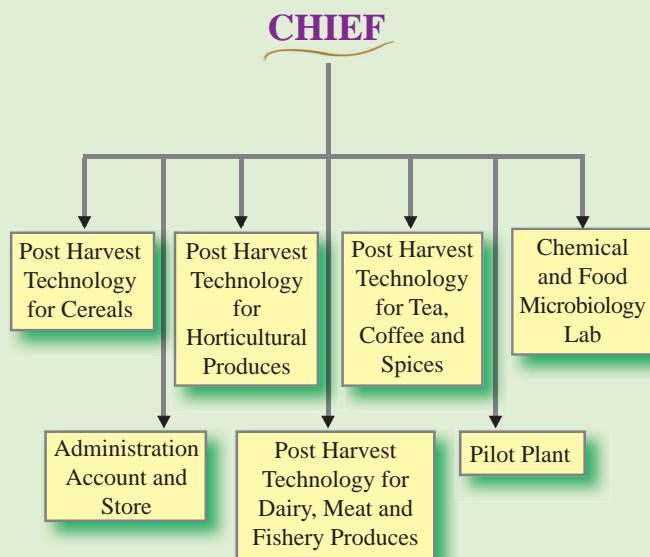
11. Increase in shelf life (up to 2 days) using zero energy cool chamber for bottom mushroom (*Agaricus bisporus*).
12. Dehydration study of tomato, spinach, mushroom and leafy vegetables.
13. Development of lab scale technology for instant rice.
14. Development of apple juice concentrates from different varieties of apple from Jumla.
15. Development of potato flour processing technology.
16. Development of preservation 'concentrates' technology for preparation of ready to serve soft drinks from mango.
17. Dissemination of approved technology and information related to food science and technology to farmers, small and medium scale entrepreneurs and other stakeholders.

### Human Resources

- |  |
|--|
| 1. Senior Technical Officer (T-8) - 1      |
| 2. Scientist (S-1) - 2                     |
| 3. Technical Officer (T-6) - 2             |
| 4. Account Officer (A-6) - 1deputed        |
| 5. Administrative Officer (A-6) - 1deputed |
| 6. Technical Assistant - 1                 |
| 7. Technical Assistant - 1 deputed         |

## ORGANIZATION STRUCTURE

### FOOD RESEARCH DIVISION



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# Food Research Division

## An Introduction



**Food Research Division**  
 National Agriculture Research Institute  
 Nepal Agriculture Research Council  
 Khumaltar, Lalitpur  
 2070 (2013)

## Background

Realizing the importance of research on post harvest losses and development of cost effective processing technology Food Research Unit (FRU) has started its work in F.Y. 2052/53 with evaluation of quality of some food and development of preservation technology for perishable fruits and vegetables. In F.Y. 2056/57 NARC has formally established this institution. The unit under Nepal Agricultural Research Council was upgraded to Food Research Division in F.Y. 2068/069. From that day onwards FRD is doing research and development on minimizing post harvest losses of agricultural products and assessment of varietal quality evaluation for various commodity research programs and development of cost effective processing technology. It is also involved in dissemination of developed technology in nutritional and quality analysis, processing, storage, packaging and product development of cereals, legumes, oilseeds, horticultural fish and meat products.

## Objectives

The overall objective is to develop efficient post production technologies for both durable and perishable agricultural produces in order to increase food availability and strengthening food and nutritional security of the country. The specific objectives are:

1. To develop appropriate technology to minimize post harvest losses of food products.
2. To develop cost effective preservation and processing technology of fruits and vegetables and spices.
3. To develop processing and milling technology for cereals, legumes and oilseeds.
4. To develop quality evaluation system of cereals, legumes and oilseeds of local and improved varieties.
5. To develop value addition or commercial technology and nutritious food from locally available food (Finger millet, foxtail millet, porso millet, barley, buckwheat, amaranth etc).
6. To develop weaning, geriatric and functional

food from locally available agricultural produces.

7. To analyze nutritional and processing quality of samples for varietal selection in commodity research program (rice, wheat, maize, legumes, oilseeds, ginger, big cardamom, sugarcane, turmeric etc)
8. To develop processing technology and product development from dairy, meat and fishery produces to help livestock development program.
9. To disseminate developed post harvest preservation and processing technology through publication, mass media communication and training to farmers, small scale entrepreneurs and other stakeholders.

## Programs

Following programs have been conceived and implemented with available physical and human resources

1. Study on nutritional, processing and quality analysis for varietal selection of cereals (rice, wheat, maize, finger millet, foxtail millet, porso millet, barley etc), legumes (pigeon pea, chickpea, lentil, kidneybean etc), oilseeds (rapeseed, peanut, sesame, sunflower etc).
2. Development of optimum processing and milling technology for cereals, legumes and oilseed crops to increase food availability and strengthening food and nutritional security.
3. Study on high nutritional density processed product (flour confectionary, pasta, weaning and geriatric food etc) development based on finger millet, foxtail millet, porso millet, buckwheat, amaranth, barley etc.
4. Development of optimum processing, dehydration and quality analysis technology for tea, coffee and spices.
5. Development of cost effective malting technology and varietal selection of barley

for malting.

6. Study on processing, storage and transportation losses of horticultural produces (citrus, apple, tomato, strawberry etc).
7. Development of low volume high value processed product from milk, meat and fish.

## Achievements

1. The division has helped plant breeder with varietal quality analysis for release and certification of cereal, legume and oilseed crops. Physical, chemical and processing quality analysis about 500 crops has been done to date.
2. The polishing technology of rice (6 to 8%) has been developed to enhance food and nutritional Security.
3. Different value added products keeping in view of nutritional quality such as bread, biscuit, cake, noodles have been developed.
4. Identification of barley varieties suitable for malt and beer production.
5. Development of malting procedure for barley.
6. Milling technology was developed for lentil and pigeon pea by adding 1% refined soya bean oil and conditioning for 40 hours at 23 to 25°C.
7. Technology development of preservation of strawberry and tomato for 15 and 20 days using modified atmospheric packaging.
8. Development of quality sekuwa and sukuti (dried meat) using 0.5 gm papaya latex per 1 kg of buff meat.
9. Development of processed products (bread, biscuit, cake, noodles, weaning food etc) from nutritious finger millet, foxtail millet, porso millet, barley, buckwheat etc.
10. Study on quality analysis of orthodox tea, development of wet processing technology