



SOW THE SEEDS OF WISDOM



NATI Graduates of 2020.

“Ena veigauna ni kida na mataka, caucaliwa mai delana, ubia koto na tegu e loma ni saqata, veivukiyaki noqu vakasama, voleka sara meu dro seu carata, Isa ko tamaqu dena qai rogorogoca na yacana.”

A solemn reminder, for a student attending Navuso Agricultural Technical Institute (NATI) via the school anthem the importance of parents' sacrifice to ensure that one remains in school, learns as much as one can, and proudly cap off that education journey at the much-anticipated graduation ceremony.

NATI is operated under the Methodist Church of Fiji and Rotuma with grant support from the Ministry of Agriculture

and the Ministry of Education.

Distinctively also known as Muainase, located in Navuso, Naitasiri, the Institute trains and produces 'replacement and commercial farmers' for Fiji.

In 1923 when the Methodist Church was then administered and operated from Australia, L.M Thompson, the then Secretary of Education for the Church, acquired the 1,200 acres freehold property in Navuso from its original owners Scott and Turner specifically to establish an agricultural school.

Overseas experts were brought in to develop the initiative with Mr Ben Meek, a graduate of Hawkesbury Agricultural

College in New South Wales becoming the school's first principal in 1924.

The Institute began recruiting young Fijian youths in villages to enroll for specific agriculture training.

Some decades later, Navuso extended its wings to the Pacific Islands region where it started accepting students from Tonga, Samoa and the Solomon Islands, making it the largest agricultural school in the region to offer Certificate in Tropical Agriculture during the booming 50's.

Hidden from the main traffic route of that area, and tucked away in lush greenery at Muainase, Head of the Institute, Mr Uraia Waibuta said the courses at the

institute would fully equip students to be 'replacement and future commercial farmers for Fiji'.

“The initial intention of the Institute, was to work towards addressing the current problems faced by young men and women of today in their respective communities,” he said.

“The school curriculum fully prepares young men and women to become future replacement and later commercial farmers in Fiji,” said Mr Waibuta.

“We have realized the saturation in the job market especially with white and blue collar jobs, therefore we have refocused now to creating, innovating and incentivizing the farmer job market.”

The Institute's two years' Certificate in Agriculture (Integrated) Level IV program is highly practical in nature, of which 80% is hands-on with students doing practical through attachments on the ten different enterprises provided in the institute facilities.

The enterprises include Dairy, Piggery, Poultry, Aquaculture, Root-crops and Vegetable crops, Fencing, Cottage Industry, Farm Machinery and Carpentry.

“It is critical that we provide the most relevant modern agricultural methods and appropriate technologies and best practice on farming to our students who come from different backgrounds,” he says.

“The point is to ensure that technologies taught to students can easily be implemented and adopted by them when they graduate.”

Currently, the Institute has a total school roll of 115 students, 13 of which are female and 102 male with 21 staff and farm hands.

Apart from the usual academic programme, students are also introduced to extra-curricular activities, such as

student driving tests, Individual farms and opening of individual bank accounts.

“We organize sporting events, and teaching iTaukei traditional protocols to empower our young men and women to reduce the gaps that exist in communities on basic traditional knowledge,” Mr Waibuta said.

“In addition, the Institute opens up individual bank accounts for first year students during enrollment so deposits earned by them can be made to their accounts. At the same time, students are able to pay for their own driving lessons from the money they earn,” he said.

Further, students are sent off from the gates of Muainase with a graduation package that includes land with Lease Titles to give them a head start, allowing them to put into practice all the lessons learnt, thus beginning the journey to sowing the seeds of excellence.

NATI is proud to have a recognized certificate programme under its cap, which is the Certificate in Agriculture Level IV. Now, the Institute has also been identified as the provider for the National Qualification on National Certificate in Dairy Level II.

The underlying strength to the Institute, since it is a Methodist owned Institute, spiritual development to students is a cross cutting program that runs in parallel with all its technical programs.

“We strongly believe, once these young men are holistically empowered, that is spiritually, technically and socially, they will create changes in their respective communities and growth in the agriculture sector.”

The Ministry of Agriculture in its 2020-2021 Budget allocated a total of \$665,270 to NATI.

BASIC INFORMATION ON BROILER FARMING



Broilers are chicken raised for meat production. Poultry meat is an important source of high quality protein for human diet. Broiler farming can be taken up as backyard farming for food and income security purpose or can be taken up as a commercial venture.

Advantages of broiler farming are:-

- Rearing period is 6-7 weeks [Short cycle]
- Broiler has high feed conversion efficiency
- Broiler has faster return from the investment
- Demand of poultry meat is more as compared to other meat.

Housing

Site selection

- Farm to be well connected to roads.
- Should have the availability of electricity and water at all times.
- High land with loamy soil for good drainage.
- Enough space for further expansion.
- Open space for good ventilation and biosecurity.

Ventilation

- Proper ventilation for movement of fresh air into the building for removal of stale air.
- Wire mesh to be fitted on the upper side of all the walls.

- Wet litter due to poor ventilation is the predisposing factor for coccidiosis and other health issues.

Floor space

- May vary according to age, size, type and number of birds.
- 1-1.2sqft/bird is recommended for matured birds.
- Floor to be strong, durable, free from dampness, smooth and rat free.
- Floor to be 1ft high from soil level.
- Cement concrete floor is best.

Building

- Should be in the East-West direction lengthwise.
- Distance between sheds to be at least 50 feet (open house).
- Width of the house not to exceed 30-35ft.
- Shed height should be from 10-12 ft.
- Roof is necessary to protect birds from rain and direct sunlight.

Litter

- Broilers are generally raised on deep litter system.
- Floor to be disinfected by phenyl, bleaching powder or lime before placing litter material.
- Litter material such as rice hull, wood shavings dried leaves etc. can be used to cover the floor.
- The depth of the litter should be

3-4inches.

- Cover the litter with paper for the first few days to avoid chicks from eating litter.
- Litter is used for keeping birds clean and comfortable as it absorbs moisture from droppings.
- Litter should be free from mould, injurious materials and dust.
- Litter should be kept in good dry condition.
- Remove wet litter if any and replace with fresh litter material.

Preparation before Chick Arrival

- Building, surrounding areas and equipment must be thoroughly cleaned and disinfected.
- Cover the dry floor with litter.
- Prepare and setup brooder guard.
- Place feeder and waters in a circle around the brooder.
- Operate the brooder for at least 24 hours before the chicks arrive for optimum temperature and condition.
- Fill the feeders and waters a few hours before the chicks arrive.

After Chick Arrival

- Introduce chicks to feed and water.
- Observe chicks closely and routinely.
- Keep feed and water available to the chicks at all times.
- Provide fresh, clean feed and water.
- Provide plenty of fresh air without draft.
- Keep litter dry.
- Adjust brooder light if needed.
- Once brooder or heat lamp is removed provide another source of light.

Brooding

- Broiler chicks need a source of heat to keep them comfortable.
- For the first week the chick environment needs to be in the range of 90-95°F.
- Reduce temperature gradually by 5°F each week until broilers are 3-4 weeks old or the temperature is 70°F.
- If the chicks are too warm, they can become dehydrated which may lead to

death or growth delay.

- Use thermometer for pen temperature by observing chicks response to heat source-cold chicks huddle together under heat source.
- Hot chicks move to the outer limits of the brooder guard.

Brooder

- A brooder provides the heat and protection the chicks would receive from the mother.
- A simple brooder is made from heavy box or basket with a layer of sawdust or newspaper placed at the bottom of it for brooding small number of chicks.
- A newly hatched chick will require an area of 20cmx20cm (8 inchx8inch) for each bird. A box of 1mx1m (3.2ftx3.2ft) will be enough for 25 chicks.
- For large farms, brooder can be constructed within the poultry shed using brooder guards and plastic curtains.
- Brooder guard should be 1.5ft in height.
- Heater, bulb or hurricane lamp can be used to provide heat. Put the light bulbs about 18 inches above ground.
- Spread saw shavings or bedding material and cover with newsprint and spread feed on newsprint for first few days. Also provide fresh clean water. Feed troughs can be introduced later.
- The birds can be kept in the brooder until they are 2 weeks old and later released into the poultry coop or shed.

Other essential Requirements

Once the birds are over 2 weeks old and released into the shed, it is important that the following is provided for optimum growth up to marketing.

Lightening

- Light should be provided 24hrs a day.
- This will increase the feeding time, increase weight gain and improve feathering in broiler.
- First 15 days in brooder 40, 60,100 Watt bulbs are used according to the requirements.

Feeders and Waterers

- Keep feeders and waterers clean all the times.
- Feeders should be kept at height that is level with the birds back height.
- Feed consumption is directly related to water consumption.
- Adequate water is necessary to optimize growth.

Types of drinkers

- One drinker can be used for 50 chicks.
- After four weeks, use one automatic drinker for 100-150 chicks.

Types of feeder

- One linear feeder for 50 chicks.
- After four weeks, use one round feeder for 25 birds.

Feeds and Feeding

Broiler Starter (21%CP) – 0 to 14 days (500g feed/chick)

Broiler Grower (19%CP) – 14 to 28 days (1200g feed/chick)

Broiler Finisher (18%CP) – 28 days to market (1200g/chick)

Pests and Diseases

- Sheds should be well-secured and free from predator.
- There is no major disease, if proper management and farm hygiene is practiced.
- Buy and feed medicated feed.

Records

Keep records of all transactions for farm inputs, mortality, flock, feed and water consumption, disease and treatment etc. These will assist in planning and better decision making.

Marketing

Farmers can market their birds by selling live. All in and all out basis should be practiced in broiler farming provided there is sufficient demand however, selective harvesting can be done based on sales demand. Clean shed by disinfecting and leaving it to dry for at least one week before next batch of birds are placed.