



Ministry of Agriculture Conducts Annual Assessment Meeting

The Ministry of Agriculture (MoA) conducted its annual assessment meeting from 27-28 January 2022 at its headquarters in Asmara. The meeting was carried out in accordance with national COVID-19 safety measures and guidelines.

Agricultural Extension Services and Zobas

According to data from all zobas and the Agricultural Extension Department (AED), in 2021 soil and water conservation (SWC) activities, including maintenance of existing structures, were carried out on more than 34,000 hectares (both on and off farm).

To date, various types of physical SWC activities have been applied on 39% of the total area under cultivation. Furthermore, 39 small-scale masonry dams have been built in the last three years, with another 23 under construction.

Temporal and spatial distribution of rainfall in 2021 was not uniform. This affected crop production and animal feed production, especially in the Northern Red Sea region.



According to estimates from all zobas, in 2021 more than 300,000 tons of field crops were harvested from a total cultivated area of 505,000 hectares. The total area under field crop production was covered in the following proportions: cereals (87%), pulses (9%), and oil seeds (4%). Since the goal is to achieve a 50:25:25 ratio by 2024, farmers and experts will need to devote extra attention to this area.

Furthermore, the MoA has been working on rapeseed multiplication in the Debub and Maekel regions in order to boost oilseed production and achieve appropriate ratios. In 2021, rapeseed multiplication was conducted on 76 hectares.

The total cultivated area for fruit production was reported to be around 4,800 hectares, with estimated yields of around 108,000 tons, while the total planted area for vegetables was 16,572 hectares, with estimated yields of roughly 246,000 tons. It

is estimated that this sub-sector employs approximately 12,000 households across the country.

Seed multiplication was also a top priority for the MoA in 2021. Around 370 hectares of land were dedicated to field crop seed multiplication in 2021, namely barley, wheat, maize sorghum and pearl millet, with a projected yield of above 14,800 quintals. 6,069 farmers were provided with more than 1,250 quintals of improved seeds collected from the previous year 2020.

Beneficiaries of this program on average produced 23 quintals per hectare from rainfed crops, while for those who supported their farms with irrigation 60 quintals per hectare.

In addition, during the past year, a total of 11,156 quintals of improved potato seeds were supplied to 2,253 farmers throughout the country. As a result of the MoA's efforts to introduce potatoes in more areas,



there have been promising results in potato production in Eritrea's lowlands (Gash Barka, Northern Red Sea, and Southern Red Sea). Efforts to expand crop production year-round within the two agro-ecological zones continue.

In the area of dairy production, artificial insemination services were conducted on 1,600 dairy cattle, and over 1,100 calves were born using AI during the reporting period.

Furthermore, since 2020, the distribution of backyard chicks has continued, with a total of 882,131 one-month-old chicks provided to 35,284 beneficiaries.

The number of bee colonies has also increased from 30,028 in 2020 to 34,924 in 2021, with an average honey yield of about 3,600 quintals. However, honey production decreased by 17% compared to the year 2020, mainly due to a mismatch of the rainy season with the flowering stage of several bee forages.

According to reports on animal health, about 3.6 million animals (including poultry) were vaccinated, helping to significantly reduce the incidence of animal and zoonotic diseases.

In order to detect desert locust breeding sites and take appropriate measures, surveys and assessments were conducted

on about 900,000 hectares of land in the NRS, SRS, and Gash Barka regions. As a result, about 7,000 hectares of infested land were identified and effectively treated.

In addition, around 200,000 hectares in the Gash Barka region was surveyed to control tree locusts. Consequently, 1,950 hectares of infested land was successfully treated with insecticides.

Moreover, over 829 motorized and manual pesticide sprayers were maintained and repaired as part of the desert locust control campaign.



Notably, a washing facility, featuring a water reservoir, was built at Ghadem Haliab, Northern Red Sea region. The facility is for cleaning and maintaining desert locust sprayer vehicles.

In addition to activities to combat migratory pests, Eritrea also successfully organized the 66th regular session of the Desert Locust Control Organization for East Africa (DLCO-EA) executive committee meeting and Council of Ministers conducted from 4-8 October 2021. During the council session, all 9 member states participated. Moreover, the participants agreed to finalize the five-year strategic plan within 2021 and to appoint a new director in January 2022

Regarding control of other pests,

diseases, and weeds, particularly for citrus, a team of experts surveyed a total area of about 20,000 hectare out of which about 15,000 hectares of affected area was treated. Also, 5,016 smallholder farmers with less than a hectare of land but with a source of water for irrigation were identified and registered to be included in the ongoing Minimum Integrated Household Agricultural Package program.

In order to minimize the use of chemical fertilizers and pesticides, as well as to ensure production of safe and nutritious food, the MoA in collaboration with the Ministry of Marine Resources, initiated the mass production of biological fertilizers and pesticides.

Early results of the ongoing trials being conducted at research stations and farmers' fields are promising. Moreover, the increasing adoption of biological fertilizer and pesticides by farmers is encouraging.

The Regulatory Services Department (RSD)

The Regulatory Service Department (RSD) is one of the core departments of the MoA. As per its mandate, the RSD monitors and inspects food and feed producing and processing plants to help ensure that they are working according to established regulations and standards.

During routine inspection activities, 36,388 litres of milk were rejected for being below standard, while the RSD also found issues in some slaughterhouses. In response to the latter, the MoA will redevelop one slaughterhouse in Keren and use it as a standard model for others to follow.

Additionally, the RSD produced brief video clips and television



spots on food safety, particularly focusing on the risks associated with consuming raw meat or milk, as well as hazards associated with the inappropriate use of pesticides.

Inspections were also carried out at several land and sea ports. Accordingly, substandard or illegally imported animals and animal products were confiscated. As part of its capacity-building initiatives, the RSD scaled up efforts to strengthen its quarantine laboratories located in ports.

In collaboration with all concerned departments and divisions of the MoA, the RSD developed a veterinary drugs and vaccines database. This will be used in monitoring the importation, distribution, and consumption of veterinary vaccines and drugs. Moreover, efforts are underway to identify and monitor vaccines and drugs available in different stores and reduce wastage. Additionally, several feed plants were inspected and various corrective measures have been implemented to improve their functioning.

Concerning the oversight of the seed multiplication process, the National Variety Release Committee, headed by the RSD, inspected the process of certification of seed production

and screening seeds which are fit for multiplication. The certification rejection rate for seeds in 2021 was lower than the previous year.

Furthermore, the RSD conducted efficacy trials of biopesticides, including green muscle for desert locust control in areas of Weqiro, Mahmimet, and the lab of the National Animal and Plant Health Laboratory (NAPHL). To ensure the appropriate use and application of pesticides. Inspections were also conducted at farms and checkpoints throughout the country. As a result of extensive support provided to farmers, particularly via Integrated Pest Management practices to control the pest *Tuta absoluta*, tomato pesticide contamination reduced significantly in 2021. Moreover, the RSD is successfully compiling data and information to produce a comprehensive database for use and management of national fauna and flora.

Consistent with the commitment to capacity building and raising public awareness, the RSD organised a number of training sessions and workshops for inspectors, farmers, and other stakeholders.

National Animal and Plant Health Laboratory (NAPHL)

The National Animal and Plant Health Laboratory (NAPHL) is a national laboratory that aims to: provide reliable, effective and confirmative laboratory tests for animal and plant disease diagnosis; ensure the safety and quality of agricultural products and inputs; and produce safe and high quality veterinary vaccines.



The laboratory utilizes the “One Health Approach”, which is a collaborative effort of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, and the environment.

According to the report presented by NAPHL, controlling and preventing brucellosis and Neglected Tropical Diseases (diseases caused by Protozoa,



Helminths/Worms, Bacteria and Viruses) were among the major areas of focus for the laboratory in its collaborative work with the MoH and Public Health Department.

In 2021, the NAPHL prepared a working seed from master seed for PPR vaccine production for small ruminants and 50% for Newcastle Disease for poultry. Notably, the Pan African Veterinary Vaccine Centre of African Union (AU-PANVAC) contributed to this milestone progress through its unwavering support and hands-on training. Looking ahead, full scale production is projected for the current year of 2022.

On top of the work it conducts at its headquarters, the NAPHL aims to strengthen regional laboratories through providing support and organizing training programs across the country.

National Agricultural Research Institute

The National Agricultural Research Institute (NARI) operates in eight stations and substations in different regions of Eritrea: namely Halhale, Shambuko, Goluj, Hagaz, Aqordet, Shieb, Gahtelay, Afdeyu, and Adi-Keih.

Last year, it conducted research on several topics, including crop improvement, genetic



resources preservation, natural resource management, livestock development, agricultural engineering, biotechnology, and food technology.

Crop improvement research, which was carried out in different research stations, focused on an array of crops, such as sorghum, pearl millet, wheat, barley, maize, potatoes, tomatoes, peppers, onions, garlic, sweet potatoes, legumes (i.e., fava beans, lentils, chick peas, grass peas), exotic vegetables (i.e., cauliflower, beetroot, spinach, lettuce, and Swiss chard), an array of citrus fruits.

With regard to genetic resources research, 18 wheat and 7 sorghum genotypes were developed by crossing farmers' varieties with the improved varieties, while natural resources research included examinations of the impact of compost, agronomic practices, and liquid fertilizers on

wheat growth and yield.

In addition, investigations of conservation agriculture on wheat, fava beans, and sorghum are in progress, while about 54 kilograms of plantation seed was collected. Reflecting the commitment to land and environment rehabilitation, three nurseries, with a total capacity of 195,000 seedlings were established at Akelet, Shambuko, and Akurdet, with another nursery at Halhale being rehabilitated.

With foundation seed production being one of NARI's key research activities, 229.5 quintals of cereals (wheat, barley, sorghum, maize and pearl millet), legumes (green gram, beans, and chickpeas), oil crops (onions, peppers, potatoes, garlic, lettuce, and carrots) were produced. Additionally, different forage and tree seeds were collected for research.

The biotechnology research work continues apace, mainly focused on potatoes, bananas, and date palm tissue cultures.

Meanwhile, livestock improvement research remains focused on grain-based calf starter as an early weaning strategy for calves, improvement of local chicken, and establishment of Barka breeding nucleus at the Goluj research station.

Other active research programs include work related to honey bees, as well as seed and soil testing.

During the assessment meeting, Administration and Finance; Planning and Statistics; Public Relations, Agricultural Strategic Information Systems Division and Human Resources Development of the Ministry bodies also presented their annual report and work plan.



Highlights of Speech by the Minister of Agriculture, H.E. Arefaine Berhe, at Annual Assessment Meeting

At the conclusion of the two-day annual assessment meeting, the Minister of Agriculture, H.E. Arefaine Berhe, delivered a brief speech. Below are several highlights.



- Reports and presentations of central headquarters and regions should have the same format and be focused on results
- Extension agents throughout the country must constantly strive to conduct research trials and share new technologies with farmers
- The MoA should be focused more on productivity instead of production.
- Young professionals throughout the country, preferably in groups with different types of expertise, should be supported to develop business plans that they can execute at the appropriate time.
- Working on increasing production without considering market status and consumers

demand is not realistic. Accordingly, we must be more practical in our planning process.

- It is important to more effectively and efficiently assess applicants for the Minimum Integrated Household Agricultural Package (MIHAP) and give technical support to small- and medium-scale commercial farmers.

- Human resource development must remain a top priority

- NARI branches throughout the country must be strengthened

- The NAPHL should scale up efforts to strengthen laboratories in various zobas and expand vaccine production

- Agricultural products must be frequently inspected and regulated to ensure quality and maintain high standards

- GIS and agricultural strategic information needs to be continuously updated and strengthened

- The production of liquid and solid natural fertilizers and biopesticides should be expanded and upgraded in close

collaboration with the Ministry of Marine Resources.

- To close gaps in the production of potatoes, we have started to grow the crop in the highlands for seed and table and in the lowlands for table only. Although the program has begun with excellent results, it needs to be consolidated. Sweet potatoes must also be focused on, as they provide excellent nutrition, especially for children under five years of age

- With date palm production through tissue culture showing promising results in the Northern and Southern Red Sea regions, production can be expanded to the lowlands of the Anseba, South, and Gash Barka regions

- Rapeseed production is one of the successes in 2021; accordingly, planting of this crop needs to be scaled up moving forward

- Day-care facilities will need to be constructed at several locations, including the headquarters, Villaggio, and NARI, in order to better support employees with young children.



Editor-In-Chief

Ermias Solomon, Director of Public Relations Division
Email:- ersohab@gmail.com, Tel: 182225/ 07143877/ 07182662, Asmara, Eritrea

Editorial Board

Filmawit Measho, Hara Weldetsae, Shushan Okbay
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