The State of Eritrea

Ministry of Agriculture Newsletter

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Eritrea's Agricultural Sector: Major achievements over the past 30 years

Reports from various departments of the Ministry of Agriculture (MoA) indicate that commendable achievements have been registered in different areas over the past 30 independence years. According to the reports, many agricultural products that were previously imported from neighboring countries are now being produced in the country. The MoA has also revised its policy and strategy in accordance with the current farming environment. Furthermore, few years ago, the MoA developed a clear strategy for small-holder farmers (the Minimum Integrated Household Agricultural Package [MIHAP]) and for small- and medium-commercial farmers.

The following is a brief outline of some of the major achievements in the agricultural sector during the period 1991 to 2021.

Natural Resources Management

Located in the Sub-saharan part of Africa, Eritrea receives low and erratic annual rainfall. Moreover, its landscape is characterized by rugged terrains that exposes the land to erosion and degradation. As a result, conserving soil and water has been one of the top priorities in the country's national agricultural strategy. Since independence, the Government of the State of Eritrea (GSE) has invested considerable resources into rehabilitating degraded land and constructing water-holding structures of varying sizes and types.

Reports from the Natural Resources and Irrigation Development Division of the MoA indicate that a total of 257,000 hectares of land has been treated with different kinds of structures and around 4.5 million cubic meter of check-dams constructed by different popular campaigns.

One of the notable achievements over the past 30 years is the substantial increase in number of water-holding structures. At independence, there were only 138 ponds and dams in the country. Currently, however, the figure is 785. Thanks to this progress, the total area of irrigated land has increased approximately fivefold.

To help reinforce these endeavors, the GSE also launched a National Greening Campaign in 2006, followed by the establishment of the Forest and Wildlife Authority in 2012. The campaign has made a significant and positive contribution to natural resources management in the country, including through helping instill a culture of tree planting and soil and water conservation within communities. Since 2006, around 45 million tree seedlings have been planted in catchments, along roadsides, schools, various public spaces, and on the grounds of different government and religious institutions. In addition, a large percentage of land has been classified as protected and placed within enclosures, supporting biodiversity and the recovery of wildlife.

To reduce the cutting of trees for firewood, an improved, more efficient, and safer stove was designed and manufactured by energy experts. The stove, which in Tigrigna is known as 'Adhanet', has helped to reduce the use of wood for fuel significantly (it is estimated as high as nearly 50 percent). At present, about 170,000 improved stoves have been installed throughout the country, covering approximately 50 percent of the potential users in rural areas. During the manufacturing and dissemination phases, over 17,000 women received training and skills development support.

Crop Production

Since many of the crops traditionally common in the country had deteriorated greatly over many years due to disease, drought, and other factors, crop production and productivity was not satisfactory until independence. However, since 1991, the GSE has been working to expand research on crop varieties. The National Agricultural Research Institute (NARI) has conducted many trials seeking to develop and distribute crop varieties which are resistant to drought, resilient against disease, and high-yielding. Since 1991, NARI has developed and released 45 crop seed varieties, comprising 16 varieties of wheat, 10 varieties of sorghum, seven varieties of barley, six varieties of pear millet, three varieties of maize, two varieties of legume, and one variety of oil seed. More than 7000 quintals of foundation seeds of these varieties have been distributed nationwide for multiplication purposes. For most crops, these improved seed varieties have increased productivity by at least twofold. In general, the area of land cultivated with cereal crop has increased from 327,000 hectares (1992) to 500,091 hectares (2020).

Horticultural Production

During Italian colonial rule, Eritrea was an exporter of fruits and vegetables. However, during the following decades, due to several factors, including droughts and a long, destructive war, growth and production plummeted.

To help revive the sector, the GSE invested in the construction of many water-holding structures across the country, imported various agricultural machineries, supported the introduction of different technologies, and distributed a massive amount of agricultural supplies, including improved seeds, fertilizers, and pesticides.

In 1992, only 4,921 hectares of land was covered with fruits and vegetables. By 2020, the amount of land irrigated by horticulture farmers in the country reached 21,987 hectares.

When it comes to production, a total of 1,330 tons of fruits and 42,579 tons of vegetables were being harvested per year during the first year of independence. However, at present, those production figures have increased to 94,331 tons for fruits and 253,225 tons for vegetables. As a result, consumers across most parts of the country are able to access quality fruits and vegetables throughout the year at reasonable prices.

What is more, while in 1992, the number of farmers who were engaged in the production of fruits and vegetables was about 1557, that figure has increased to reach 11,523.

NARI, for its part, has played an important role in introducing improved varieties of many vegetable crops, including potato, onion, pepper, tomato, cabbage, lettuce, and Swiss-chard. Reports indicate that over the years, 147 varieties of vegetable seeds (e.g., potatoes, tomatoes, garlic, sweet potatoes, and hot pepper) and 125 fruit varieties (e.g., papaya, mango, citrus, banana, and date palm) have been imported for research purposes.

Various field and laboratory trials have been conducted to test productivity, maturity period within different agro-ecological settings, and resistance to diseases and pests. Following numerous and comprehensive research trials, 27 vegetable seed varieties and 21 fruit seed varieties have been found to be viable and distributed to local farmers.

Within this sub-sector, one of the notable achievements has been the tangible improvement in potato production. More than 70 varieties of potato were imported for adaptability trials. Out of these, around 10 varieties were found to be successful and distributed to farmers. At present, the average potato yield is about 350 quintals per hectare, which is nearly triple the previous productivity levels (130 quintals per hectare).

According NARI, an encouraging onion variety, locally known as 'hagaz' and which has been tested for the past couple of years, is close to being distributed to local farmers. Some of the advantages of this variety are its pungency and the fact that it has less risk of splitting and pre-mature bolting.

As a final note, some of the major and popular fruits in Eritrea include bananas, oranges, lemons, papayas, mandarins, guava, date palms, mangoes, and more recently, peaches and apples.

Animal Production and Health

At independence, one of the pressing challenges for farmers was livestock mortality. Many animals succumbed to different diseases, such as rinderpest. Rinderpest was one of the major animal diseases that farmers suffered from for many years. Starting from 1991, the GSE managed to vaccinate around 800,000 livestock annually and the disease was eradicated in 1997; and an official certificate of eradication was given in 2005 by the World Animal Health Organization.

In 2003, the MoA expanded its programs to offer an annual free and compulsory vaccination program for major animal and zoonotic diseases, including foot and mouth disease, lumpy skin disease, Peste des petits (PPR), brucellosis, rabies, and others.

An average of 2.5 million livestock get vaccinated annually and as a result livestock disease and mortality is currently very low.

More important, in order to enhance livestock health, the MoA also offers free and reduced cost services in animal clinics in all regions and sub-regions of the country.

In addition to the above, the MoA has made efforts to strengthen the National Animal and Plant Health Laboratory. Presently, the laboratory is helping to diagnose animal and plant diseases and pests, while also ensuring quality and safety of animal and plant products. Furthermore, it is supporting the establishment and strengthening of laboratories in zobas across the country.

Poultry Production

Prior to independence, poultry production in Eritrea was mainly restricted to local chicken rearing by rural households. In 1992, the MoA imported 1,100 parent stock chicks and 20,000 first generation chicks to introduce semi-commercial poultry. Over the years, a total of 112,000 parent stock and 2.8 million first generation chicks have been imported and distributed to small-scale and commercial farmers, which is to the tune of over 6 million chicks, imported and locally reproduced in hatcheries.

Since June 2020, the MoA has distributed over a million one-month-old backyard chicks to more than 40,000 households in towns and rural areas.

Reports from the Poultry Development Unit of the MoA indicate that there were almost no commercial poultry farms before independence. Currently, there are 47 small and medium poultry farms which have a capacity to hold from 5,000 – 22,000 chicks at a time. In addition, there are hundreds of very small farms that hold below 5,000 chicks.

Another commendable achievement in this sub-sector is the construction of chick brooding stations in all regions of the country. A variety of incubators and hatchers that have a capacity to incubate and hatch from 3,400 up to 120,000 chicks at a time have been imported.
Thanks to these various efforts and developments, consumers across Eritrea are able to access quality, nutritious poultry products year around and at a fair price. Also, poultry farming has become an increasingly viable livelihood for many individuals and households.

Beekeeping

Before 1991, beekeeping was only practiced in rural areas and with traditional beehives. In 1992, the number of traditional bee hives was only 19,000. Shortly after independence, however, the MoA began to transform the sub-sector, supporting the development of semi-commercial and commercial initiatives and importing many modern frame hives and accessories. To date, there are more than 30,000 bee colonies in modern frame hives, traditional hives and top bar hives. Consequently, national honey production has doubled while the number of beekeepers has grown by over 50 percent.

Regulatory Services

From 2003, the MoA, through its Regulatory Services Department (RSD), has been working to strengthen its inspection capacity to ensure that safe agricultural products are sold in the market. Moreover, since the improper use of agricultural chemicals, both pesticides and drugs not only affect food safety but also impact the environment and human health, their use and management have been a major focus of RSD inspection. As part of this effort, the department conducted an inventory in 294 pesticide stores in 2007, where nearly 400 tons of obsolete pesticides were stored. This stock was properly safeguarded and stored in strategic locations suitable for transport and eventual disposal. The MoA successfully disposed of 365 tons of obsolete pesticides, which was transported to Liverpool, England for disposal through high temperature incineration.

Furthermore, very intensive inspection activities were carried out to avoid contamination of horticultural crops, mainly tomato fruits, through the use of excessive pesticide application, particularly during harvest time.

Plant and animal quarantine inspection services are also very important activities of the RSD. There are entry points, located at international airports, seaports and land ports, where imported agricultural produce are inspected for the presence of any exotic pests and diseases, while all exported agricultural produce are properly inspected and subsequently given a health certificate, testifying that such products are free from any pests and diseases. It should also be noted that import and export of agricultural produce cannot be carried out without securing permits from RSD

for its effective implementation. In that regard, over 3000 import and export permits were issued to various animal and plant resources and agrochemicals over the years.

The RSD also endeavors to make sure that, to the extent possible, all livestock and livestock products, as well as plant and plant products, being sold in the local market, have the necessary national quality and safety standards. A good example is the inspection of small scale yogurt processing plants, which are mainly located in Asmara. Before 10 years, there was no yogurt processing plant in Eritrea. Currently, there are about 16 yogurt processing plants, which produce safe yogurt to the market. This achievement is the result of the high encouragement made by the MoA to these plants, while at the same time the RSD making very close monitoring to ensure safety.

In this connection, it should be noted that all animal and plant products processing plants as well as animal feed processing plants are obliged to get certificate of qualification which ensures that the plant has the required hygienic standards annually.

Control of Migratory Pests

Eritrea is one of the frontline countries for migratory pests in general and desert locust breeding in particular. Over the years, Eritrea has followed a preventive strategy that focuses on controlling locusts before they mature or begin flying. The strategy has been reinforced by extensive surveillance in breeding areas and establishing a number of duty or surveillance stations, as well as utilizing vehicles and scouts. Annually, surveillance is carried out across roughly 500,000 hectares of potential breeding areas.

According to reports from the Migratory Pests Control Unit, desert locust infestations have occurred in 18 different years since independence. In the years 1995, 2006/2007, 2013/2014, 2020, serious infestations and invasions covering areas ranging from 51,000 – 101,000 hectares of land occurred.

Recently, desert locust control operations were reinforced through the participation of the Eritrean Defense Forces (EDF), local administrations, and communities. As part of the control operations, over 1,200 experts, along with over 200,000 EDF members and community residents, have participated in practical training programs and workshops. These initiatives have focused on prevention, desert locust management, and information about safe use of pesticides.

In summation, as a result of the coordinated and widespread efforts, the damage to crops and rangelands by migratory pests, such as desert locusts, has not been significant.

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