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Commodity Intelligence Report

Dominican Republic: Rice and Palm Crop Travel Summary

USDA's Foreign Agricultural Service (FAS) analysts from Washington and FAS/Santo Domingo conducted crop assessment travel in the Dominican Republic during the fourth week of September 2024. The trip included visits with the Ministry of Agriculture (MinAg) Bio-Arroz facility in Monseñor Nouel, the MinAg Bio-Arroz facility in Mao, Valverde, industry representatives from Coopearroz in La Vega, and Depalma SRL in Monte Plata (Figure 1). The harvested rice and the palm oil produced from the palm plantation are used domestically.

Rice

Rice is a staple food in the Dominican Republic where the population consumes rice every day. Bio-Arroz has developed rice varieties that are less susceptible to pests, are tolerant of tropical winds, provide acceptable yields, and meet consumers' expectations on taste. The quality, taste, and aroma of rice are of utmost importance to consumers. Evaluating the aroma produced by Domincan rice varieties is compared to evaluating the aroma of coffee.

Rice is grown in 21 provinces throughout the country, however, the 9 provinces which comprise of the Nordeste, Noroeste and Norcentral regions produce the largest amount of rice (Figure 2). Many rice producers have very small farms, some even as small as 0.5 hectares, due to the national land reformation that took place in the 1970s. These small farms make up about 50 percent of the total rice harvested and are able to produce the same yields as larger farms, just in smaller amounts.

Rice is almost all irrigated from rivers, however, regular rainfall throughout the growing season is advantageous. Rice is grown primarily in two seasons (Figure 3). Each growing season for rice, from planting to harvesting, takes 120 days. The first, or main, season is planted from December to February, harvested from April to June, and comprises about 60% of the annual production. The first season has a higher yield because the growing months that it is planted and harvested provide good conditons for crop development. There is plenty of water availability after the summer and fall tropical storm season. The primary method of planting is manual seed broadcasting, but some larger farms are known to use machinery. During harvest, the first season rice is cut and the second season crop then begins to grow from the shoots left in the field. When a field is planted as early as December 15, and harvested close to the middle of March, the second season starts the 120 day growth period.

The second season is mainly harvested from August to November and comprises of about 40% of the annual production. The second season rice has more affects from the tropical climate; there is more sun and high temperatures throughout the summer which has led to some plants to not produce well and not spread pollen. In addtition, the second season does not receive the fertilizer that the first season receives with the seed that is planted. When the second season is harvested, a third season is sometimes able to grow from the remaining shoots of the plant, however this crop is not harvested and is not included in the annual production.

During crop travel in September, the second season rice was in different stages of growth. In Monseñor Nouel the crop was near harvest (Figure 4) and in Valverde the crop was flowering (Figure 5 and 6). Crop conditions were observed to be good to excellent in the areas that were visited.

Palm Oil

The majority of the palm oil plantations in the Dominican Republic are in the Monte Plata province (Figure 7). The African palm tree is the variety grown and is native to tropical climates. This region benefits from regular rainfall throughout the year supporting the growth of the trees which in turn produce the palm fruit. Each individual fruit within the palm bunch produces both crude oil and a palm kernel seed within the fruit that produces the palm kernel oil (Figure 8). The crude and palm kernel oils have separate extraction methods. Additionally, the remnants from the bunch itself and from the fruit are not wasted, rather they are further processed and used as an organic fertilizer and as animal feed respectively.

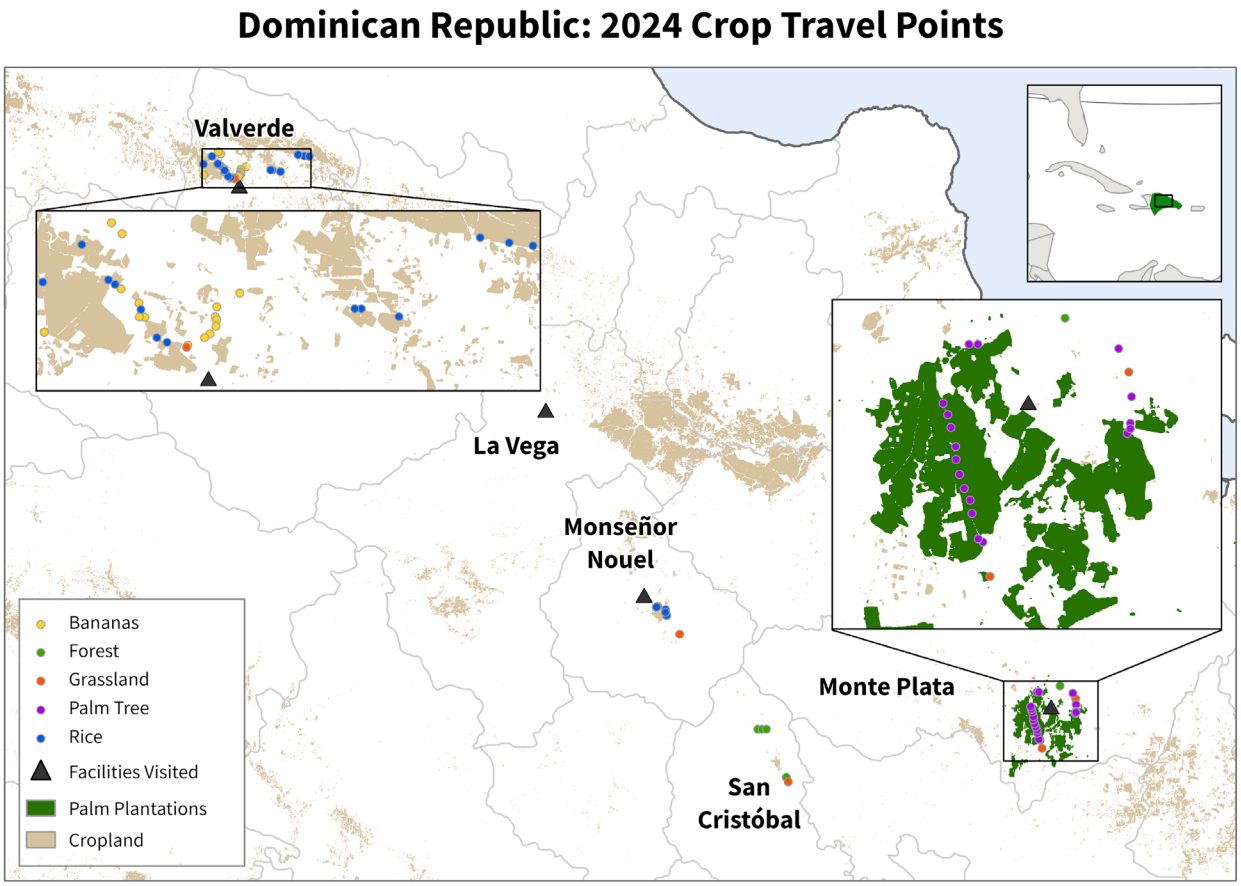
Palm trees are grown from seeds in a nursery (Figure 9) and must be shielded from direct sunlight as well as provided regular water. Once the plants are 1 year old (Figure 10) they are able to take direct sunlight and regular rainfall, with supplemental watering as needed. At that point, the trees are planted into a 9 meter by 9 meter grid to allow space for the trees to grow. The tree will begin producing fruit when it is 2 to 2 ½ years old (Figure 11). The palm tree reaches peak production of palm fruit at 7 years and will continue to produce fruit until it is 30 years old.

The African palm is compact and reaches a full grown height of about 20 meters, which allows for harvesting from the ground. The fruit is harvested by manually cutting the bottom branch with a saw and removing the palm bunch that contains the fruit from the tree. The harvesters visually observe that the fruit is turning an orange color to determine that it is ready for harvest before cutting the branches (Figure 12). When the fruit is over ripe, it will fall from the tree and will be collected manually and processed with the rest of the palm bunches harvested from the tree.

Once the palm bunch is harvested, it is taken to the mill where it enters the processing facility (Figure 13). The palm bunch is first pressure cooked and spun to break up the remnant fiber from the fruit so the oil can be extracted (Figure 14). The oil is tested for

quaility before being stored on site in a 150 ton tank. Trucks come to pick up the oil multiple times a week.

The palm tree harvest and oil extraction is a continous process throughout the entire year.



Sources: Fieldwork data collected by FAS in September 2024; ESA Worldcover 2021 Cropland 10m; Biopama Global Palm Oil Plantations 2021

Figure 1. Locations of fields and facilities visited on the crop asssessment tour.

Figure 2. Dominican Republic key rice production regions map.

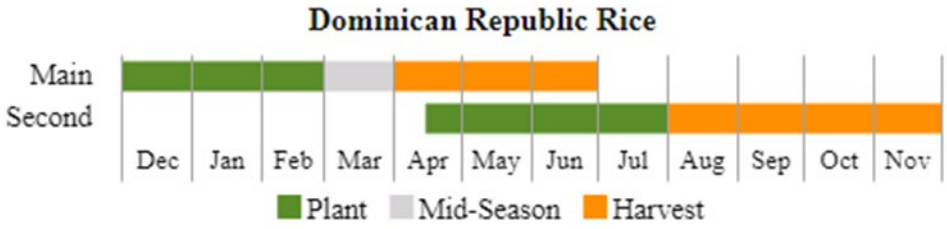


Figure 3. Crop calendar for the two main rice seasons. Source: FAS.

Figure 4. Second season rice ready for harvest in Monseñor Nouel, Dominican Republic. Photo from FAS on September 23, 2024.

Figure 5. Second season rice growing in Valverde, Dominican Republic. Photo from FAS on September 25, 2024.

Figure 6. Second season rice flowering in Valverde, Dominican Republic. Photo from FAS on September 25, 2024.

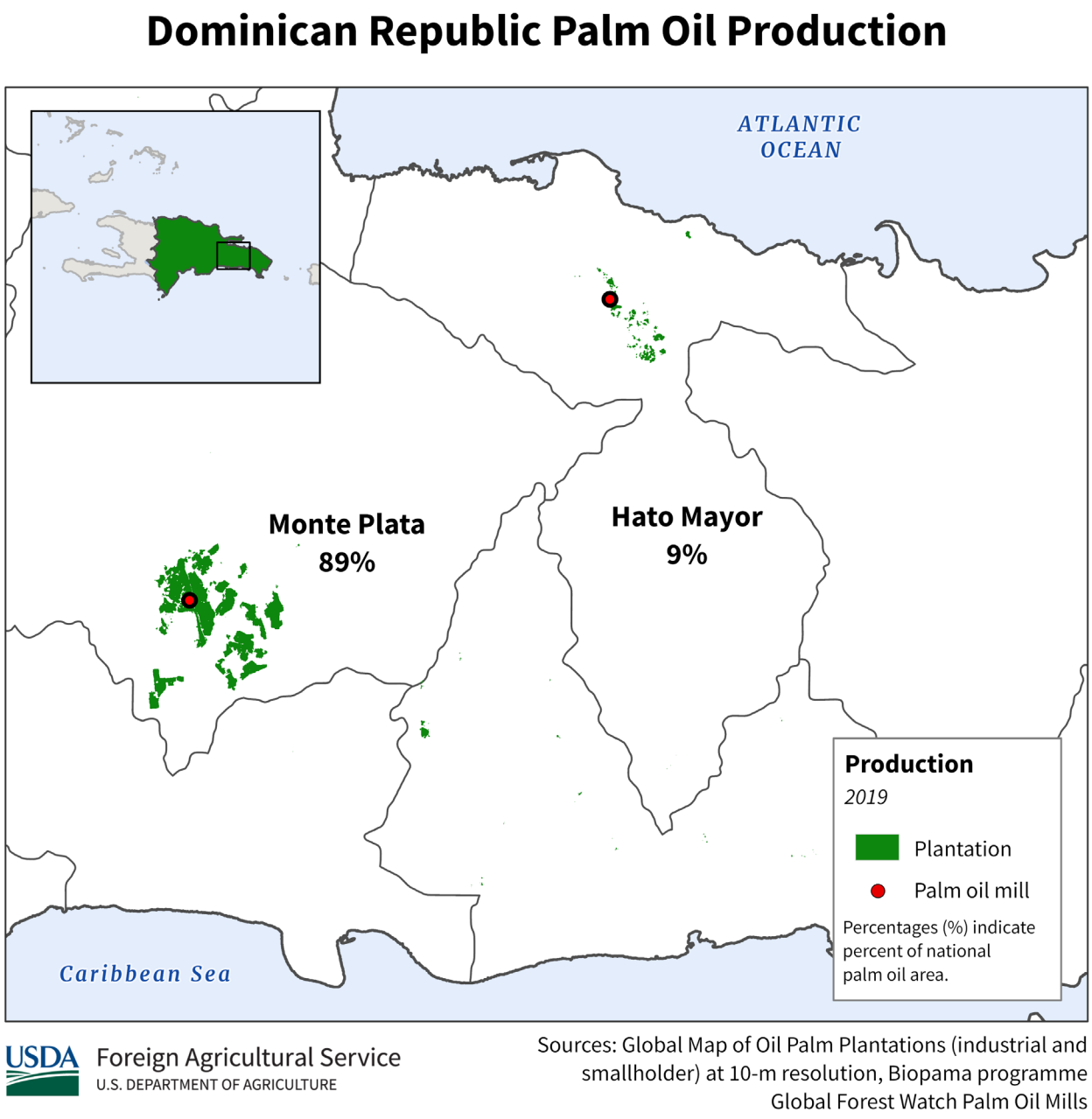


Figure 7. Dominican Republic Palm Oil production map.

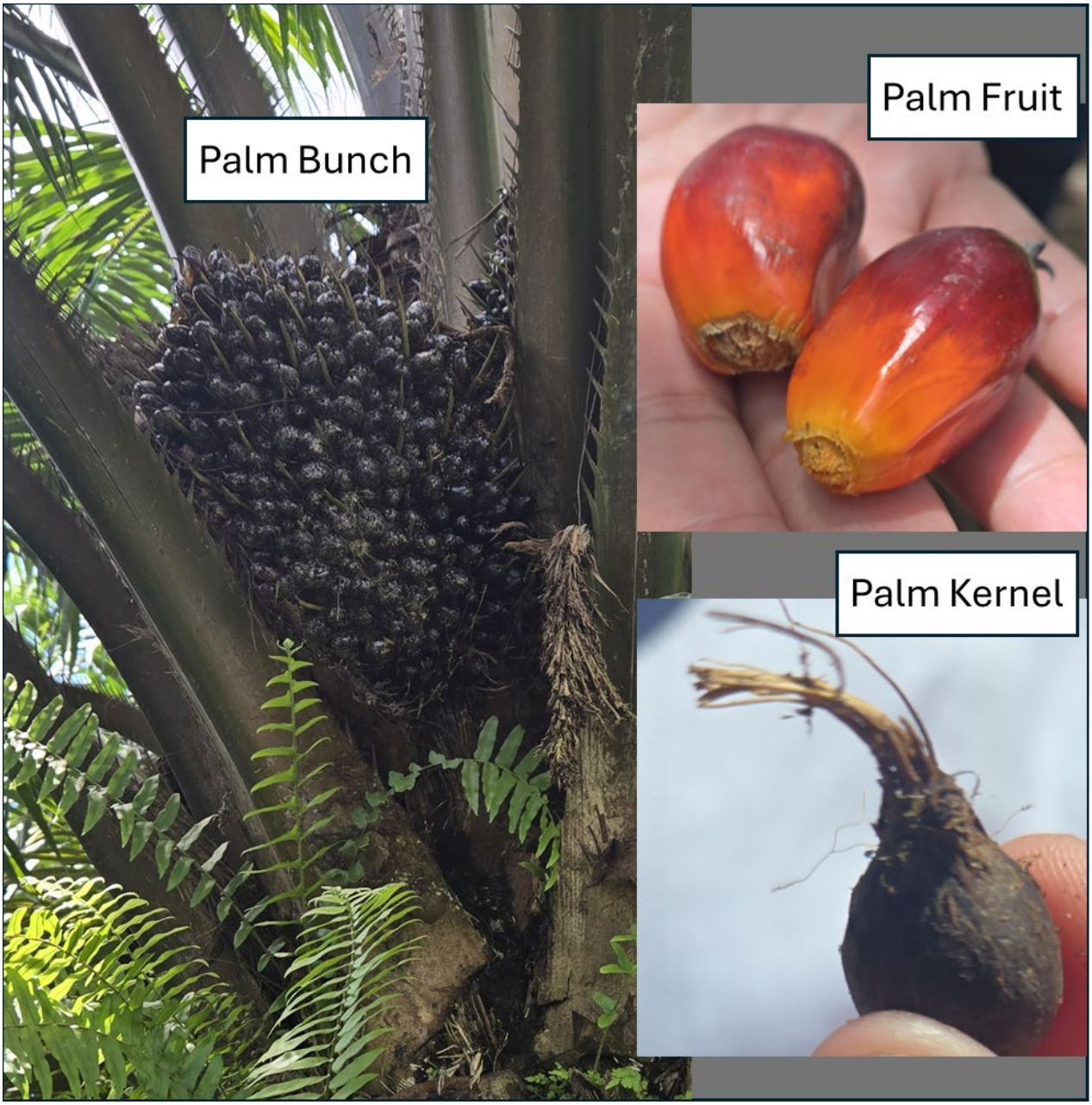


Figure 8. African palm bunch, palm fruit and palm kernel. Photo from FAS on September 26, 2024.

Figure 9. African palm tree plants grown from seeds that are 1 ½ months old in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

Figure 10. One year old African palm trees that are ready to be planted in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

Figure 11. African palm trees that are 2 1/2 years old and recently planted in 9m x 9m plantation in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

Figure 12. African palm tree fruit ready to be harvested in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

Figure 13. Harvested palm bunches with fruit entering the processing facility in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

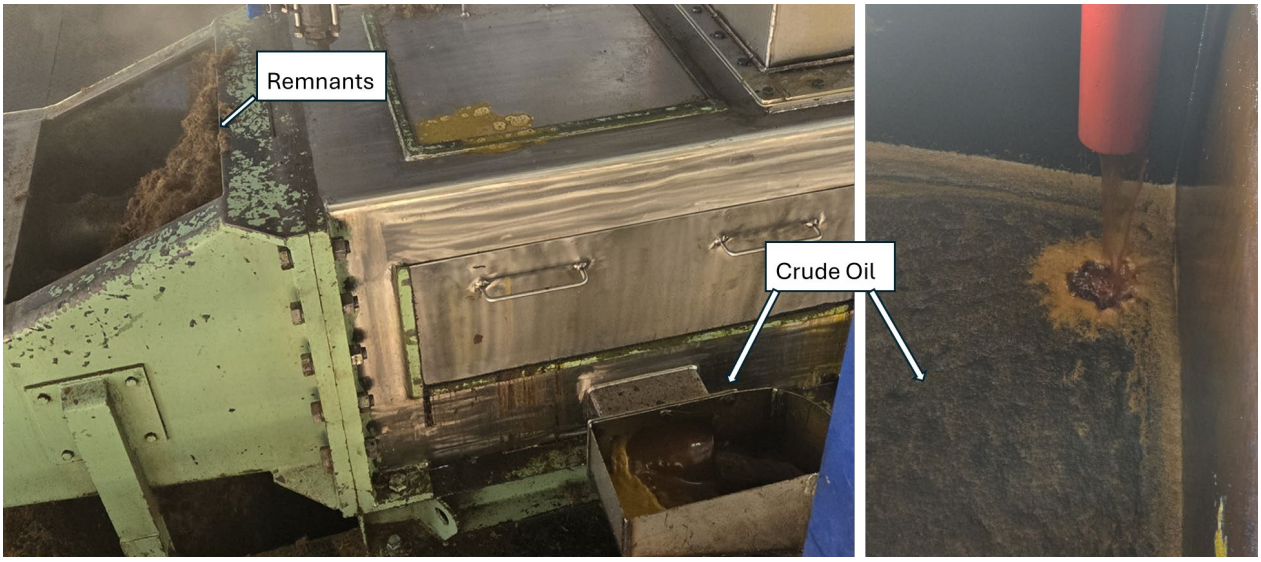


Figure 14. Remnants and crude oil extracted at the processing facility in Monte Plata, Dominican Republic. Photo from FAS on September 26, 2024.

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