



KINGDOM OF CAMBODIA

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Cambodia Agriculture Survey 2022

Report 2: Crop Production



National Institute of Statistics, Ministry of Planning
in collaboration with Ministry of Agriculture,
Forestry and Fisheries.



Food and Agriculture
Organization of the
United Nations

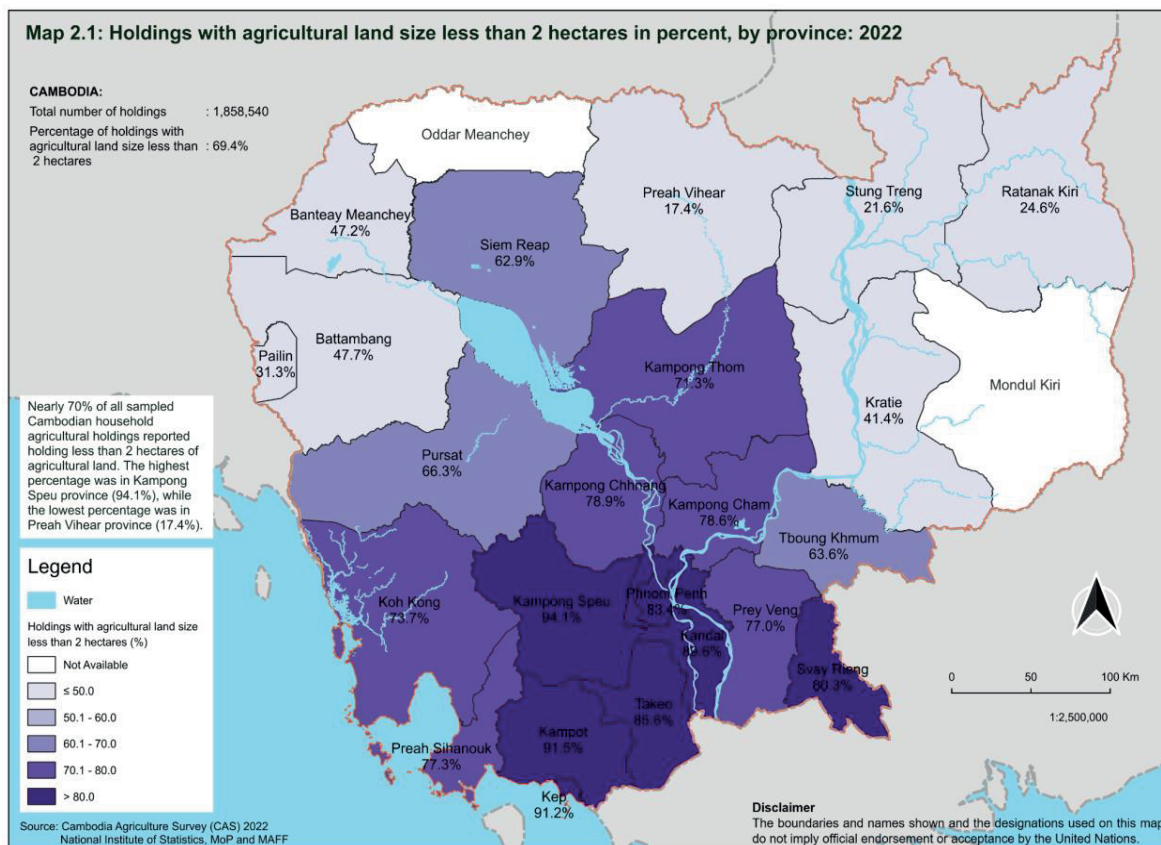
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Agricultural area

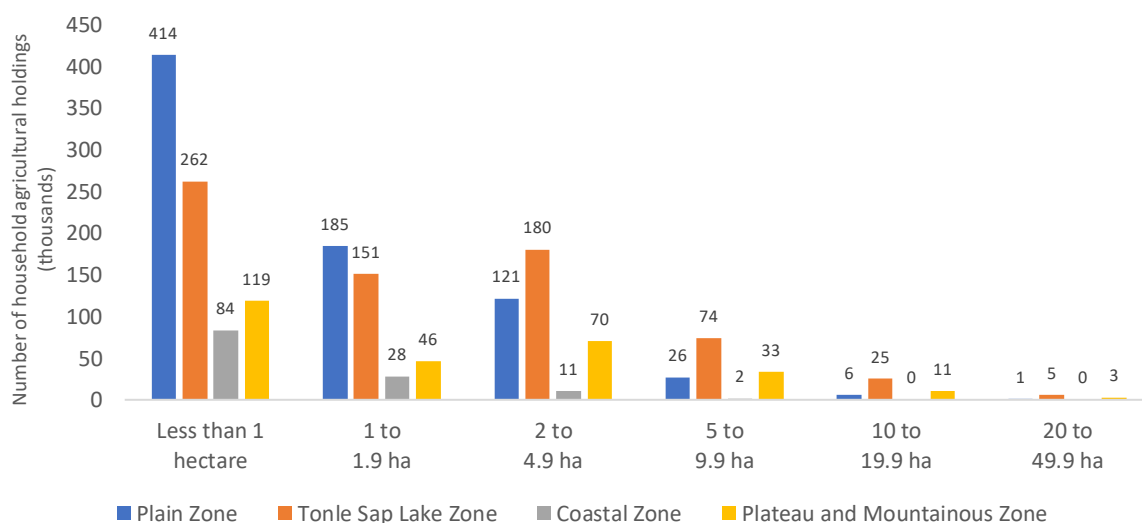
Cambodia has a total household owned agricultural area of approximately 3,736,000 hectares. The largest zone in terms of agricultural size is the Tonle Sap Lake zone with 1,776,000 hectares of agricultural land. This is followed by the Plain zone (1,075,000 hectares), Plateau and Mountainous zone (764,000 hectares), and the Coastal zone with a much smaller area at 121,000 hectares of agricultural land.



Source: Cambodia Agriculture Survey 2022 (CAS 2022) Selection of Thematic Maps; NIS-MOP, MAFF 2024.

Most household agricultural holdings are small. Approximately 47% of the household holdings have less than 1 hectare and the average size across all of Cambodia is 2.0 hectares. The Coastal zone has the smallest holding size on average at only 1 hectare. On the other hand, the holdings in the Tonle Sap Lake zone and Plateau and Mountainous zone are much larger on average at 2.6 hectares and 2.7 hectares respectively.

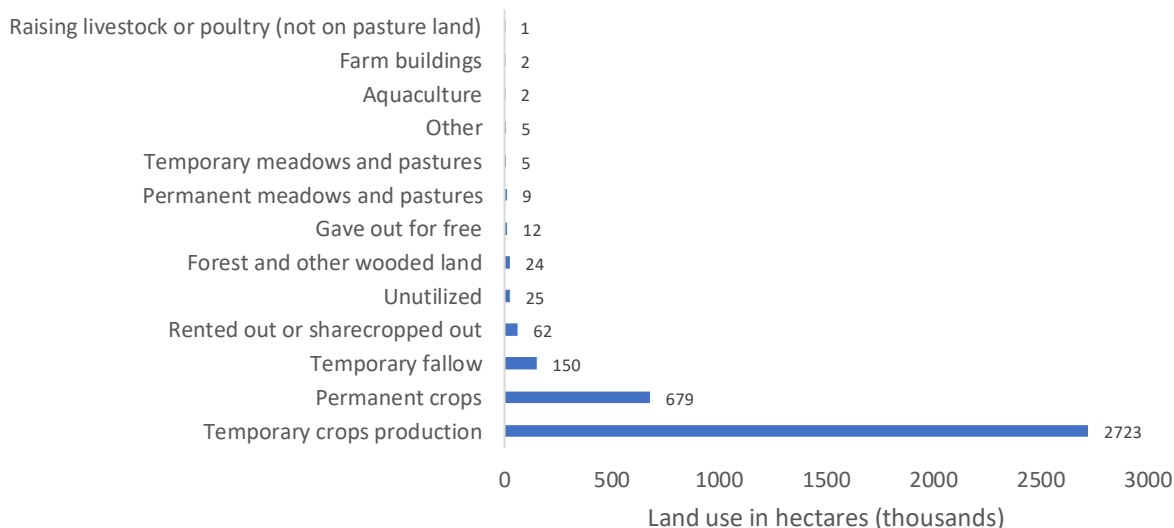
Figure 2.1: Size of household agricultural holdings, by zone, 2022



Source: CAS 2022

Although agricultural land may be used for a plethora of activities, temporary crop production is predominantly the main land use in Cambodia. More than 2.7 million hectares of agricultural land is used for temporary crop production. In comparison, permanent crop production, the second largest land use, uses roughly one-third as much land with 679,200 hectares being used. Temporary fallow the third biggest land use, uses only 150,000 hectares in comparison.

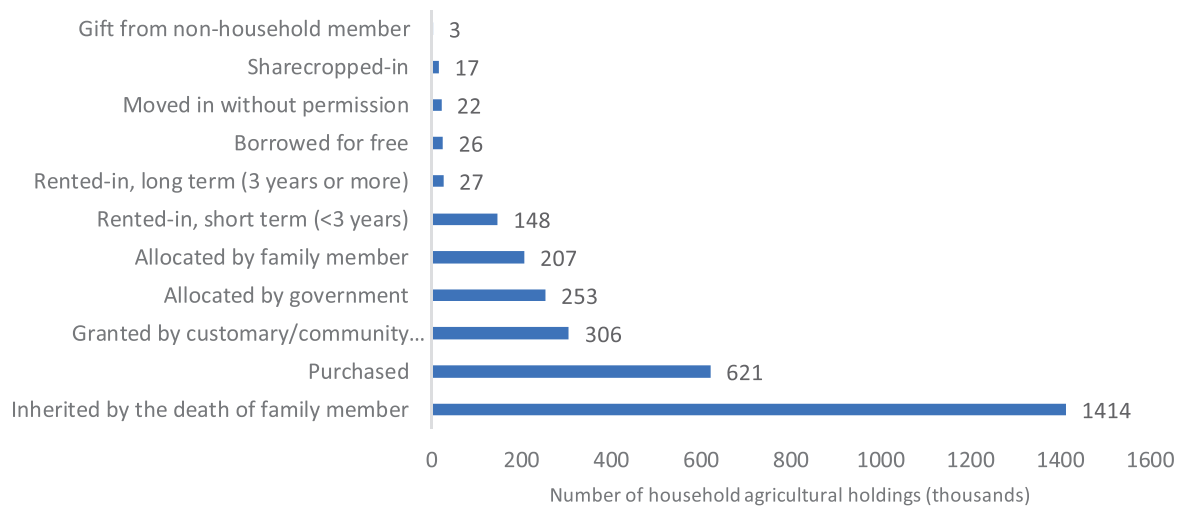
Figure 2.2: Agricultural land use in hectares, Cambodia, 2022



Source: CAS 2022

Agricultural land parcels are most frequently acquired by inheritance (in 1.4 million parcels). The purchase of a land parcel was accounted for in 621,000 of the parcels. Positively, only 22,000 parcels were reportedly ‘moved in without permission,’ although respondent bias may result in this being underreported.

Figure 2.3: Method of parcel acquisition by household agricultural holdings, Cambodia, 2022



Source: CAS 2022

Crop production

The primary activities undertaken by household agricultural holdings in Cambodia were the growing and harvesting of temporary and permanent crops. Of the total 1.86 million household agricultural holdings, 1.36 million household agricultural holdings reported growing crops.

Temporary crops are those with a growing cycle of less than one year and after harvest, they are either re-sown or replanted for another production cycle. Temporary crops presented in the CAS were those grown seasonally during the reference period. Permanent crops are those with more than one-year growing cycles, found to be standing and productive within agricultural holdings.

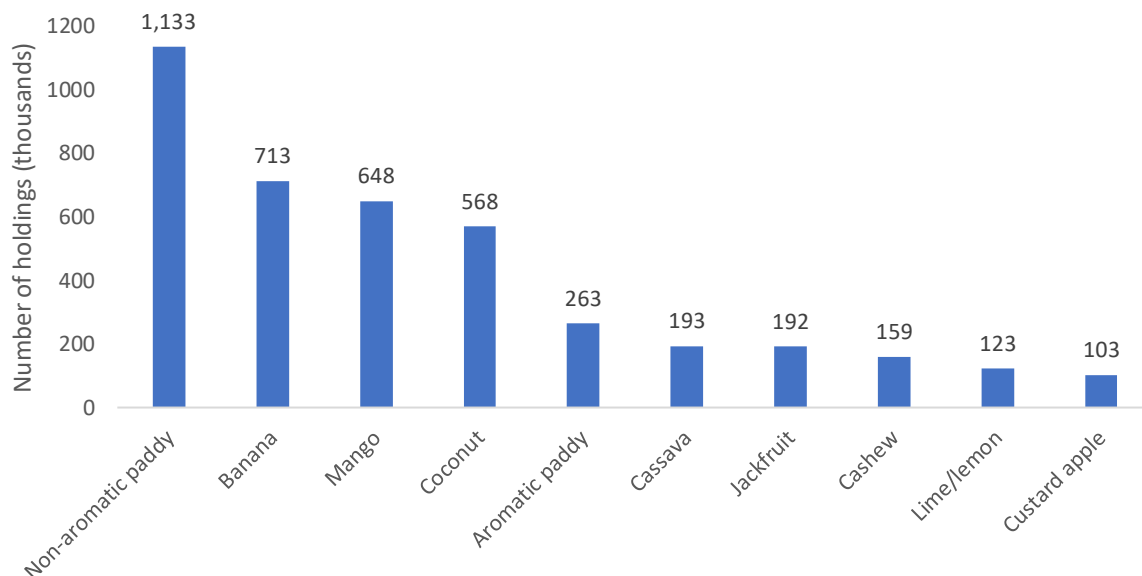
Due to the numerous types of crops grown in Cambodia and an effort to reduce respondent burden and interview length, detailed data was collected on the top 34 crops in Cambodia, as defined by MAFF. For these top 34 crops, respondents provided information in terms of area planted, area harvested, quantity harvested, fertilizer use, pesticide use, irrigation use, and the share of production both sold or kept for the holding's own use. To ease the respondent burden, data for permanent crops were collected in either hectares or the number of trees, based on the preference of the respondent. As such, the data reported in the number of trees was standardized to hectares based on the conversion factors provided by the Ministry of Agriculture, Forestry and Fisheries (Annex 1).

Data users need to note that the procedures used in the CAS 2022 differ from procedures used in other agriculture assessment efforts in Cambodia. CAS 2022 is a probability-based sample survey which procedurally relied on self-reported data at the holding level in terms

of a specific reference period from 1 July 2021 through 30 June 2022 and had limited coverage of the non-household agricultural sector. As a result, overall areas, production totals and calculated yields for crops may differ from other data sources.

Figure 2.4 shows that the top ten most planted crops: non-aromatic paddy, banana, mango, coconut, aromatic paddy, cassava, jackfruit, cashew, lime/lemon, and custard apple. In total, 1.13 million household agricultural holdings planted non-aromatic paddy, the second most frequently grown crop was banana in 713,000 holdings.

Figure 2.4 Number of holdings reporting crops (top 10 crops), Cambodia, 2022



Source: CAS 2022

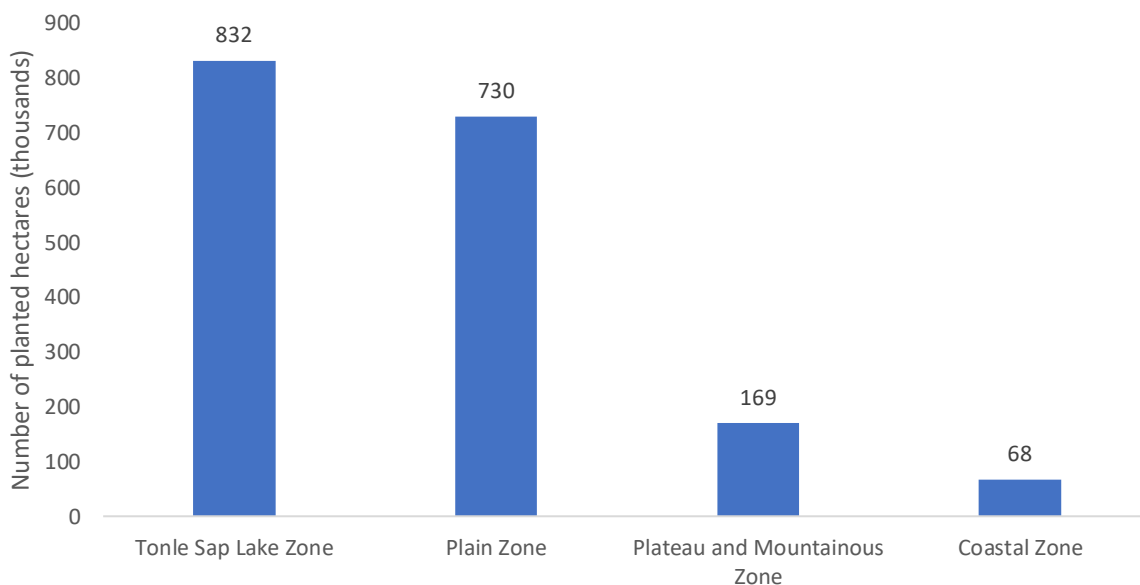
Temporary Crops

Cereal and Grain Crops

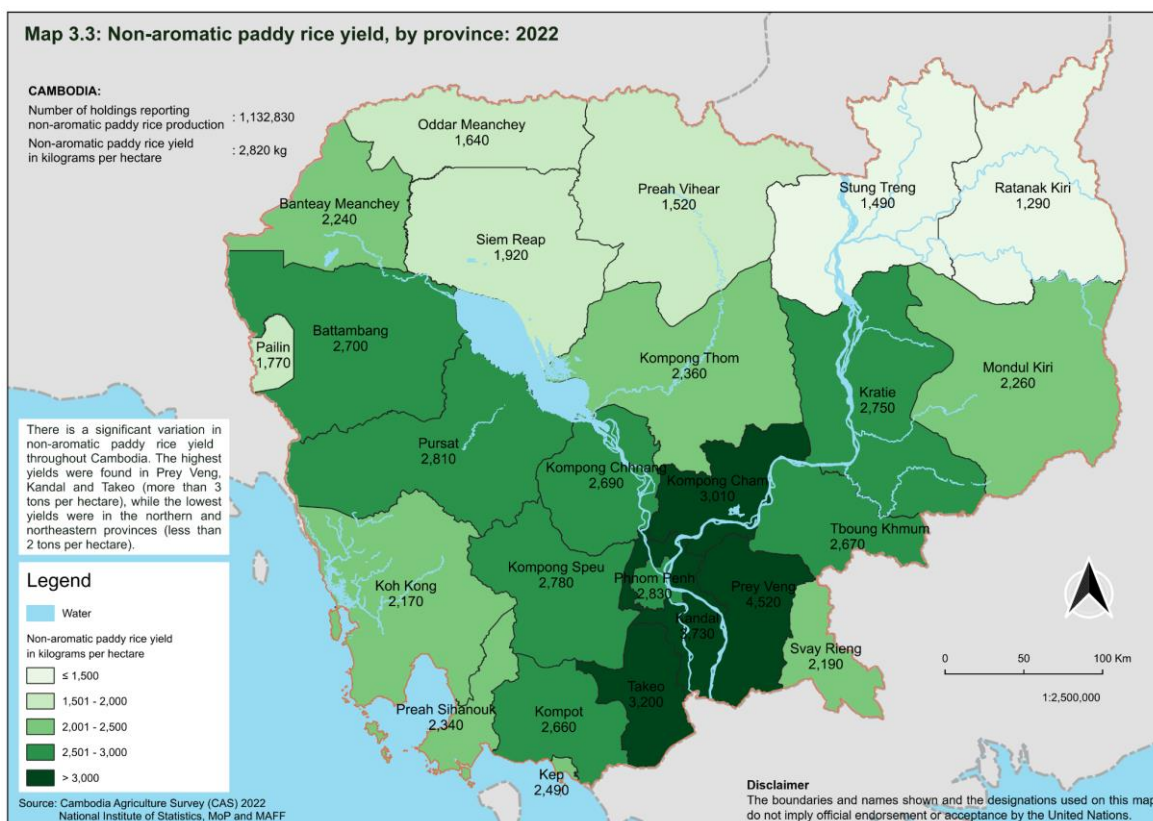
The two major crops grown in this category were rice and maize. The types of rice grown included non-aromatic, aromatic, and glutinous (sticky) rice. Maize was considered as the white/yellow/violet corn variety.

Of the three types of rice, non-aromatic varieties were the most common by far, with planted area estimated at 1.80 million hectares and harvested area estimated at 1.78 million hectares. The average production per harvested hectare of non-aromatic rice varieties was estimated at 2,900 kilograms with a total of 5.17 million tonnes of non-aromatic rice harvested. The Tonle Sap Lake Zone grew the most non-aromatic rice, with 832,000 hectares planted followed by the Plain Zone with 730,000 hectares, the Plateau and Mountainous zone with 169,000 hectares and the Coastal zone with 68,000 hectares planted.

Figure 2.5 Non-aromatic rice planted in hectares, by zone, 2022



Source: CAS 2022

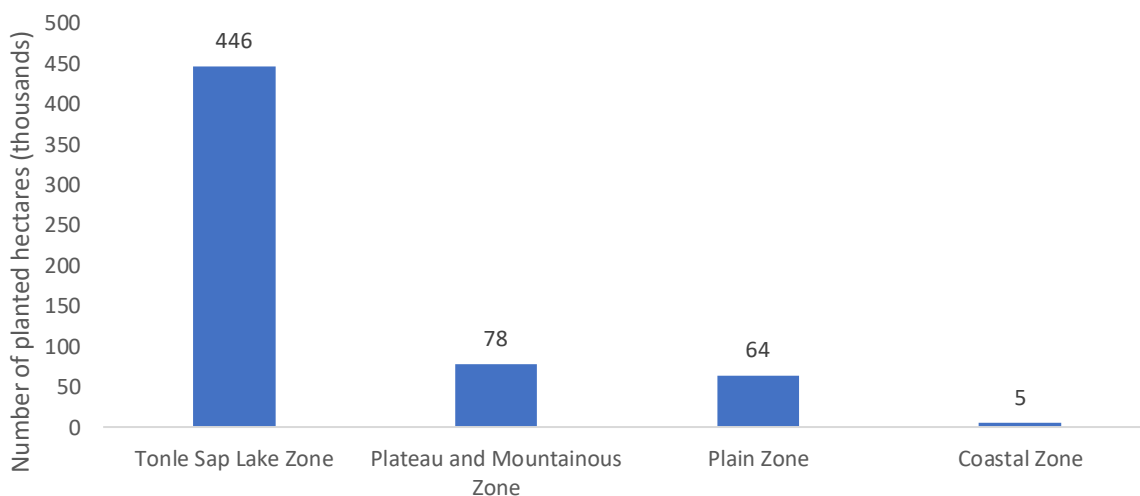


Source: Cambodia Agriculture Survey 2022 (CAS 2022) Selection of Thematic Maps; NIS-MOP, MAFF 2024.

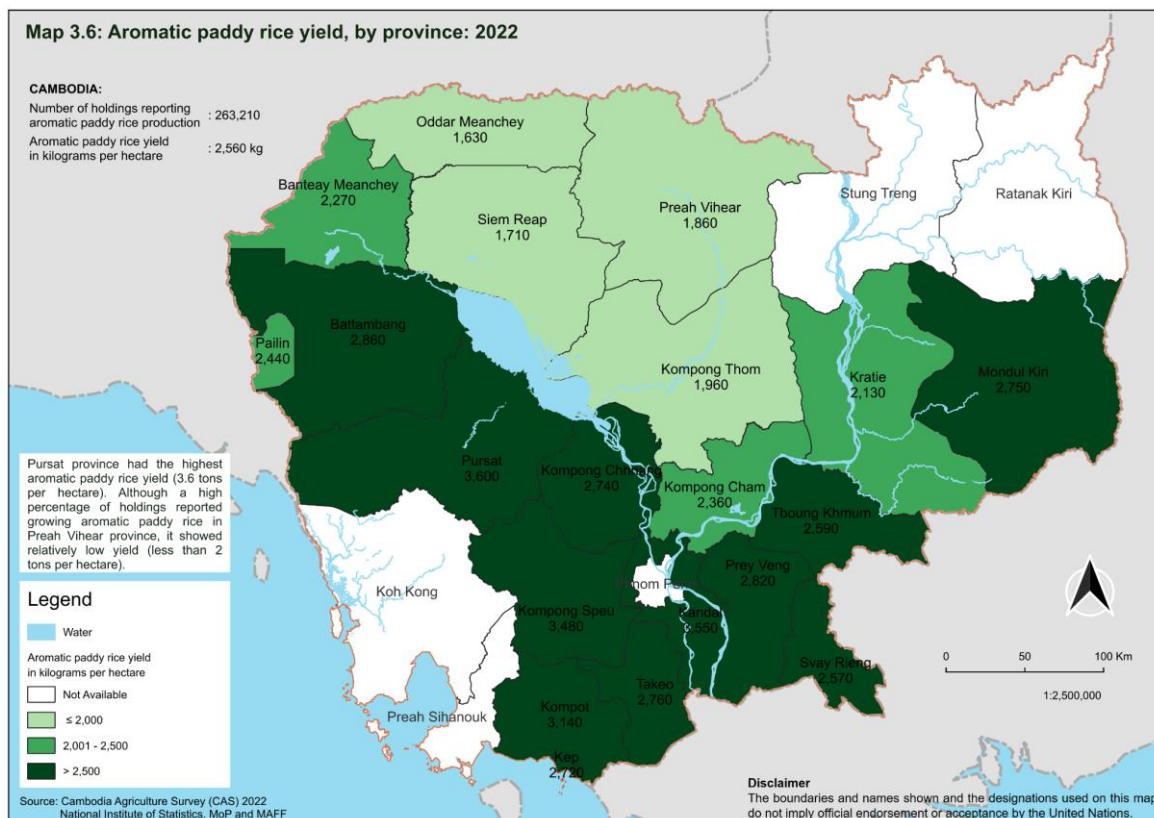
Aromatic varieties were planted on roughly 594,000 hectares in Cambodia, with 587,000 hectares harvested. The average production per harvested hectare of aromatic rice varieties was estimated at 2,540 kilograms with the total quantity harvested in Cambodia estimated

at 1.49 million tonnes. Unlike non-aromatic varieties, most production of aromatic rice is concentrated in the Tonle Sap Lake zone with 446,000 hectares planted there.

Figure 2.6 Aromatic rice planted hectares, by zone, 2022



Source: CAS 2022



Source: Cambodia Agriculture Survey 2022 (CAS 2022) Selection of Thematic Maps; NIS-MOP, MAFF 2024.

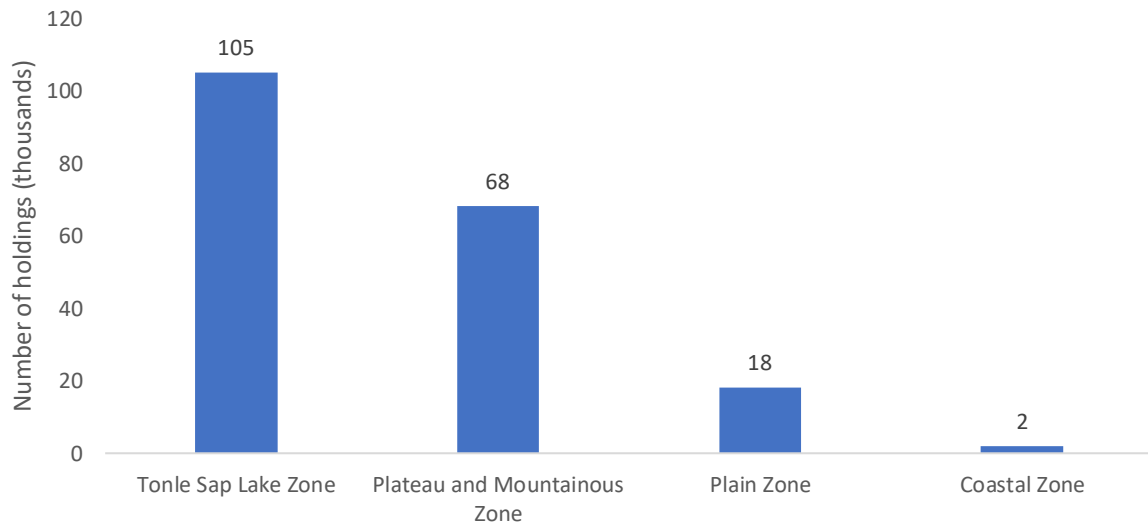
Maize was planted about 61,000 hectares throughout Cambodia. The Tonle Sap Lake Zone had an estimated 41,000 hectares of maize planted making it the leading zone in terms of

area planted. The average production per harvested hectare of maize was estimated at 5,000 kilograms with the total quantity harvested in Cambodia estimated at 307,000 tonnes.

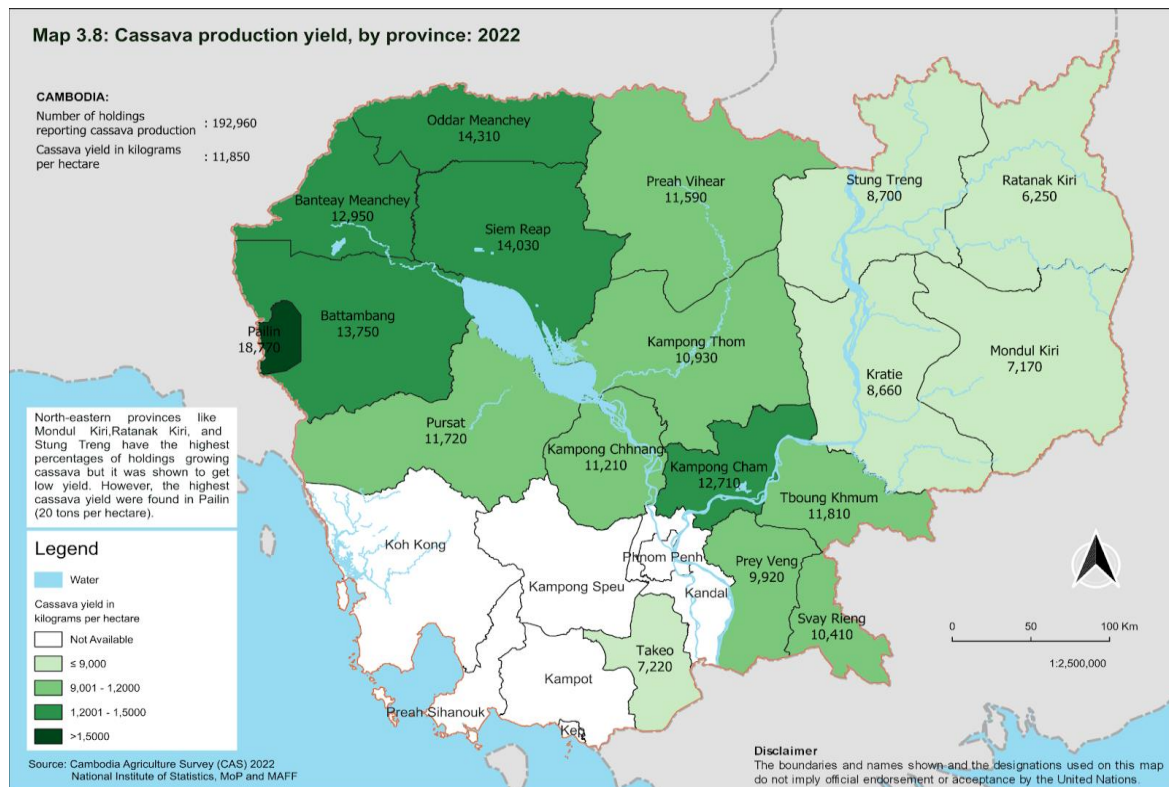
Root and Tuberous Crops

Root and tuberous crops include cassava, sweet potato and taro. Cassava accounted for the largest share of such crops, with 413,000 hectares planted and 402,000 hectares harvested. The average production per harvested hectare of cassava was estimated at 11,850 kilograms with the total quantity harvested in Cambodia estimated at 4.74 million tonnes.

Figure 2.7: Cassava, household holdings reporting, by zone, 2022



Source: CAS 2022



Source: Cambodia Agriculture Survey 2022 (CAS 2022) Selection of Thematic Maps; NIS-MOP, MAFF 2024.

Temporary Oilseed Crops

The CAS collected data on oilseed crops, of which soybean was the most prominent in Cambodia. A total of 9,600 hectares of soybean were planted and harvested with 19,500 tonnes produced and a yield of 2,040 kilograms per hectare.

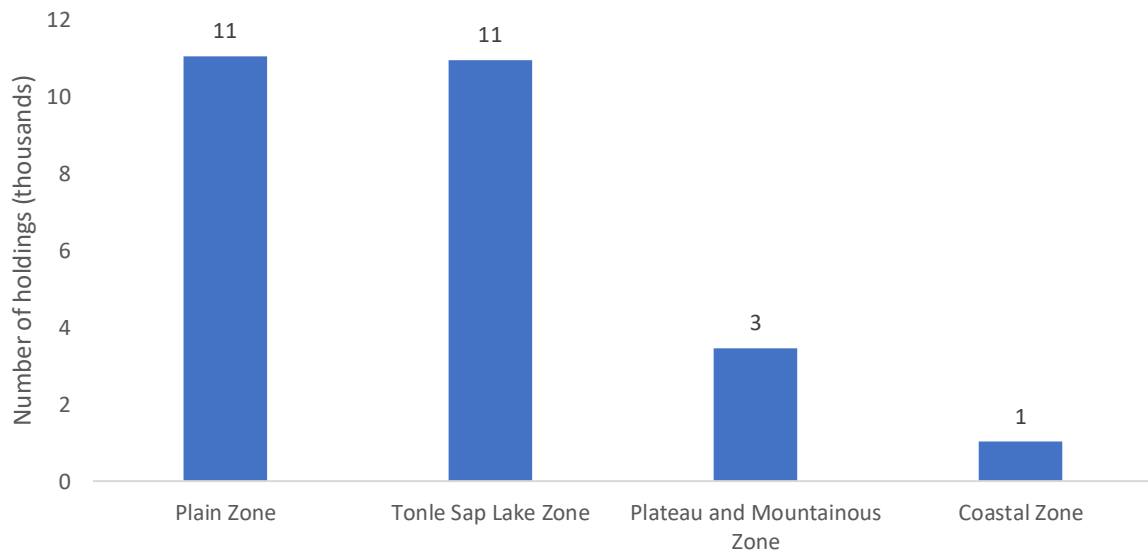
Spices, Condiments, Aromatic and Medicinal Plants

Information collected on spices, condiments, and aromatic and medicinal plants in the CAS included lemon grass, mint and betel leaf. The number of households reporting the growing of lemon grass was estimated at 101,500, with 28,000 growing mint, growing turmeric 9,300 and 3,300 growing betel leaf.

Industrial Crops

Sugarcane was among one of the industrial crops covered by the CAS. 26,500 household agricultural holdings planted sugarcane in Cambodia, with 11,000 of them being in the Plain zone and Tonle Sap Lake Zone. Overall, in Cambodia, the yield of sugarcane was 19,100 kilograms per hectare.

Figure 2.8 Sugarcane, household holdings reporting, by zone, 2022



Source: CAS 2022

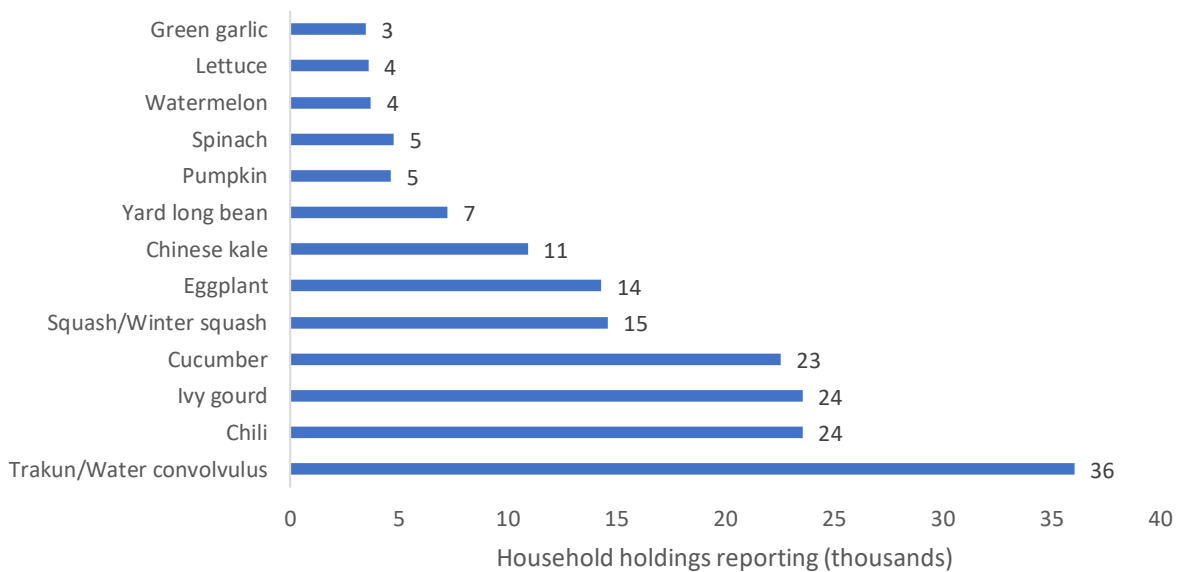
Vegetables

A wide variety of vegetables were cultivated across the country, including leafy or stem vegetables; fruit-bearing vegetables; root, bulb and tuberous vegetables; leguminous green vegetables, etc. Leafy or stem vegetables included green garlic, spinach, Chinese kale, lettuce and trakun/water convolvulus. Fruit-bearing vegetables covered by the CAS included chili, cucumber, eggplant, ivy gourd, pumpkin, and squash/winter squash.

Leguminous green vegetables included yard long beans. Other vegetables include cauliflower.

Trakun/water convolvulus was the vegetable reported in most household holdings with 36,000 household holdings growing it. Cucumber was grown by 23,000 households in Cambodia with an area planted and harvested of around 3,700 hectares. The total production for cucumbers was 29,100 tonnes. Eggplant was grown by approximately 14,000 households in Cambodia. Pumpkin was grown by 5,000 households in Cambodia. Watermelon was grown by an estimated 4,000 households in Cambodia, with an area planted of 1,600 and harvested of 1,500 hectares with an average yield of 13,460 kilograms per hectare.

Figure 2.9 Vegetables, household holdings reporting, Cambodia 2022



Source: CAS 2022

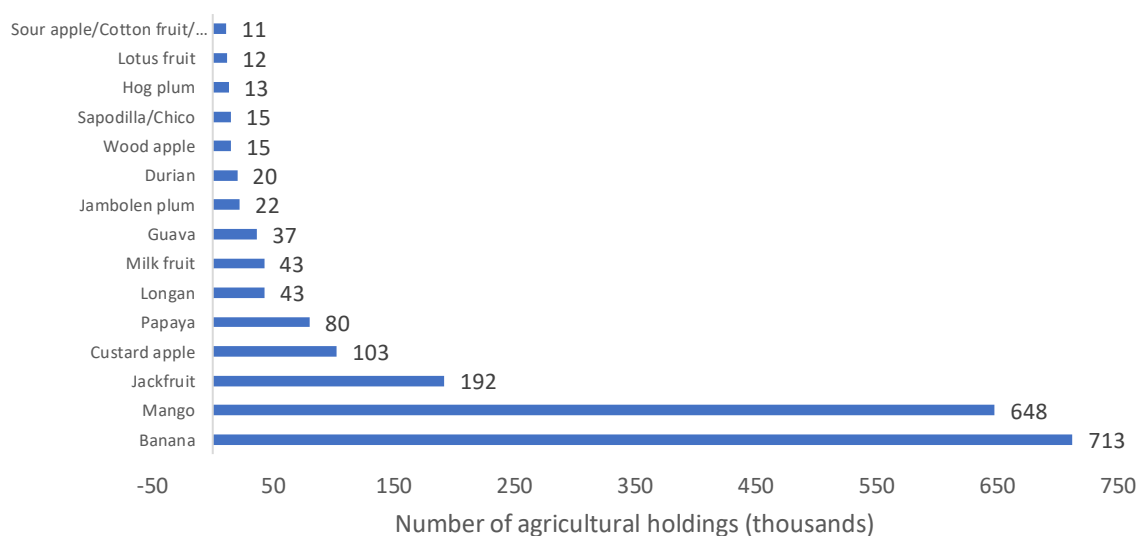
Permanent Crops

Fruits

Citrus fruits were found in abundance in Cambodia, and the crops covered by the CAS included grapefruit and pomelo; lime/lemon, and oranges. Oranges were grown on approximately 60,600 household agricultural holdings in Cambodia and the area planted of oranges was estimated at 2,000 hectares.

The category of cultivated fruit contains many of Cambodia's most grown produce including mango, banana, jackfruit, papaya, guava, custard apple, milk fruit, durian, longan, and others.

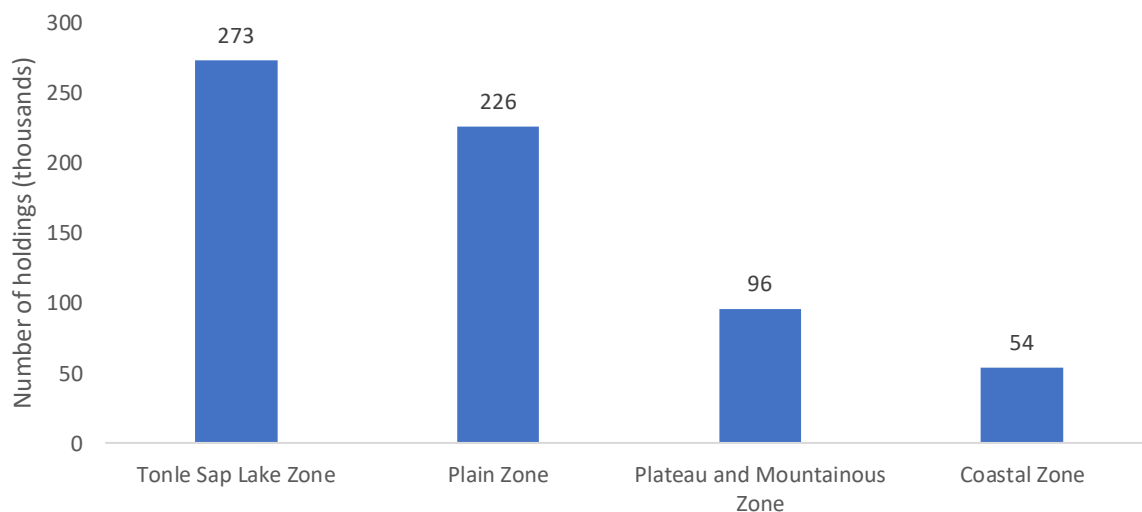
Figure 2.10 Cultivated fruits, household holdings reporting, Cambodia 2022



Source: CAS 2022

Mango was grown on approximately 648,000 household agricultural holdings in Cambodia. The area planted was estimated at 83,000 hectares with 60,000 hectares harvested, the largest of any of Cambodia’s fruits. Mango was harvested with an estimated yield of 6,320 kilograms per hectare.

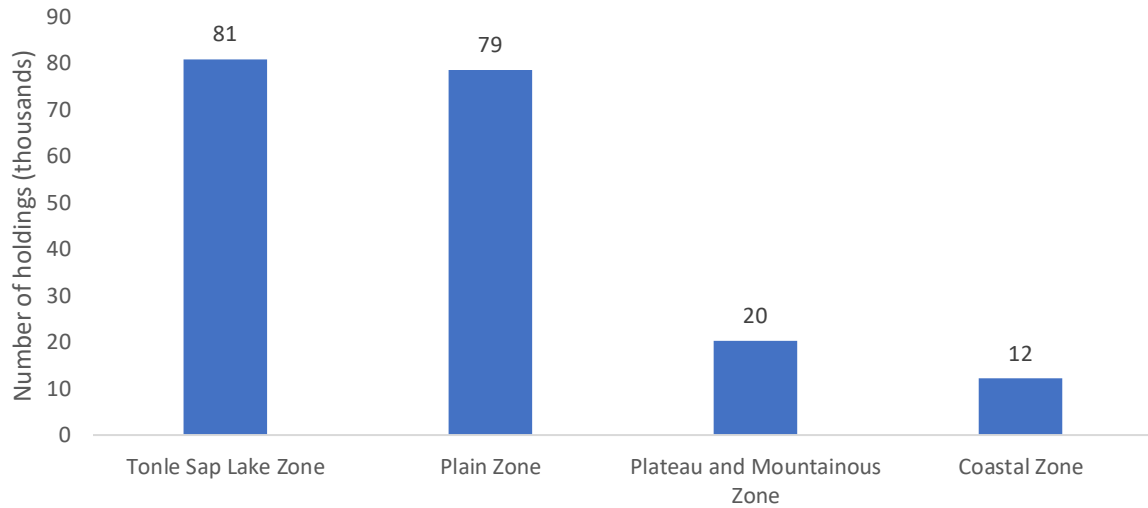
Figure 2.11 Mango, household holdings reporting, by zone, 2022



Source: CAS 2022

Jackfruit was grown on approximately 192,000 holdings in Cambodia. The area planted was estimated at 3,800 hectares with 1,300 hectares harvested. The average yield was estimated at 6,250 kilograms per hectare. Jackfruit was grown most frequently in the Tonle Sap Lake zone with 81,000 households reporting its production.

Figure 2.13 Jackfruit, household holdings reporting, by zone, 2022

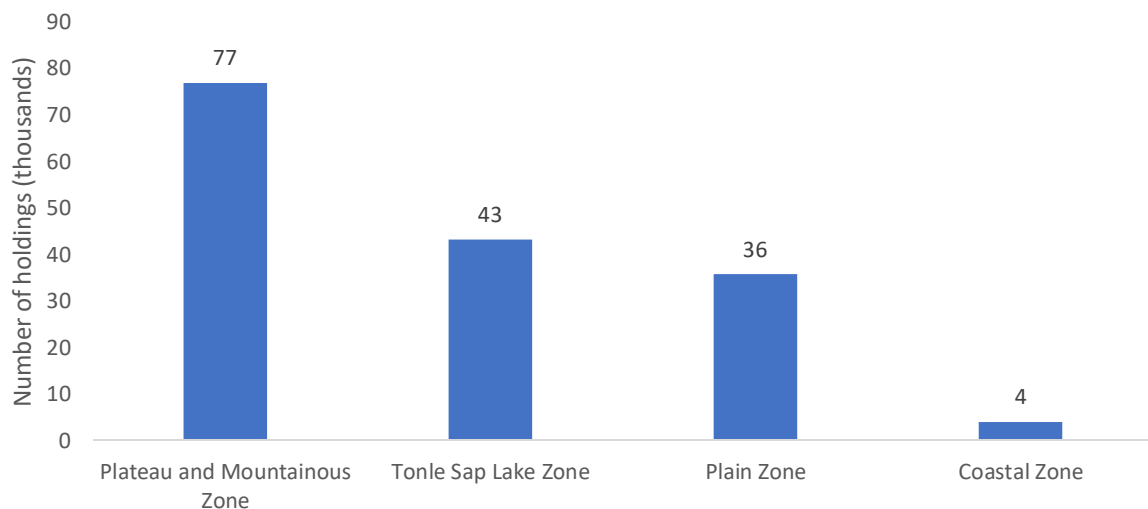


Source: CAS 2022

Cashew

In the edible nuts category, the CAS collected data on betel nuts and cashews, with cashews being the more popular of the two. Cashews were grown on approximately 159,000 agricultural household holdings in Cambodia. The area planted of cashews was estimated at 341,000 hectares in Cambodia, with 267,000 hectares harvested and the quantity harvested estimated at 212,000 tonnes. The average yield per hectare was 790 kilograms. The Plateau and Mountainous zone reported the largest area of cashews grown, with 207,000 hectares of cashews planted.

Figure 2.14 Cashew, household holdings reporting, by zone, 2022

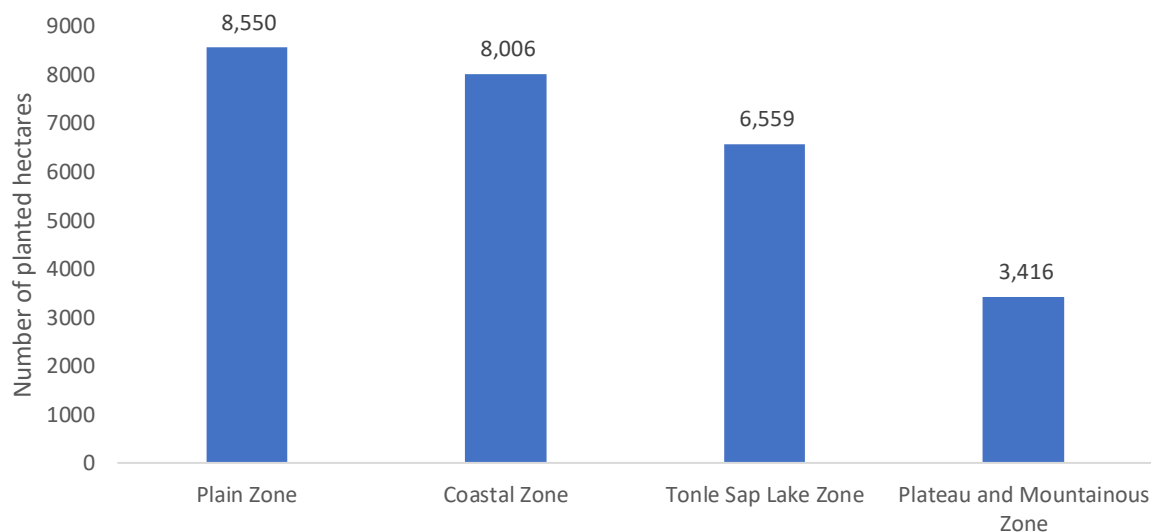


Source: CAS 2022

Oil Crops

Oil crops covered by the CAS included coconut and palm. Coconut was the more popular crop of the two, with 568,000 household agricultural holdings reportedly growing coconut. Coconut planted area was estimated at 33,000 hectares with an area harvested of 10,000 hectares. The quantity harvested was estimated at 99,000 tonnes with an average yield of 10,060 kilograms per hectare. The Plain Zone grew the largest area of coconuts with approximately 8,600 hectares planted.

Figure 2.15 Coconut planted hectares, by zone, 2022



Source: CAS 2022

Permanent Spice and Aromatic Crops

Black pepper was grown by approximately 13,000 agricultural household holdings in Cambodia. Planted hectares were estimated at 6,900 with harvested hectares estimated at 5,500. The total quantity harvested was estimated at 12,700 tonnes with an average yield of 2,330 kilograms per hectare. The Plain Zone reported most of the planted black pepper with 5,000 hectares planted coming from this zone.

Rubber

Rubber was grown on approximately 39,000 agricultural household holdings in Cambodia. The total rubber area planted was estimated at 138,000 hectares. It is worth noting again that the data for this report uses only the household agricultural holdings, whilst most rubber production in Cambodia is completed by private sector establishments, not included within this report.

Non-Food Crops

Non-food crops contain flowers, plants and trees. Bamboo, used for many purposes including house building, furniture and cooking was the leading non-food crop with approximately 13,000 agricultural households reportedly growing bamboo. The Tonle Sap Lake zone was the region that reported the largest number of holdings growing bamboo, at 7,000 holdings.

Annex 1

Table 2.1: Tree or plant crops, conversion factors from number of trees to hectares:

Tree/plant type	Conversion factor in trees (or plants) per hectare
Oranges	400
Tangerines	400
Pomelo	400
Lime/lemon	400
Kafir lime	400
Other citrus fruits	400
Banana	1,667
Custard apple	400
Soursop	400
Guava	400
Longan	278
Mango	270
Papaya	1,600
Pineapple	14,000
Wood apple	400
Jackfruit	270
Jampadak Breadfruit	270
Pomegranate	600
Sapodilla/Chico	278
Rambutan	156
Mangosteen	100
Rambeh	270
Manila tamarind	70
Durian	270
Milk fruit	270
Lotus fruit	25,000
Rose apple	278
Marian plum	270
Hog plum	278
Jambolen plum	270



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Jujube	278
Lychee or Litchi	156
Star fruit	300
Dragon Fruit	2,500
Bilimbi Fruit	300
Passion Fruit	156
Sour apple/Cotton fruit/ Sandorica	100
Small bell	400
Date	200
Noni/Morinda	300
Avocado	280
Other cultivated fruit	280
Cashew	278
Betel nuts	2,500
Lotus nuts	25,000
Other beverage crops	1,000
Coconut	278
Oil Palm	278
Palm	1,000
Black pepper	2,500
Krasang	250
Tamarind	70
Other spices and aromatic crops	1,000
Rubber	555
Other rubber and tanning crops	500
Jasmine	5,000
Tuberose	3,000
Frangipani	200
Anthurium	20,000
Other flowers	1,500
Heliconia	15,000
Ginger plant	10,000
Lucky bamboo plant	15,000
Bamboo	10,000
Eucalyptus trees	7,000
Sandalwood	1,600