



KINGDOM OF CAMBODIA

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Cambodia Agriculture Survey 2023

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

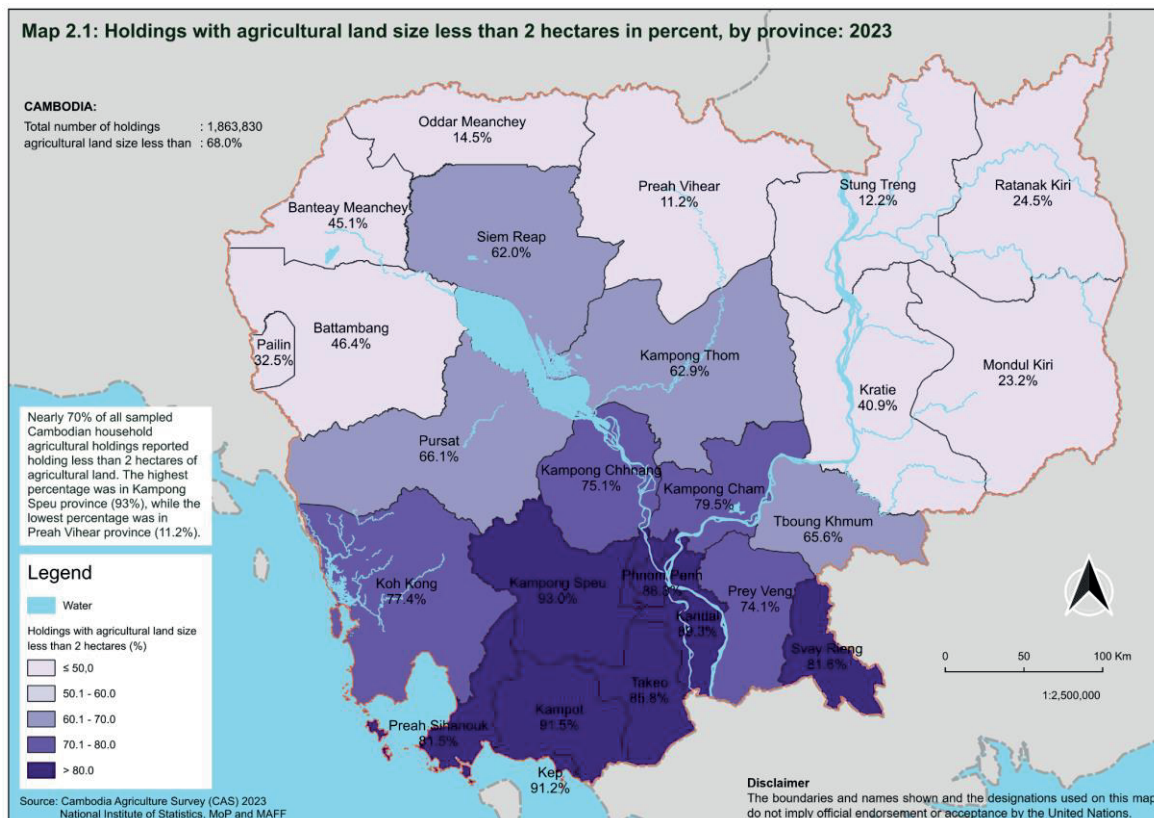
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Financial support from the 50x2030 initiative.

Agricultural area

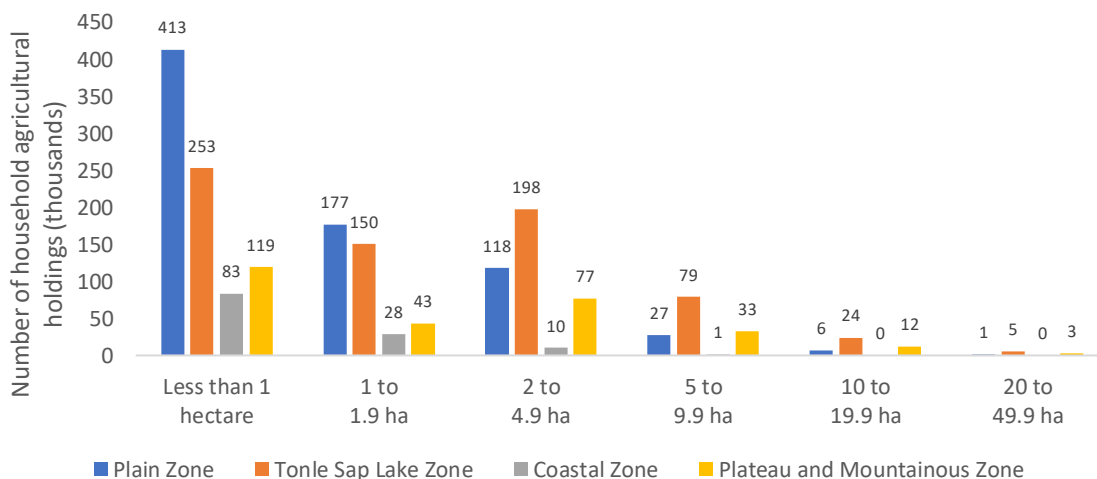
Cambodia has a total household owned agricultural area of approximately 3,853,000 hectares. The largest zone in terms of agricultural size is the Tonle Sap Lake zone with 1,895,000 hectares of agricultural land. This is followed by the Plain zone (1,035,000 hectares), Plateau and Mountainous zone (796,000 hectares), and the Coastal zone with a much smaller area at 127,000 hectares of agricultural land.



Source: Cambodia Agriculture Survey 2023 (CAS 2023) 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 2.1 hectares. The Coastal zone has the smallest holding size on average at only 1 hectares. On the other hand, the holdings in the Tonle Sap Lake zone and Plateau and Mountainous zone are much larger on average at 2.7 hectares and 2.8 hectares respectively.

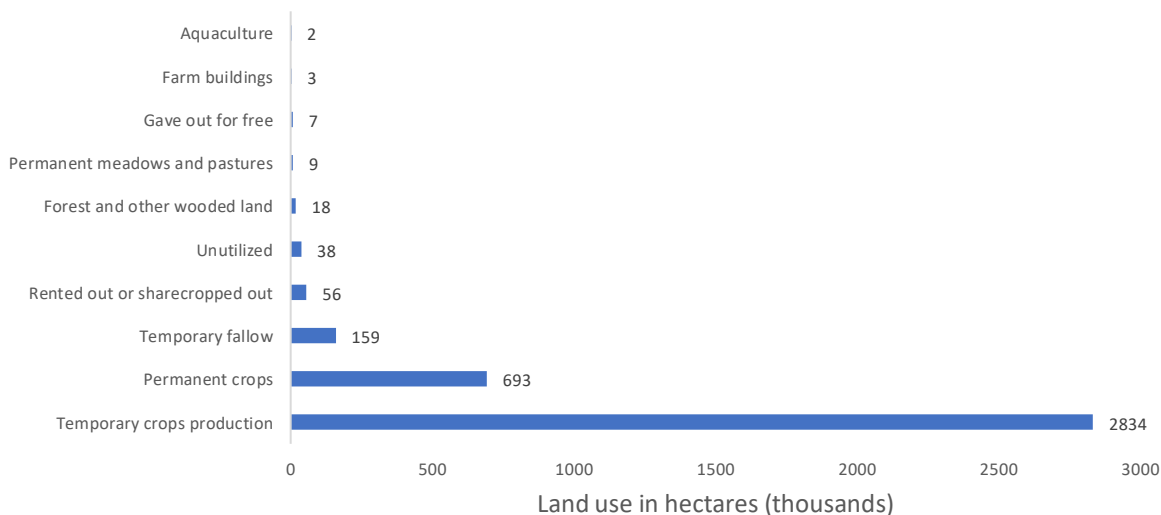
Figure 2.1: Size of household agricultural holdings, by zone, 2023



Source: CAS 2023

Although agricultural land may be used for a plethora of activities, temporary crop production is predominantly the main land use in Cambodia. More than 2.8 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 693,000 hectares being used. Temporary fallow the third biggest land use, uses only 159,000 hectares in comparison.

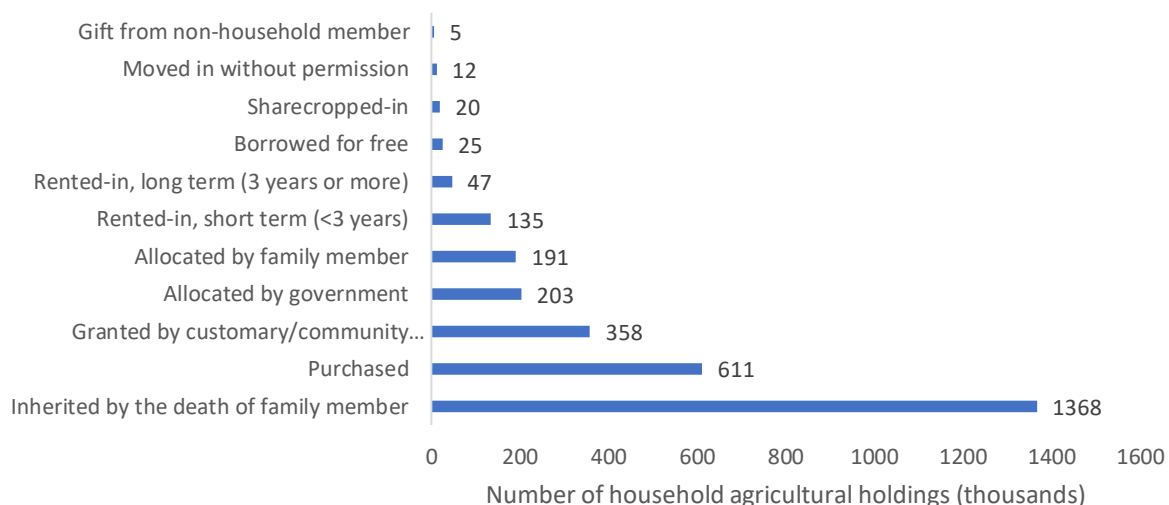
Figure 2.2: Agricultural land use in hectares, Cambodia, 2023



Source: CAS 2023

Agricultural land parcels are most frequently acquired by inheritance (in 1.4 million parcels). The purchase of a land parcel was accounted for in 611,000 of the parcels. Positively, only 12,000 parcels were reportedly ‘moved in without permission,’ although respondent bias may result in this being underreported.

2.3: Method of parcel acquisition by household agricultural holdings, Cambodia, 2023



Source: CAS 2023

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, 1.74 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.

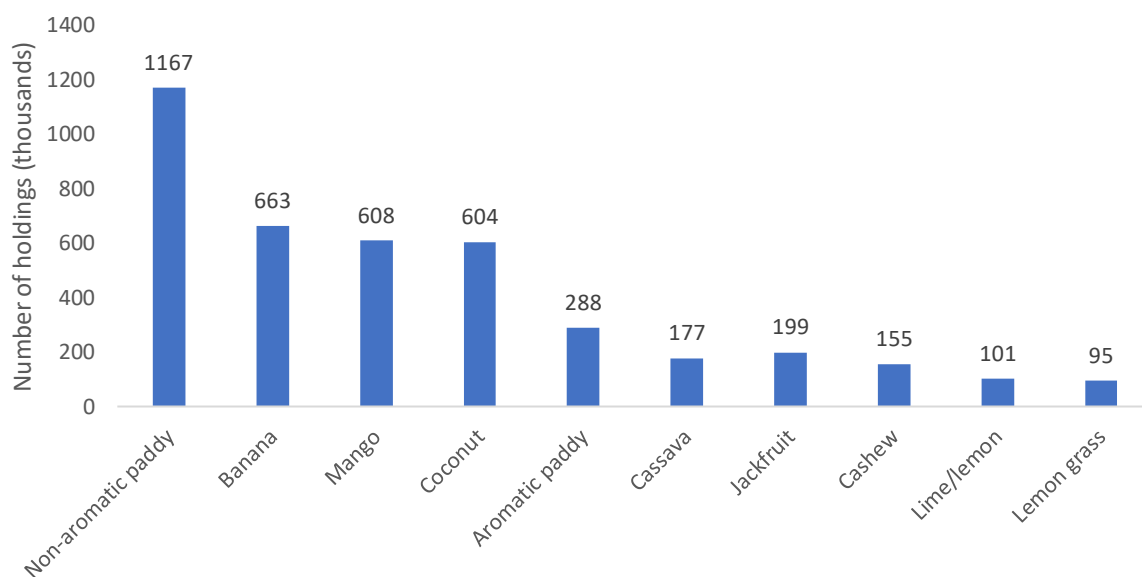
Due to the numerous types of crops grown in Cambodia and an effort to reduce respondent burden and interview length, detailed data was collected on the top 34 crops in Cambodia, as defined by MAFF. For these top 34 crops, respondents provided information in terms of area planted, area harvested, quantity 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 2023 differ from procedures used in other agriculture assessment efforts in Cambodia. CAS 2023 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 2022 through 30 June 2023 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 lemon grass. In total, 1.17 million household agricultural holdings planted non-aromatic paddy, the crop grown in the second most number of holdings was banana in 663,000 holdings.

Figure 2.4 Number of holdings reporting crops (top 10 crops), Cambodia, 2023



Source: CAS 2023

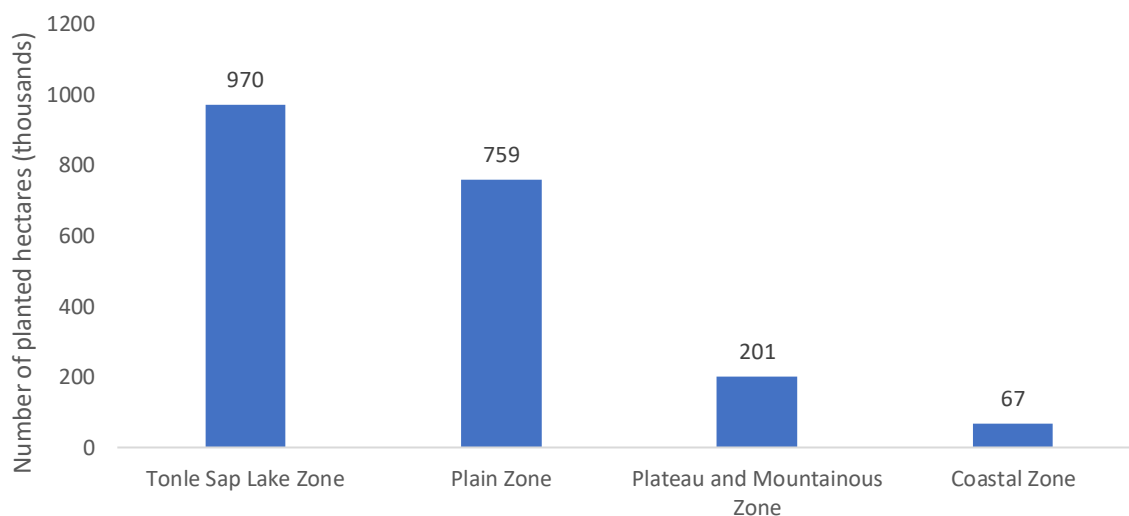
Temporary Crops

Cereal and Grain Crops

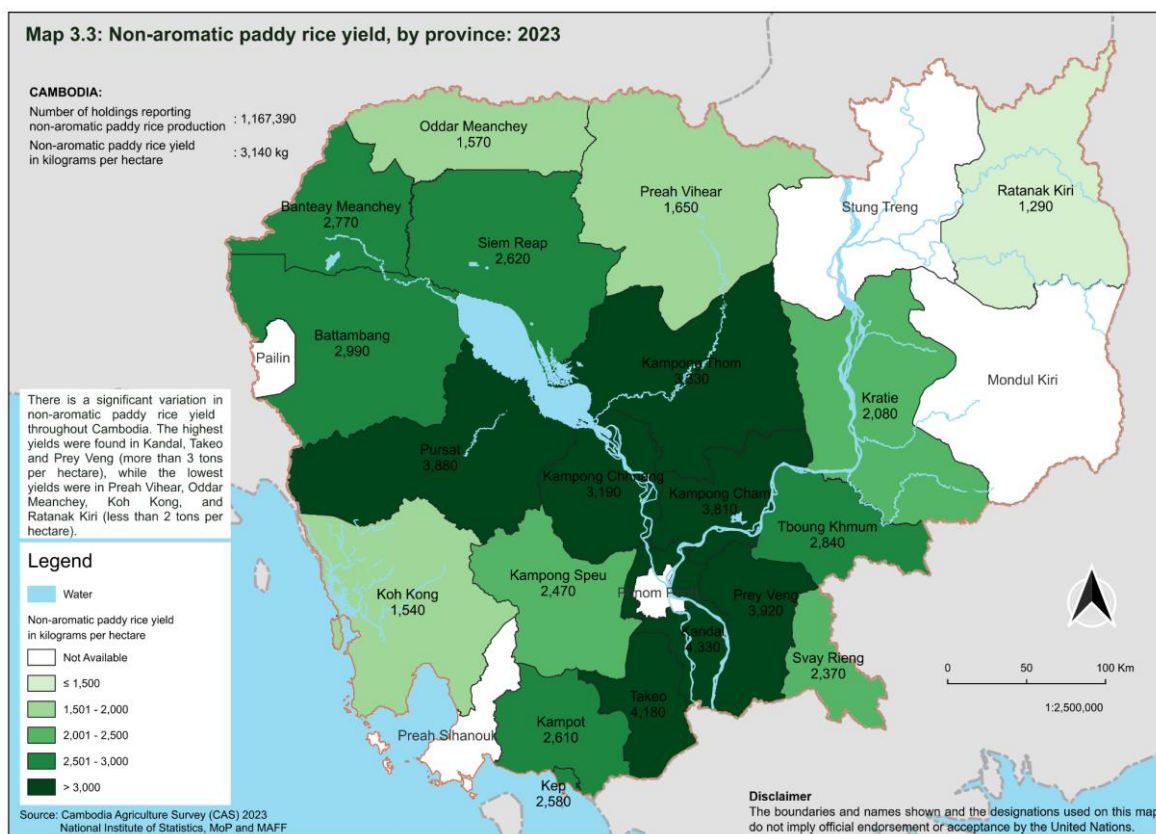
The two major crops grown in this category were rice and maize. The types of rice grown included non-aromatic, aromatic, and glutinous (sticky) rice. Maize was considered as the white/yellow/violet corn variety.

Of the three types of rice, non-aromatic varieties were the most common by far, with planted area estimated at 2.0 million hectares and harvested area estimated at 1.95 million hectares. The average production per harvested hectare of non-aromatic rice varieties was estimated at 3,140 kilograms with a total of 6.18 million tonnes of non-aromatic rice harvested. The Tonle Sap Lake Zone grew the most non-aromatic rice, with 970,000 hectares planted followed by the Plain Zone with 759,000 hectares, the Plateau and Mountainous zone with 201,000 hectares and the Coastal zone with 67,000 hectares planted.

Figure 2.5 Non-aromatic rice planted in hectares, by zone, 2023



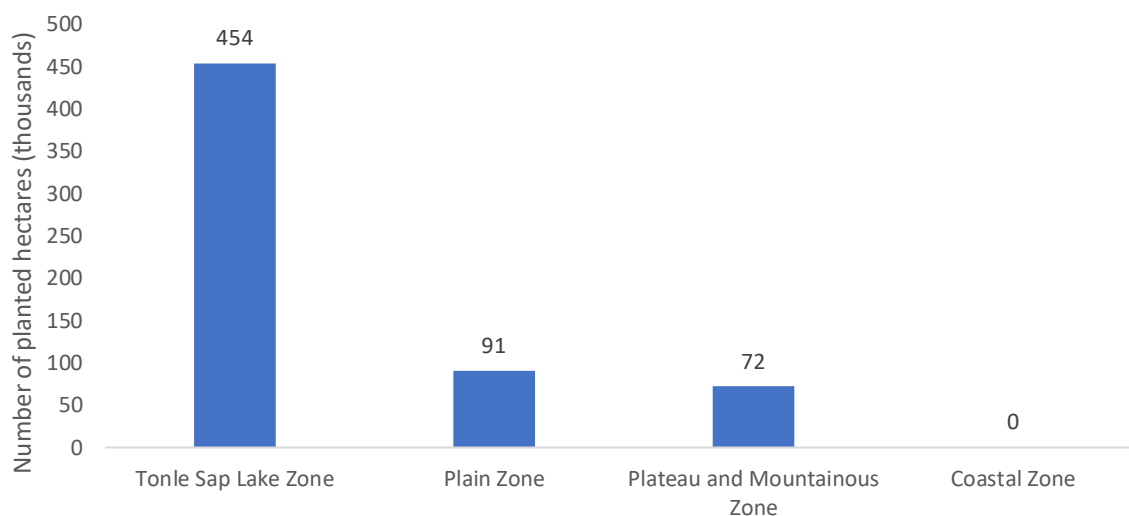
Source: CAS 2023



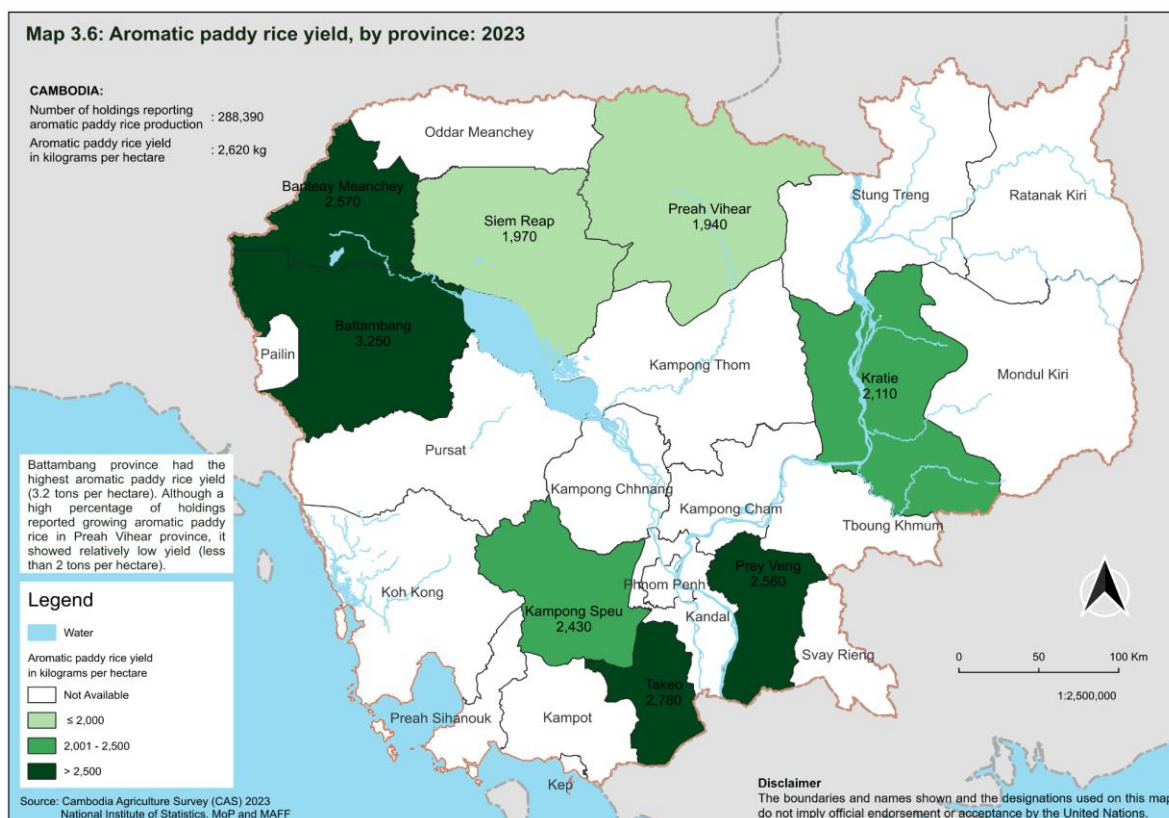
Source: Cambodia Agriculture Survey 2023 (CAS 2023) Selection of Thematic Maps; NIS-MOP, MAFF 2023.

Aromatic varieties were planted on roughly 624,000 hectares in Cambodia, with 611,000 hectares harvested. The average production per harvested hectare of aromatic rice varieties was estimated at 2,620 kilograms with the total quantity harvested in Cambodia estimated at 1.60 million tonnes. Unlike non-aromatic varieties, most production of aromatic rice is concentrated in the Tonle Sap Lake zone with 454,000 hectares planted there.

Figure 2.6 Aromatic rice planted hectares, by zone, 2023



Source: CAS 2023



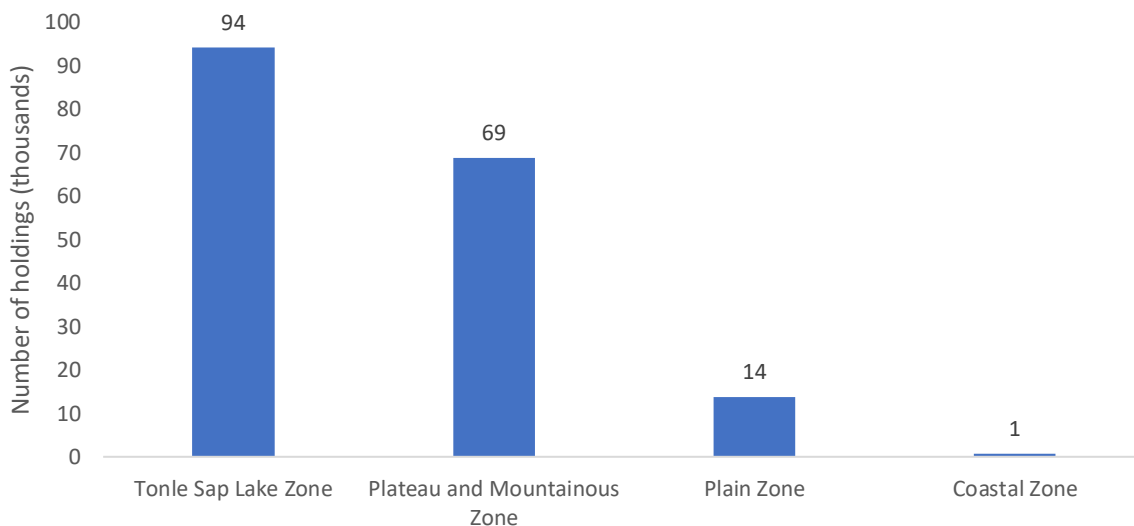
Source: Cambodia Agriculture Survey 2023 (CAS 2023) Selection of Thematic Maps; NIS-MOP, MAFF 2023.

Maize was planted about 96,000 hectares throughout Cambodia. The Tonle Sap Lake Zone had an estimated 77,000 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 4,000 kilograms with the total quantity harvested in Cambodia estimated at 380,000 tonnes.

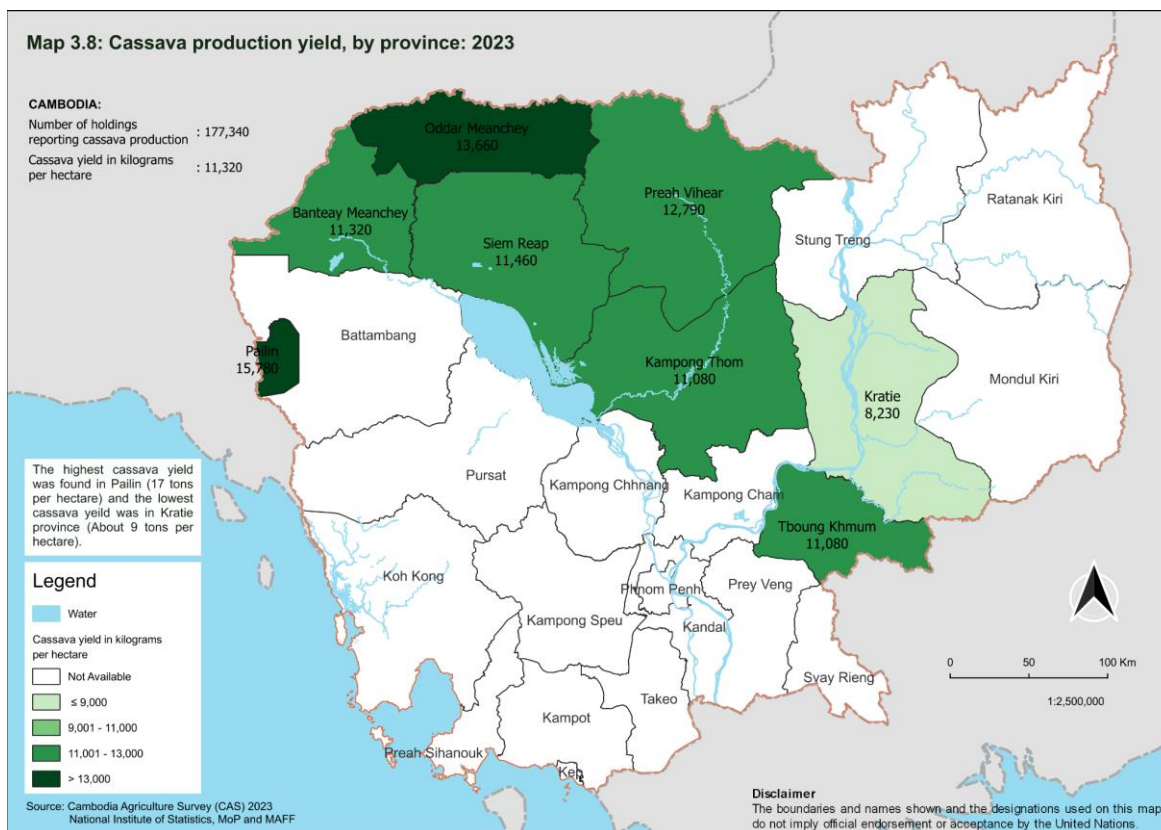
Root and Tuberous Crops

Root and tuberous crops include cassava, sweet potato and taro. Cassava accounted for the largest share of such crops, with 433,000 hectares planted and 418,000 hectares harvested. The average production per harvested hectare of cassava was estimated at 11,320 kilograms with the total quantity harvested in Cambodia estimated at 4.73 million tonnes.

Figure 2.7: Cassava, household holdings reporting, by zone, 2023



Source: CAS 2023



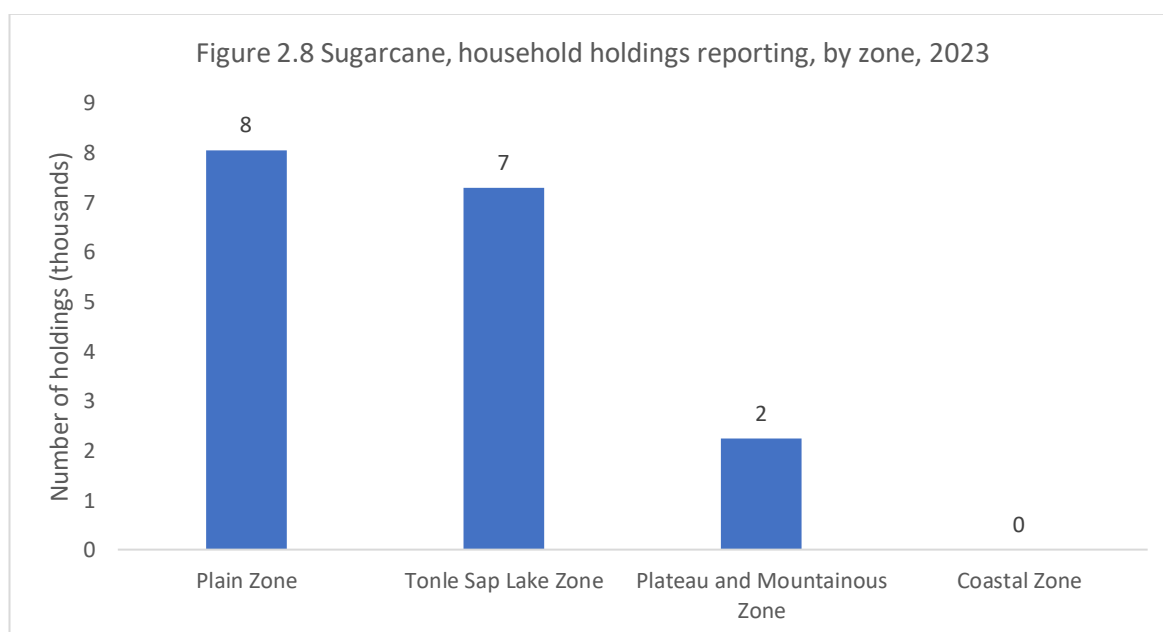
Source: Cambodia Agriculture Survey 2023 (CAS 2023) Selection of Thematic Maps; NIS-MOP, MAFF 2023.

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 95,000, with 24,000 growing mint, growing turmeric 6,000 and 2,400 growing parsley.

Industrial Crops

Sugarcane was among one of the industrial crops covered by the CAS. 19,000 household agricultural holdings planted sugarcane in Cambodia, with 8,000 of them being in the Plain zone and Tonle Sap Lake Zone. Overall in Cambodia, the yield of sugarcane was 10,760 kilograms per hectare.



Source: CAS 2023

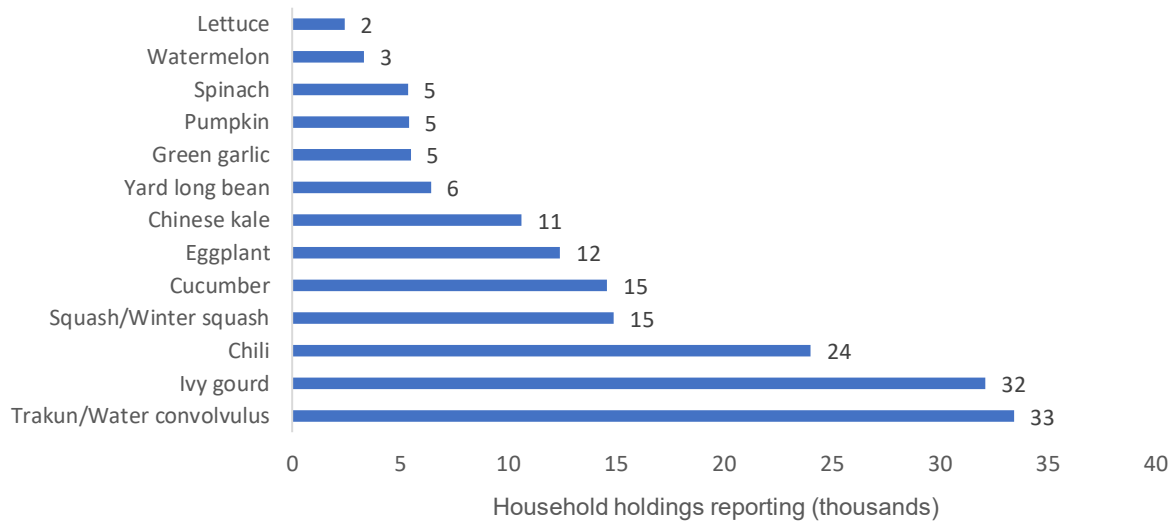
Vegetables

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 yardlong beans. Other vegetables include cauliflower.

Trakun/water convolvulus was the vegetable reported in most household holdings with 33,000 household holdings growing it. Cucumbers was grown by 15,000 households in Cambodia with an area planted and harvested of around 3,800 hectares. The total production for cucumbers was 39,400 tonnes. Eggplant was grown by approximately 12,000 households in Cambodia and had an average yield of 8,300 kilograms per hectare. Pumpkin

was grown by 5,000 households in Cambodia, with an average yield of 10,170 kilograms per hectare. Watermelon was grown by an estimated 3,000 households in Cambodia, with an area planted of 1,670 and harvested of 1,570 hectares.

Figure 2.9 Vegetables, household holdings reporting, Cambodia 2023



Source: CAS 2023

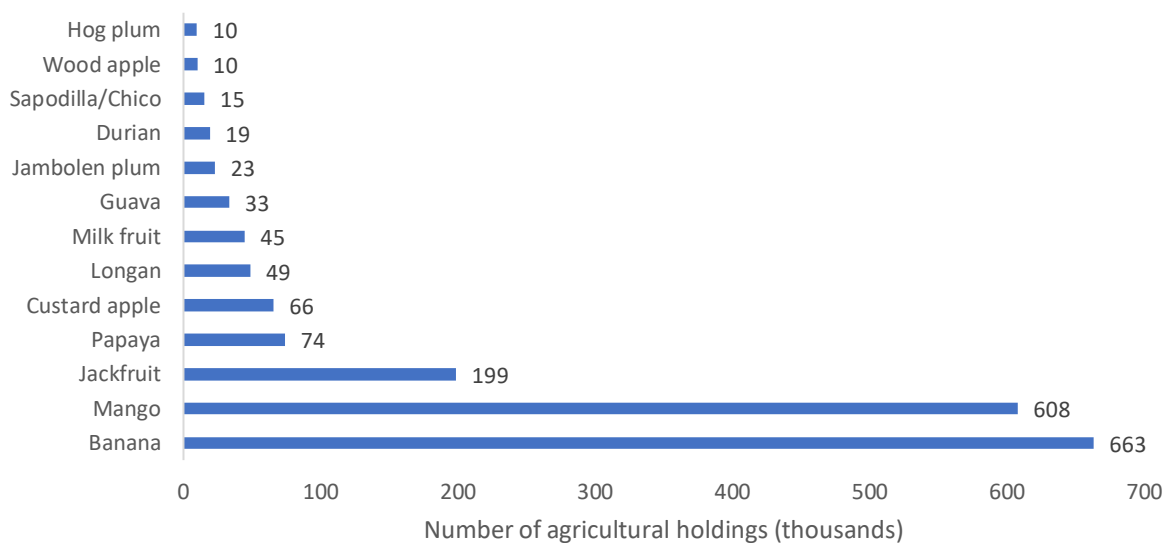
Permanent Crops

Fruits

Citrus fruits were found in abundance in Cambodia, and the crops covered by the CAS included pomelo grown on 35,000 holdings; lime/lemon grown on 101,000 holdings, and oranges grown on approximately 47,000 household agricultural holdings in Cambodia.

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

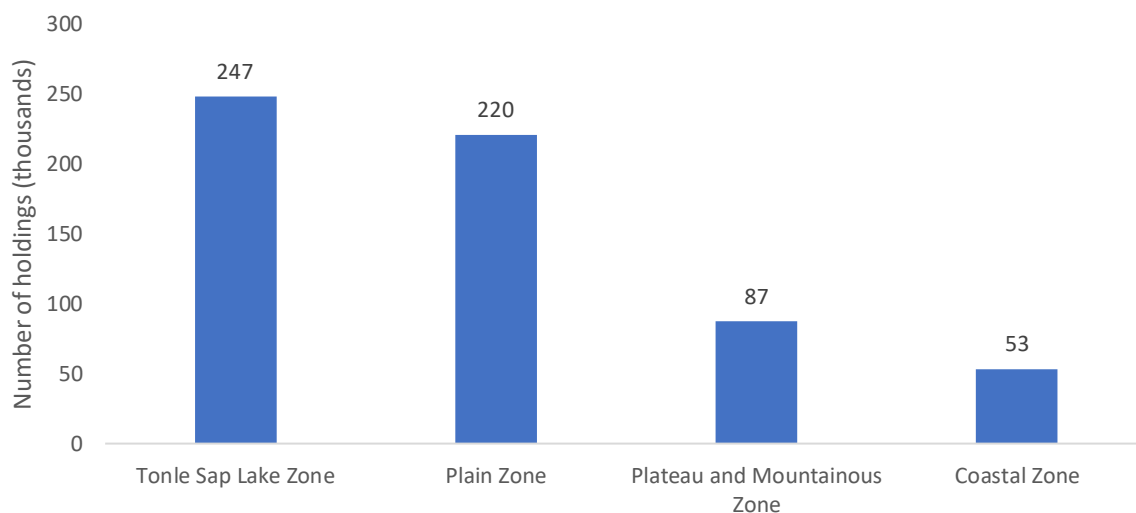
Figure 2.10 Cultivated fruits, household holdings reporting, Cambodia 2023



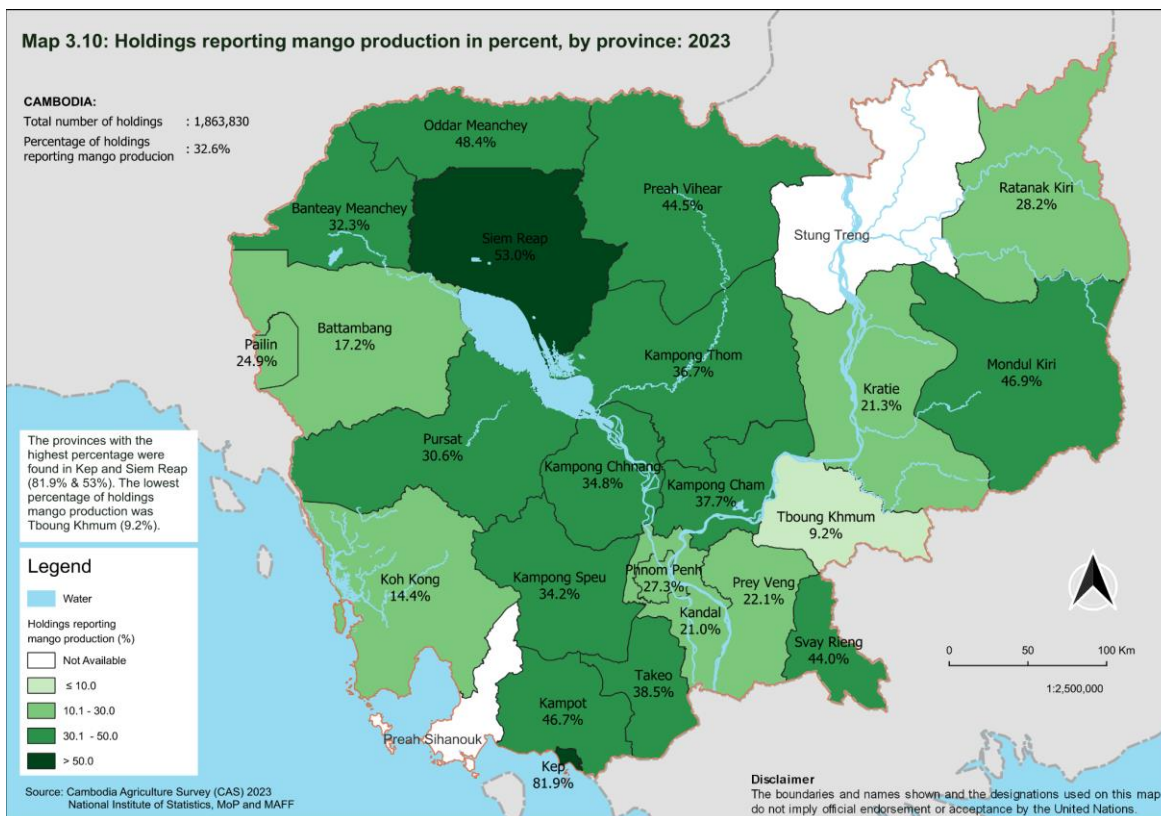
Source: CAS 2023

Mango was grown on approximately 608,000 household agricultural holdings in Cambodia. The area planted was estimated at 91,000 hectares with 69,000 hectares harvested, the largest of any of Cambodia’s fruits. Mango was harvested with an estimated yield of 3,170 kilograms per hectare.

Figure 2.11 Mango, household holdings reporting, by zone, 2023



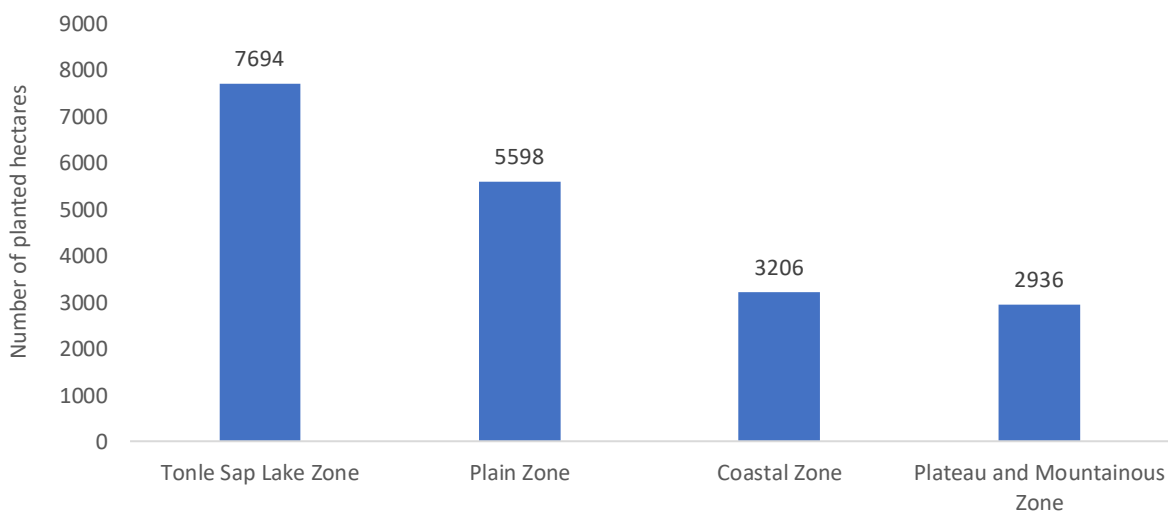
Source: CAS 2023



Source: Cambodia Agriculture Survey 2023 (CAS 2023) Selection of Thematic Maps; NIS-MOP, MAFF 2023.

Bananas were grown on approximately 663,000 agricultural household holdings and were planted across 19,000 hectares in Cambodia, with 12,000 hectares harvested. The quantity produced from the harvested hectares was estimated at 93,000 tonnes with an average yield of 7,970 kilograms per hectare. The Tonle Sap Lake zone reported the largest area of bananas, with 8,000 hectares planted.

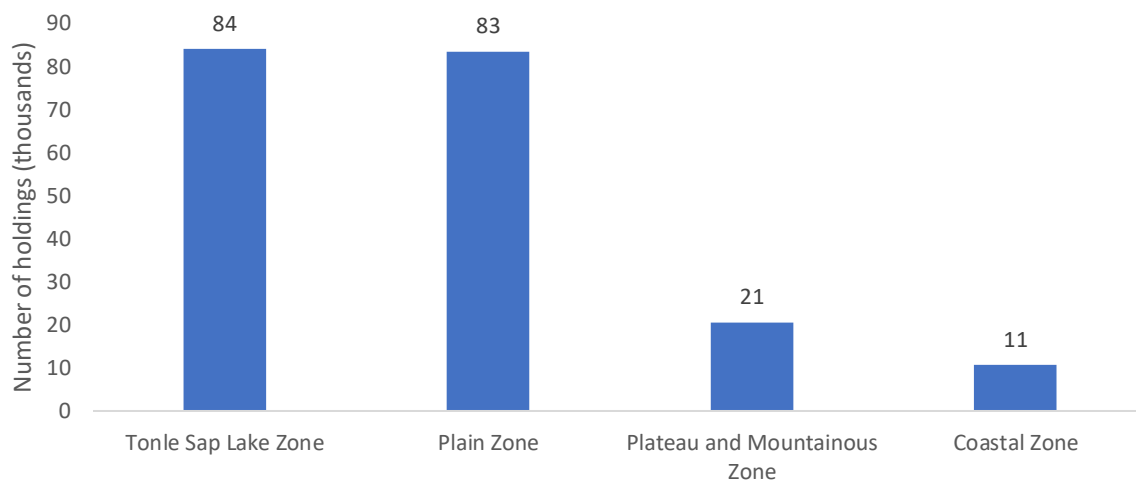
Figure 2.12 Banana planted hectares, by zone, 2023



Source: CAS 2023

Jackfruit was grown on approximately 200,000 holdings in Cambodia. The area planted was estimated at 6,000 hectares with 2,000 hectares harvested. The average yield was estimated at 6,300 kilograms per hectare. Jackfruit was grown most frequently in the Tonle Sap Lake zone with 84,000 households reporting its production.

Figure 2.13 Jackfruit, household holdings reporting, by zone, 2023

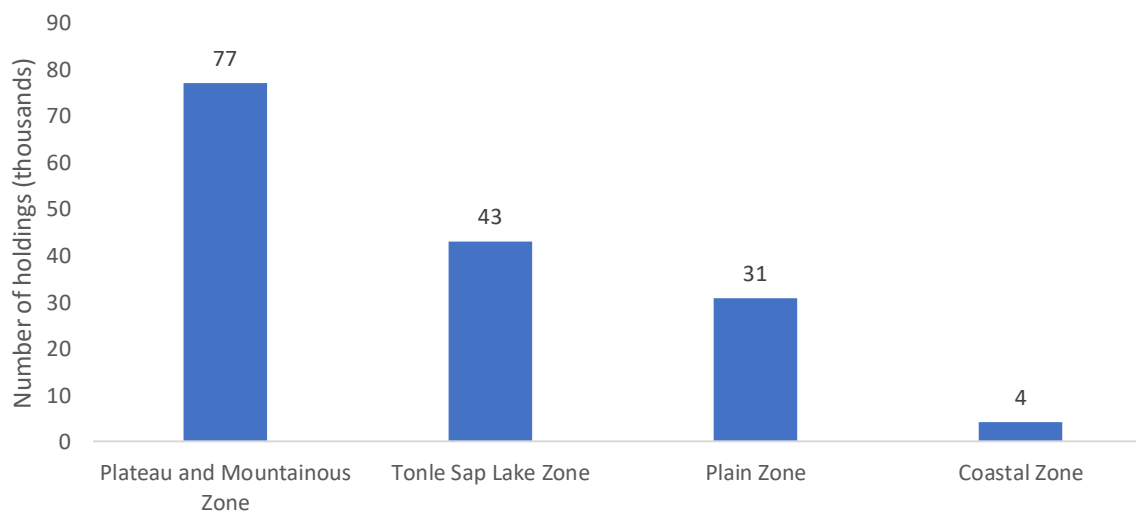


Source: CAS 2023

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 155,000 agricultural household holdings in Cambodia. The area planted of cashews was estimated at 334,000 hectares in Cambodia, with 286,000 hectares harvested and the quantity harvested estimated at 202,500 tonnes. The average yield per hectare was 710 kilograms. The Plateau and Mountainous zone reported the largest area of cashews grown, with 193,000 hectares of cashews planted.

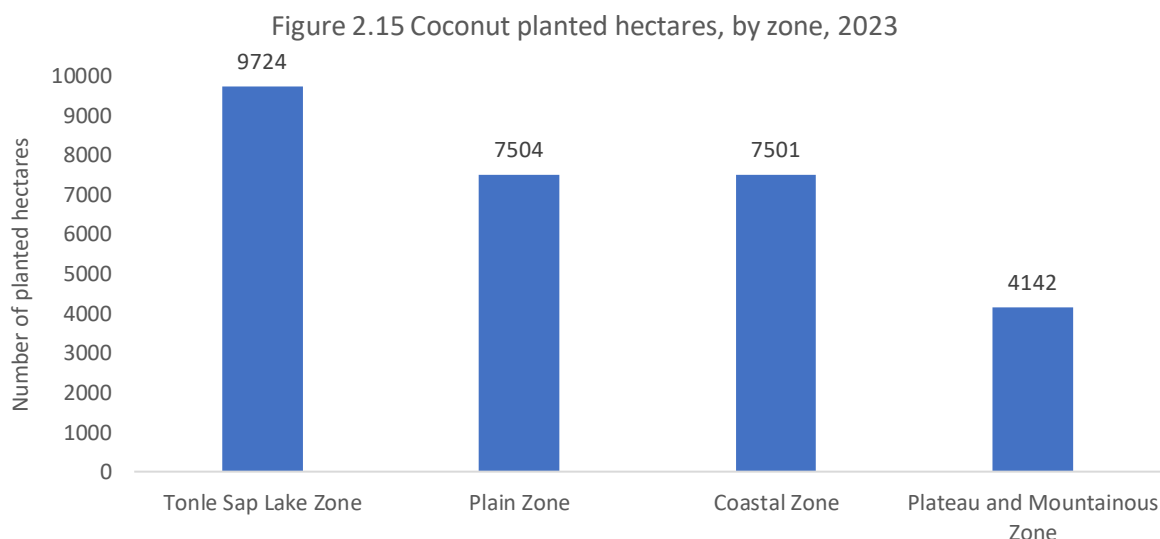
Figure 2.14 Cashew, household holdings reporting, by zone, 2023



Source: CAS 2023

Oil Crops

Oil crops covered by the CAS included coconut and palm. Coconut was the more popular crop of the two, with 604,000 household agricultural holdings reportedly growing coconut. Coconut planted area was estimated at 29,000 hectares with an area harvested of 10,000 hectares. The quantity harvested was estimated at 121,000 tonnes with an average yield of 12,130 kilograms per hectare. The Plain Zone grew the largest area of coconuts with approximately 9,700 hectares planted.



Source: CAS 2023

Permanent Spice and Aromatic Crops

Black pepper was grown by approximately 11,000 agricultural household holdings in Cambodia. Planted hectares were estimated at 7,300 with harvested hectares estimated at 7,100. The total quantity harvested was estimated at 11,150 tonnes with an average yield of 1,560 kilograms per hectare. The Plain Zone and Tonle Sap Lake Zone reported most of the planted black pepper with 4,900 hectares planted coming from this zone.

Rubber

Rubber was grown on approximately 43,000 agricultural household holdings in Cambodia. The total rubber area planted was estimated at 133,000 hectares with an average yield of 2,330 kilograms per hectare. 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 6,500 agricultural households reportedly growing bamboo. The Tonle Sap Lake zone was the region that reported the largest number of holdings growing bamboo, at 2,200 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
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



Cambodia Agriculture Survey 2023: Crop Production

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