

Latin America: Potato production, 2007

| country | area harvested (hectares) | quantity (tonnes) | yield (tonnes/ha) |
|--------------------------------|------------------------------|----------------------|----------------------|
| Argentina | 68 000 | 1 950 000 | 28.7 |
| Belize | 55 | 730 | 13.3 |
| Bolivia | 135 600 | 755 000 | 5.6 |
| Brazil | 142 327 | 3 375 054 | 23.7 |
| Chile | 54 528 | 831 054 | 15.2 |
| Colombia | 110 000 | 1 900 000 | 17.3 |
| Costa Rica | 2 220 | 53 500 | 24.1 |
| Cuba | 12 000 | 290 000 | 24.2 |
| Dominica | 12 | 120 | 10.0 |
| Dominican Republic | 2 450 | 52 000 | 21.2 |
| Ecuador | 52 000 | 355 000 | 6.8 |
| El Salvador | 237 | 5 218 | 22.0 |
| Guatemala | 11 000 | 300 000 | 27.3 |
| Haiti | 880 | 10 000 | 11.4 |
| Honduras | 1 350 | 22 000 | 16.3 |
| Jamaica | 580 | 9 000 | 15.5 |
| Mexico | 64 709 | 1 750 797 | 27.1 |
| Nicaragua | 2 400 | 33 000 | 13.8 |
| Panama | 1 300 | 26 000 | 20.0 |
| Paraguay | 200 | 1 300 | 6.5 |
| Peru | 269 441 | 3 388 147 | 12.6 |
| Uruguay | 7 925 | 118 362 | 14.9 |
| Venezuela (Bolivarian Rep. of) | 24 552 | 456 661 | 18.6 |
| Latin America | 963 766 | 15 682 943 | 16.3 |

Source: FAOSTAT

Top producers, 2007

| | |
|--------------------|---|
| 1 Peru | 7 Bolivia |
| 2 Brazil | 8 Bolivarian Republic of Venezuela |
| 3 Argentina | 9 Ecuador |
| 4 Colombia | 10 Guatemala |
| 5 Mexico | 11 Cuba |



Latin America

*The potato originated in South America, yet the region has the world's lowest level of potato production, less than 16 million tonnes in 2007. The potato remains a traditional crop for small farmers in the Andean region, where it is cultivated along with potato species unknown elsewhere. In other countries – Argentina, Brazil, Colombia and Mexico – production of *Solanum tuberosum* by large scale commercial growers is increasing.*

1. Peru



The potato has been essential to the diet of Peruvians for millennia. Archaeological evidence indicates that the potato was cultivated in the Peruvian Andes 8 000 years ago, and recent research suggests the potato's centre of origin lies in Peru, just north of Lake Titicaca. Today, Peru's farmers cultivate four species of potato: *Solanum tuberosum*, plus three other species exclusive to the Andes.

Peru is also Latin America's biggest potato producer, with a record harvest in 2007 of almost 3.4 million tonnes. Annual consumption is a high 80 kg per capita. The potato is produced mainly by small farmers, at altitudes of from 2 500 m to 4 500 m in the central Andes, while a smaller area in coastal valleys is devoted to irrigated commercial production.

The great genetic diversity found in Peruvian potatoes is considered “under threat” from new commercial varieties that

DANIEL DABOVE



Treasure of Peru

are often grown to satisfy urban consumer preferences. To help conserve the country's rich potato heritage, the Government of Peru created in July 2008 a national register of Peruvian native potato varieties.

2. Brazil



Brazil is the centre of origin of the world's premier root crop, cassava. Yet cultivation of potatoes was virtually unknown until the late 1800s, when European immigrants introduced the tuber to relatively temperate areas of southern Brazil (in the state of São Paulo, potato can be grown and harvested almost every month of the year).

While the potato, known locally as *batata inglesa*, is still a minor crop for Brazilian agriculture, the country ranks as Latin America's second biggest potato producer, with production of more than 3.3 million tonnes in 2007. Over the past 15 years, the country's potato output has grown by an average of five



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treasure*

**Tuber transport
in Antioquia, Colombia**

percent a year, and average yields have increased from 14 tonnes to 24 tonnes per hectare.

Although few of Brazil's potatoes are exported, annual consumption is estimated at a low 14 kg per capita. But that is expected to change: as one of the world's emerging economic giants, Brazil is considered a prize market for processed potato snacks.

3. Argentina



Although western Argentina lies within the area of origin of wild potatoes, evidence of potato production there dates from the 1870s, when 2 400 hectares were planted with tubers almost certainly imported from Europe.

**At 2 000 m
in the Argentine
Andes**



DUILIO BARRO

Today, potato production is large-scale and highly mechanized, and concentrated around Buenos Aires and Santa Fe.

Over the past 50 years, Argentina's potato output has changed very little: the 2007 harvest of 1.9 million tonnes was only slightly less than that of 1961. Since the early 1960s the national harvest has averaged around 2 million tonnes, with only occasional peaks (in 1998, it reached 3.4 million). Levels of potato consumption – around 44 kg per capita per year in 2005 – have changed little since 1990.

However, yield has improved markedly. Along with a steady drop in the size of the harvested area, from 200 000 ha in 1961 to around 68 000 in 2007, per hectare yields have more than tripled to almost 30 tonnes. In 2005, Argentina exported 33 000 tonnes of potatoes and 4 000 tonnes of potato flour.

4. Colombia



In 1538, a Spanish visitor to the central mountain ranges in present-day Colombia noted that local people cultivated “a kind of earth truffle” – which were probably potatoes. In fact, Colombia lies along the northern edge of the Andean centre of potato origin and domestication.

While the “earth truffle” is still a subsistence crop for many small farmers in Colombia, it is also the focus of the largest commercial potato industry in the Andean region. In 2000, production reached more than 2.8 million tonnes, thanks largely to yields of around 17 tonnes per hectare, far above those achieved in Bolivia, Ecuador



CARLOS ANTONIO MONROY ESCUDERO

Per capita consumption of potato in Mexico stands at 17 kg a year, very low compared to its maize intake of 400 kg. But potato imports from Canada and the USA have grown in recent years, reaching 65 000 tonnes of fresh potatoes and 122 000 tonnes of frozen products in 2006.

and Peru. Since then, the harvested area has shrunk from 170 000 to 110 000 hectares, and production in 2007 stood at 1.9 million tonnes.

Potato is grown mainly at altitudes of 1 800 to 2 300 m in the Cordillera Central and Cordillera Oriental mountain ranges. Since the 1990s, there has been a rapid increase in potato processing, which accounts for 12 to 14 percent of the total harvest.

5. Mexico



The presence of wild potato plants in Mexico indicates that it lies within the potato's area of origin. However, some evidence suggests cultivated varieties were brought there by Spanish conquerors during the 1500s.

Until the early 1960s, potato growing was limited to rainfed areas above 2 000 m in volcanic zones of central Mexico, with annual production of about 300 000 tonnes and yields below six tonnes per hectare. Over the following 20 years, production expanded into irrigated commercial areas in the north and west, where yields today reach 40 tonnes. While the area dedicated to potato has changed little since 1980, average yields have almost tripled since 1961 and production reached a record 1.75 million tonnes in 2007.

6. Chile



Although the potato originated in the Andes, recently uncovered DNA evidence indicates that varieties grown around the world today were developed mainly from Chilean cultivars. While the Andean potato predominated in Europe in the 1700s, germplasm introduced from Chile became predominant in the 1800s.

Chile is the sixth biggest potato producer in Latin America, with a record harvest in 2006 of almost 1.5 million tonnes, on a par with the country's output of maize and wheat. Although potatoes can be grown throughout Chile, production is concentrated in the provinces between Coquimbo, in the north, and Chiloé (including Chiloé Island, where it was already cultivated in pre-Colombian times).

More than half of Chile's potatoes are eaten fresh (consumption is estimated at 51 kg per capita per year, almost unchanged since 1990), while around 10 percent is processed, and 15 percent is used as seed potato. By value, seed potato accounts for almost half of the country's potato exports, destined mainly for Brazil and Venezuela.



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7. Bolivia



Cultivated in the Bolivian Andes for thousands of years, the potato is today the country's most important food crop, along with soybeans. It is grown across some 135 000 hectares of land by an estimated 200 000 farmers, the vast majority of them smallholders who produce mainly for household consumption.

Most farmers rely heavily on traditional varieties that are well adapted to Bolivia's "high climatic risk" (on the *altoplano*, especially, the potato crop is exposed frequently to hail, frost and drought). One such native variety is the hardy "bitter potato", which is cultivated at altitudes as high as 4 300 m and processed into a dried product, *chuño*, that can be stored for up to 10 years.

Over the past decade, Bolivia's potato production has expanded steadily, thanks mainly to higher yields, and stood at 755 000 tonnes in 2007. However, recent growth in imports of wheat and rice is creating strong competition for potato farmers, especially in urban markets.

8. Bolivarian Republic of Venezuela



The northern extensions of the Andes in western Venezuela are home to some 20 species of wild potato and account for most of the country's potato production. In subsistence farming areas between 2 000 and 2 500 m, the potato is the main cultivated crop, while commercial production is concentrated in hilly areas of the state of Lara.

Potato output has grown steadily since the 1960s, and nearly doubled between 1990 and 2007 to a record 450 000 tonnes. Almost all of Venezuela's potatoes are fresh marketed, prompting government efforts to diversify production to varieties suitable for processing. Although per capita consumption is a low 12 kg a year, demand was sufficient to require imports of more than 80 000 tonnes of raw and processed potato in 2005.

Cultivation in the high Venezuelan Andes is threatened by the loss of potato genetic diversity adapted to the region's climatic and ecological conditions. An ongoing programme is encouraging farmers to produce disease-free seed potatoes using local varieties.

9. Ecuador



Ecuador's Andean region lies within the potato's area of genetic diversity, and particularly rich diversity of wild potato is found in central Ecuador. Cultivation is generally undertaken by small farmers with less than five hectares of land, one of which is typically devoted to potato.

Input costs and the higher profitability of other crops has led to marked fluctuations in the country's potato output: over the past decade, total production has fallen from more than 450 000 tonnes to 350 000, while the cultivated area has shrunk from 65 000 ha to around 50 000.

Potato production is becoming more commercially oriented in response to demand from Ecuador's growing urban sector, which accounts for more than 60 percent of the

Potato seller in Antigua,
Guatemala



population. Almost all potatoes produced are consumed locally, with per capita consumption of around 25 kg per year.

10. Guatemala



The highlands of central and western Guatemala offer often ideal conditions for potato growing. At altitudes of between 1 500 and 2 800 m, where average temperatures range from 7°C to 25°C, farmers can harvest potatoes within 100 days of planting, and in frost-free irrigated areas, tubers are cultivated throughout the year.

As a result, Guatemala ranks as Central America's leading potato producer, with a record harvest in 2007 of 300 000 tonnes. Average yields are estimated at more than 27 tonnes per hectare, second only to Argentina in the Latin American region.

The potato has become a valuable cash crop for small farmers, who grow it mainly for sale to urban areas and for export to neighbouring countries. However, Guatemala's potential as a potato producer is constrained by a shortage of certified planting material and fragmentation of supply chains. Recently, the government approved importation of seed potato from Argentina and is promoting the creation of small-scale potato producers' associations.

11. Cuba



The first reference to potato in Cuba dates from 1798, when a land-owner complained about a shortage of suitable seed potato. In fact, the lack of varieties adapted to Cuba's tropical island climate discouraged generations of farmers from growing the tubers.

Since the 1970s, production has increased steadily thanks to the use of seed potato imported from France and the Netherlands, which can be reproduced locally for up to three consecutive years. Cuba's potato output reached a record 370 000 tonnes in the year 2000 and, since then, annual harvests have averaged more than 300 000 tonnes.

Yields have doubled since 1990. Today, per hectare output is more than 24 tonnes, amongst the highest levels in Latin America and 50 percent higher than the world average. Production is concentrated in areas around the capital, Havana, and is used mainly for French fries. Annual per capita potato consumption is around 30 kg.