


Lentil

Lentil	
	
Lentils	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Fabales
Family:	Fabaceae
Subfamily:	Faboideae
Tribe:	Vicieae
Genus:	<i>Lens</i>
Species:	<i>L. culinaris</i>
Binomial name	
<i>Lens culinaris</i> Medikus	

The **lentil** (***Lens culinaris***) (International Feed Number, 5-02-506) is an edible pulse/bean. It is a bushy annual plant of the legume family, grown for its lens-shaped seeds. It is about 40 centimetres (16 in) tall and the seeds grow in pods, usually with two seeds in each.

Background

Lentils have been part of the human diet since the aceramic (pottery nonproducing) Neolithic times, being one of the first crops domesticated in the Near East. Archeological evidence shows they were eaten 9,500 to 13,000 years ago.^[1]

Lentil colors range from yellow to red-orange to green, brown and black.^[1] Lentils also vary in size (e.g. Masoor lentils, shown in photos here), and are sold in many forms, with or without the skins, whole or split.



Lentil plants in the field before flowering

Types

- Brown/Spanish pardina
- French green/puy lentils (dark speckled blue-green)
- Green
- Black/beluga
- Yellow/tan lentils (red inside)
 - Red Chief (decorticated yellow lentils)
- Eston Green (Small green)
- Richlea (medium green)
- Laird (large green)
- Petite Golden (decorticated lentils)
- Masoor (brown-skinned lentils which are orange inside)
 - Petite crimson/red (decorticated masoor lentils)
- *Macchiados* (big Mexican yellow lentils)

The seeds require a cooking time of 10 to 40 minutes, depending on the variety — shorter for small varieties with the husk removed, such as the common red lentil — and have a distinctive, earthy flavor. Lentils are used throughout South Asia, the Mediterranean regions and West Asia. They are frequently combined with rice, which has a similar cooking time. A lentil and rice dish is referred to in western Asia as *mujaddara* or *mejadra*. Rice and lentils are also cooked together in *khichdi*, a popular dish in the Indian subcontinent (India and Pakistan); a similar dish, *kushari*, made in Egypt, is considered one of two national dishes. Lentils are used to prepare an inexpensive and nutritious soup all over Europe and North and South America, sometimes combined with some form of chicken or pork.

Dried lentils can also be sprouted by soaking in water for one day and keeping moist for several days, which changes their nutrition profile.

Lentils with husk remain whole with moderate cooking; lentils without husk tend to disintegrate into a thick purée, which leads to quite different dishes.^[2]

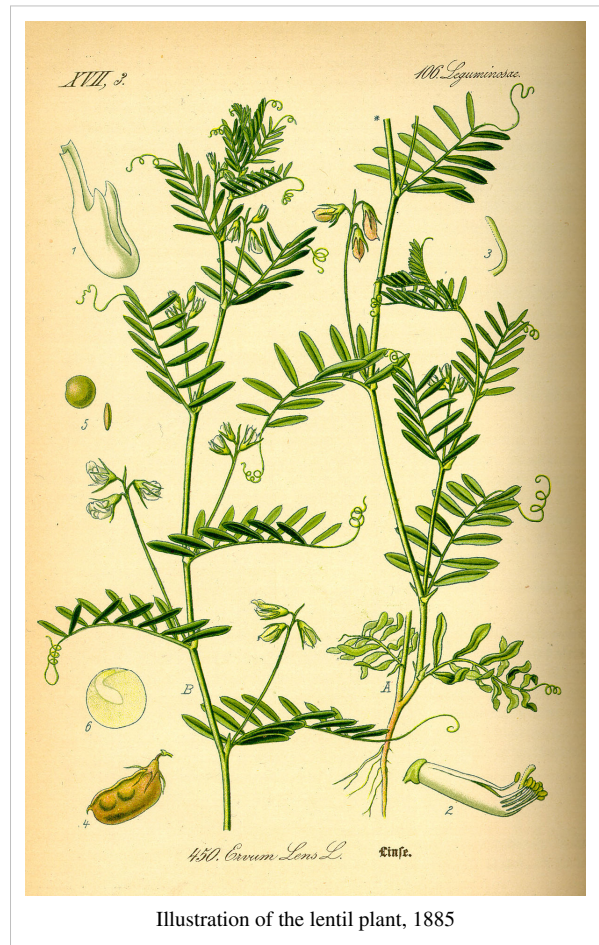


Illustration of the lentil plant, 1885



Red and brown comparison

Nutritional value and health benefits

Lentils, raw (dry weight)

Nutritional value per 100 g (3.5 oz)	
Energy	1,477 kJ (353 kcal)
Carbohydrates	60 g
- Sugars	2 g
- Dietary fiber	31 g
Fat	1 g
Protein	26 g
Water	10.4 g
Thiamine (vit. B ₁)	0.87 mg (76%)
Folate (vit. B ₉)	479 µg (120%)
Calcium	56 mg (6%)
Iron	7.54 mg (58%)
Magnesium	122 mg (34%)
Phosphorus	451 mg (64%)
Potassium	955 mg (20%)
Sodium	6 mg (0%)
Zinc	4.78 mg (50%)
Percentages are relative to US recommendations for adults. Source: USDA Nutrient Database ^[3]	

With about 30% of their calories from protein, lentils have the third-highest level of protein, by weight, of any legume or nut, after soybeans and hemp.^[4] Proteins include the essential amino acids isoleucine and lysine, and lentils are an essential source of inexpensive protein in many parts of the world, especially in West Asia and the Indian subcontinent, which have large vegetarian populations.^[5] Lentils are deficient in two essential amino acids, methionine and cysteine.^[6] However, sprouted lentils contain sufficient levels of all essential amino acids, including methionine and cysteine.^[7]

Lentils also contain dietary fiber, folate, vitamin B₉, and minerals. Red (or pink) lentils contain a lower concentration of fiber than green lentils (11% rather than 31%).^[8] *Health* magazine has selected lentils as one of the five healthiest foods.^[9] Lentils are often mixed with grains, such as rice, which results in a complete protein dish.

Lentils also have antinutritional factors, such as trypsin inhibitors and relatively high phytate content. Trypsin is an enzyme involved in digestion, and phytates reduce the bioavailability of dietary minerals.^[10] The phytates can be reduced by soaking the lentils in warm water overnight.

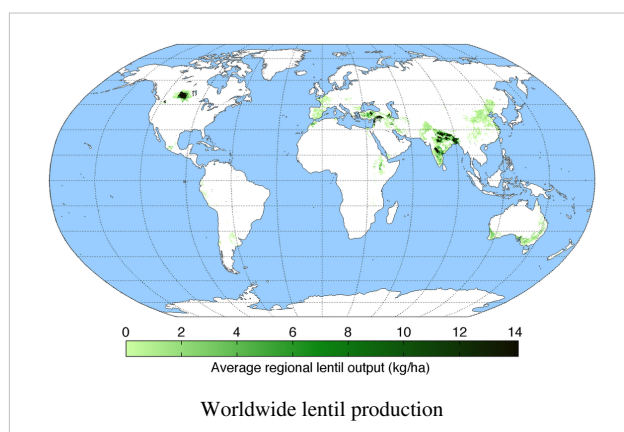
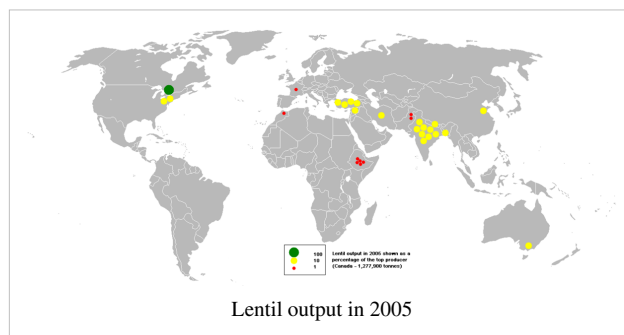
Lentils are a good source of iron.^[11]

Production

Lentils are relatively tolerant to drought, and are grown throughout the world. The FAO reported that the world production of lentils for calendar year 2009 was 3.917 million metric tonnes, primarily coming from Canada, India, Turkey and the United States.

About a quarter of the worldwide production of lentils is from India, most of which is consumed in the domestic market. Canada is the largest export producer of lentils in the world, and Saskatchewan is the most important producing region in Canada. Statistics Canada estimates that Canadian lentil production for the 2009/10 year is a record 1.5 million metric tonnes.^[12]

The Palouse region of eastern Washington and the Idaho Panhandle, with its commercial center at Pullman, Washington, constitute the most important lentil-producing region in the United States.^[13] Montana and North Dakota are also significant lentil growers.^[1] The National Agricultural Statistics Service reported United States 2007 production at 154.5 thousand metric tonnes.



Top ten lentil producers – 2009		
Country	Production (tonnes)	Footnote
Canada	1,510,200	
India	950,000	
Turkey	302,181	
United States	265,760	
Australia	143,000	
Ethiopia	123,777	
China	120,000	
Syria	102,461	
Iran	83,985	
Bangladesh	60,537	
World	3,917,923	A

No symbol = official figure, P = official figure, F = FAO estimate, * = Unofficial/semiofficial/mirror data, C = Calculated figure A = Aggregate (may include official, semiofficial or estimates);

Source: Food And Agricultural Organization of United Nations: Economic And Social Department: The Statistical Division ^[14]

Current United States production numbers can be found at the NASS database here ^[15] by selecting the desired items. Lentils can be used for stuffing and are very useful as of their softness.

In culture

Lentils are mentioned many times in the Hebrew Bible, the first time recounting the incident in which Jacob purchases the birthright from Esau with stewed lentils (a "mess of pottage").^[16] In Jewish mourning tradition, they are considered as food for mourners, together with boiled eggs, because their round shape symbolizes the life cycle from birth to death.

Lentils were the main ingredient in the diet of ancient Iranians, who consumed lentils daily in the form of a stew poured over rice.

Lentils are also commonly used in Ethiopia in a stew-like dish called *kik*, or *kik wot*, one of the dishes people eat with Ethiopia's national food, *injera* flat bread. Yellow lentils are used to make a nonspicy stew, which is one of the first solid foods Ethiopian women feed their babies.

In India, lentils soaked in water and sprouted lentils are offered to God in many temples. It is also a practice in South India to give and receive sprouted peas by women who perform Varalakshmi Vratam. It is considered to be one of the best foods because the internal chemical structures are not altered by cooking.

In Shia narrations, lentils are said to be blessed by seventy Prophets including Jesus and Mohammed.^[17]

In Italy, eating lentils on New Year's Eve traditionally symbolizes the hope for a prosperous new year, most likely because of their round, coin-like form.

In "Cinderella", one of Grimm's Fairy Tales, Cinderella's stepmother assigns to Cinderella the task of fishing lentils out of ash. If she succeeds, she may go to the ball.

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- [17] Jesus through Shiite Narrations, Chapter: Preaching of Jesus. No. 63 http://www.al-islam.org/jesus_shiite_narrations/21.htm

Further reading

- Alan Davidson, *The Oxford Companion to Food*. ISBN 0-19-211579-0
- S S Yadav et al. *Lentil: An Ancient Crop for Modern Times*. (2007). Springer Verlag. ISBN 9781402063121.

External links

- Multilingual taxonomic information from the University of Melbourne (<http://www.plantnames.unimelb.edu.au/Sorting/Lens.html>)
 - Crop Wild Relatives **Gap Analysis** Portal (<http://gisweb.ciat.cgiar.org/GapAnalysis/?p=271>) reliable information source on where and what to conserve *ex-situ*, regarding **Lens** gene pool
 - All types of lentils & uses (<http://www.chieftainwildrice.com/products/beans-lentils/lentils>)
 - Lentils - Country Production, Consumption, Exports, and Imports Statistics (<http://www.indexmundi.com/en/commodities/agricultural/lentils/>)
 - Alternative Field Crops Manual: Lentil (<http://www.hort.purdue.edu/newcrop/afcm/lentil.html>)
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