



The among underutilised legume crops, **Horse gram** is of **immense medicinal value** in treating the day-to-day ailments and meeting the nutritional requirements which other conventional legume crops may fail to provide.

Moreover, the amount of land available for fodder production has been diminishing and consequently the livestock is put to a huge hardship due to lack of total feed and fodder.

A net shortfall of **35.6% green fodder, 10.95% dry crop residues** and **44% concentrate feed** ingredients exists right now. **The development of high-quality fodder is especially crucial to cattle because feed accounts for 60-70 % of the cost of milk production.** This is where the role of underutilised legumes is important to support lack of quality fodder particularly, where other fodder crops may fail to sustain.

Legume that prevent Cancer, destroy Kidney Stone and many more....

Horse gram

Previously, only **tribal people** used to consume sprouted seeds for excellent nutritional benefits.

Due to risen health consciousness sprouts and dal have become common among the urban class people as well.

Considering ethnomedicinal value, as mentioned in classical Indian texts like **Charaka Samhita** and **Sushruta Samhita** the seeds of horse gram are traditionally used for medicine preparations to **treat urinary stones ("gahot" meaning to destroy kidney stones, abnormal menstrual cycles, piles, worms, obesity, tooth calculus, extracts phlegm, common cold, throat infection, fever** and is known to generate body heat suitable during winter days. The seed extract is known to **cure gastritis, excessive postpartum bleeding, rheumatism, coronary heart disease, diabetes** etc..

Source : *Legume Research, Volume 46 Issue 2 (February 2023)* : 127-133



An underutilized nutraceutical pulse crop: a review
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4397296/>
 NLM USA.gov

Greatly protects one from getting heart attack
<https://pubmed.ncbi.nlm.nih.gov/27091200/>
 NLM USA.gov



Horse gram

Based on various pre-historic cultivation evidences, **Horse gram** is native to tropical southern Asia and has been found in archaeological **sites in India, since 2500 BC**. It was probably first domesticated in India. The crop is now placed in genus *Macrotyloma* by Verdecourt in 1982 and known as ***Macrotyloma uniflorum*** (Fabaceae) but it was formerly known as "*Dolichos biflorus* Linn".

While Horse gram (*M. uniflorum*) is widely distributed in Asia, Africa and Australia, its close relatives, i.e., *M. ciliatum* are common in Asia and Africa, *M. axillare* in Australia and other species under genus *Macrotyloma* are sparsely distributed in Africa (Dikshit et al., 2013).

It is a self-pollinated annual herb; bears trifoliate leaves of **2.5-5.0 cm**, produces light yellow flowers and can attain a height of **30-35 cm**. The crop duration is **120-150 days**. Each pod contains five to seven seeds of **3-6 mm** length with light red to brown or mottled colour.



Horse gram Plants



Horse gram Pods



Horse gram Flower

Take care of your Health



Rich in polyphenols, flavonoids, proteins and low fat healthier for heart

KEEPS HEART HEALTHY:

According to established medical science, oxidative damage caused by free radicals plays a causative role in ageing and leads to diseases including several heart diseases. Raw horse gram is particularly rich in polyphenols, flavonoids and proteins, the major antioxidants. It is also low in fat and high in carbohydrate content, making it healthier for the heart. **Recommendations for plant-based dietary patterns have traditionally centered on replacing animal-source foods with plant-based whole foods such as legumes and nuts.** From [American Heart Association](#)



Horse gram seeds have the ability to reduce high blood sugar

INSULINE RESISTANCE

Scientists from the Indian Institute of Chemical Technology have found that unprocessed, raw horse gram seeds have the ability to reduce high blood sugar following a meal, by slowing down carbohydrate digestion and reducing insulin resistance by inhibiting protein-tyrosine phosphatase 1 β . This makes it an extra diabetic-friendly food.



Provide immediate relief and help manage breathing problems

ASTHAMA RELIEF

A common Ayurvedic prescription for asthmatic patients is to consume the paste of boiled horse gram and pepper, which aids in reducing cough, cold and congestion. Although not a cure for asthma, it has been known to provide immediate relief and help manage breathing problems



Avoiding the formation of kidneys stones by use of Horse gram on regular diet

REMOVE KIDNEY STONE :

Due to its diuretic properties, horse gram is very effective in assisting in the removal of kidney stones. In addition, making horse gram a part of your regular diet will aid in avoiding the formation of stones in the kidneys, as horse gram contains certain compounds that make these stones soluble. **Source :** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4397296/>



Foods rich nutrients helps optimize the immune system's

BOOST ENERGY & IMMUNITY :

Rich in iron and Vitamin C, horse gram has the power to increase hemoglobin levels and act as an immunity booster. A superabundance of proteins helps to maintain muscle strength and muscle mass.



Well known diuretic Horse gram effective in increasing urine flow

HELPS URINARY DISCHARGE :

In Ayurveda, horse gram is a well-known diuretic and is reputed to be effective in increasing urine flow. For this purpose, horse gram soup can be consumed twice a day for four weeks to show visible results



Horse gram have anti-ulcer activity due to the presence of phytosterol esters

HEAL ULCERS :

Lipids in horse gram have been shown to have anti-ulcer activity due to the presence of phytosterol esters. Researchers from the "Department of Surgery at Royal Free and University College Medical School, London" found that horse gram is highly beneficial in healing peptic and mouth ulcers.



Horse gram a Truly effective legume for body weight loss (obesity) and fat loss naturally

REDUCED OBESITY:

Horse gram being a excellent source of rich protein and fibre play a key role in weight management. Emerging scientific evidence suggests that a diet rich in high-quality protein is a beneficial dietary strategy to prevent and/or treat obesity. **Source :** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6179508/>

Major nutrients in different milled fractions of Horse Gram (Percent of dry matter)

Data source use QR



Constituent	Cotyledon*	Embryonic axe*	Seed coat*
Moisture	5.8 ± 0.31b	8.4 ± 0.21a	3.9 ± 0.05c
Protein	22.6 ± 1.23a	18.6 ± 0.90b	9.1 ± 0.35c
Fat	1.8 ± 0.06b	2.6 ± 0.04a	0.6 ± 0.02c
Ash	2.9 ± 0.02b	2.2 ± 0.04b	3.8 ± 0.05a
Crude fiber	1.6 ± 0.02c	11.2 ± 0.26b	21.8 ± 1.6a
Total carbohydrate ^a	66.9 ± 2.6b	68.2 ± 1.9b	82.6 ± 1.1a
Soluble sugars	6.4 ± 0.15a	4.8 ± 0.19b	0.96 ± 0.06c
Reducing sugar (mg/100 g)	538.3 ± 16.2a	211.7 ± 6.3b	108.6 ± 5.1c
Non reducing sugar	5.86 ± 0.15a	4.6 ± 0.08b	0.85 ± 0.03c
Dietary fiber	16.7 ± 0.27c	22.6 ± 0.18b	36.4 ± 0.90a
Soluble	1.32 ± 0.04b	3.1 ± 0.04a	3.9 ± 0.05a
Insoluble	15.38 ± 0.16c	19.5 ± 0.28b	32.5 ± 1.1a

Where to get natural horse gram beans



Delicious Horse gram Culinary



Horse gram Veg Curry



Horse gram Pudding

More you need to know

Recently, a collaborative project between the “Indian Agricultural Research Institute” (IARI) and the “United States Department of Agriculture”(USDA) germplasm conservation of horse gram started in 1970 s and they are being maintained by **NBPGR** (National Bureau for Plant Genetic Resources). The project identified several specific traits of interest, such as yellow mosaic resistance of *M. axillare* and also the potential of *M. axillare*, *M. daltonii* and *M. africanum* as valuable leguminous forage crop. Research initiatives such as ICAR’s.

Apart from a few organizations like **GRIN** (Germplasm Resources Information Network), **KARI** (Kenya Agricultural Research Institute) and Australian Tropical Crops and Forage Genetic Resources Centre, global efforts to conserve germplasm of **horse gram** are very much lacking and the crop remains ignored by the researchers as well.

Where to get ➔



Ready to eat canned food



Sprouted Horse gram

Use QR to reach us

