

17 April 2009

Chana Seasonal Report update



For the year 2009

Period	Outlook	Target (Delhi spot)
Medium Term (July-Aug)	Bullish	2600-2650

Current spot market (Delhi) price: 2300

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Chana: Market review

The short term view (bearish with target of 2100-2150) mentioned in earlier report has almost achieved the target and the long term target of Rs2600 is in progress. Chana prices have moved up sharply from first week of April after weakness in March month. Arrivals across spot markets of Madhya Pradesh failed to improve in March despite being peak season, as farmers are in anticipation of better returns in future and reluctant to offload at current levels. Arrivals are seen improving in Rajasthan, where late harvesting commences and extends till April end. Stockiest and mills are active buyers in spot markets on anticipation of higher prices in long term especially during July-August.

Introduction

Chana (*Cicer aritinum* L), also known as Bengal gram or chick pea, is a major pulse crop in India and accounts for 40% of the total pulse production. India is the largest producer of chana in the world, constituting 66% of the production. It belongs to family *Leguminosae* and is a small, multi-branched herbaceous plant. In India, gram is classified into two broad groups—*Cicer aritinum* L. (desi gram or brown gram) and *Cicer kabulium* (Kabuli or white gram). The colour of desi gram ranges from yellow to dark brown; the size is usually small and it is the most widely grown variety in India. On the other hand, Kabuli gram is white coloured and bold. The desi gram variety constitutes 85-90% and Kabuli variety accounts for the remaining 10-15% of world production. It has different names in different states; for instance, it is called chana in the northern states, chhole in Punjab, chola in West Bengal, boot in Orissa, sanagulu in Andhra Pradesh, kadale in Karnataka, kadalai in Tamil Nadu and kadala in Kerala.

Chana is a protein-rich pulse, which supplements cereal-based diets, especially in developing countries where people are either vegetarians or cannot afford animal protein. Seed contains about 20% protein, 5% fat and 55% carbohydrates. The proteins in pulses are rich in lysine and have low sulfur-containing amino acids. It plays a very important role in India as a human diet and eradication of protein malnutrition among children and nursing mothers.

Chickpea is native to the Middle-East and is traditionally grown through the semi-arid regions of India and the Mediterranean. It is the third most important pulse crop after dry bean and pea and constitutes 20% of the world pulse production. The *Sanskrit* name of chana is “Chanaka”, indicating that the crop is being cultivated since ancient times in India.

Chana: Cultivation practices

Chana is “multiple” branched, and plant growth ranges from 8-40 inches. The Kabuli varieties are generally taller than the desi varieties. The plant is deep-rooted and grows well in fertile sandy and loam soils with good drainage. It grows best if the daytime temperature ranges from 21-29°C and night temperature ranges from 18-21°C. The best temperature for germination is 15°C. However, with desi chickpeas, germination will begin at soil temperatures as low as 5°C. Kabuli is more sensitive to cold and should not be sown at soil temperatures less than 10°C. The yields are good in drier conditions and heavy rainfall affects the yield as it is more prone to diseases and excessive

vegetative growth leads to lodging problems. Harvesting is done when the plant becomes yellowish and the pods are matured.

Chana seasonality

Chickpea is a cool season plant, usually grown as a winter crop in India, the Middle East, Australia, and South and Central America. It is cultivated in different seasons across different parts of the world, and the crop season can be seen throughout the year. The crop season begins during September and ends in March-April in the Indian sub-continent. On the other hand, in Australia and Canada, sowing starts in April-May and ends in November-December.

Figure 1: Chickpea seasonality

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
India												
Turkey												
Pakistan												
Australia												
Canada												

Sowing
 Growth stage
 Harvesting

Chana: World scenario

Chickpea is the world's third most-important food legume crop. It is probably used in more diverse food preparations than any other pulse crop. The world chana production has hovered in the range of 8-9 million tonnes and remained stable around 8 million tonnes in the last 10 years. It is being cultivated on 10-12 million hectares across the globe, mainly in South Asian and Middle Eastern countries. India is the largest producer and constitutes about 64% of the world production. Other major producers are Pakistan and Turkey. More than 90% of the chickpeas are consumed in the countries where they are produced, and developing countries like India and Pakistan import to meet the shortages from countries like Australia and Canada.

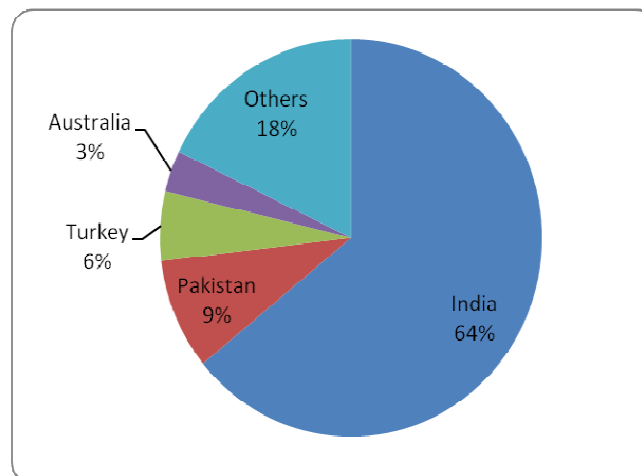
World chana production has improved marginally in the last couple of years with major contribution from India and Australia. The output has touched 9.31 million tonnes in 2007, up 9% from the previous year. The world chana production has shown a CAGR of 2.91% during the current decade.

Figure 2: World—Chana area, production and yield



India has the largest contribution—about 64%—to the global chana output. This legume crop is largely cultivated in the developing countries for human consumption and enjoys 95% share in the world production. Among the major producers, Canada and Turkey produces more of the Kabuli variety, whereas the Asian countries grow more of the desi type. The other major producers are Pakistan, Turkey, Australia and Canada. Although Pakistan is the second-largest producer of chana, it is a net importer due to huge consumption demand.

Figure 3: Major chana producers



Chana: Indian scenario

Chana is a major pulse crop in India, contributing about 40% of the total pulses production of 15 million tonnes. Since ancient times, pulses have a special value in human nutrition, with a combination of cereals, in a vegetarian country like India. In recent times, the importance for pulses has declined due to high diversification of food habits into vegetables and ready-to-eat foods.

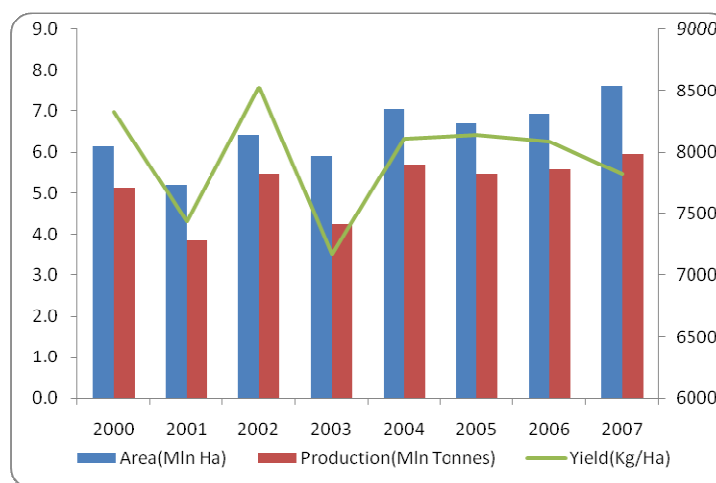
Chana is largely cultivated in northern and central parts of India, where it is used in diet as “dal” along with cereals. It is not a major crop in the southern states, except Andhra Pradesh and northern

Karnataka. Chana is sown during October-December, towards the end of the north-east monsoon, when soil moisture is left over from the rainfall. Since chana is cultivated in the post-monsoon period in India, the rainfall pattern does not have a direct implication on the production. Although moisture content in the soil depends on the rainfall, the after-monsoon climatic conditions, mainly cold waves or hot waves in northern states, will affect the output. It is observed that the annual rainfall amount and the chana output have a low correlation co-efficient of -0.03.

Early sowing is done in Andhra Pradesh, Karnataka and Maharashtra. However, late sowing activities can be seen in Madhya Pradesh and Rajasthan towards December. The soil moisture and dew factor during the winter season in the northern states will help the crop to grow. The early crop harvesting takes place during January-February in Andhra Pradesh, Karnataka and Maharashtra, while harvesting is done in Madhya Pradesh and Rajasthan in February-March. The production of chana has been stagnant for the last 15 years in the absence of increase in area and yield. That is because the cultivation practices have been witnessing a shift in major producing areas—from pulses cultivation to cereals and vegetables.

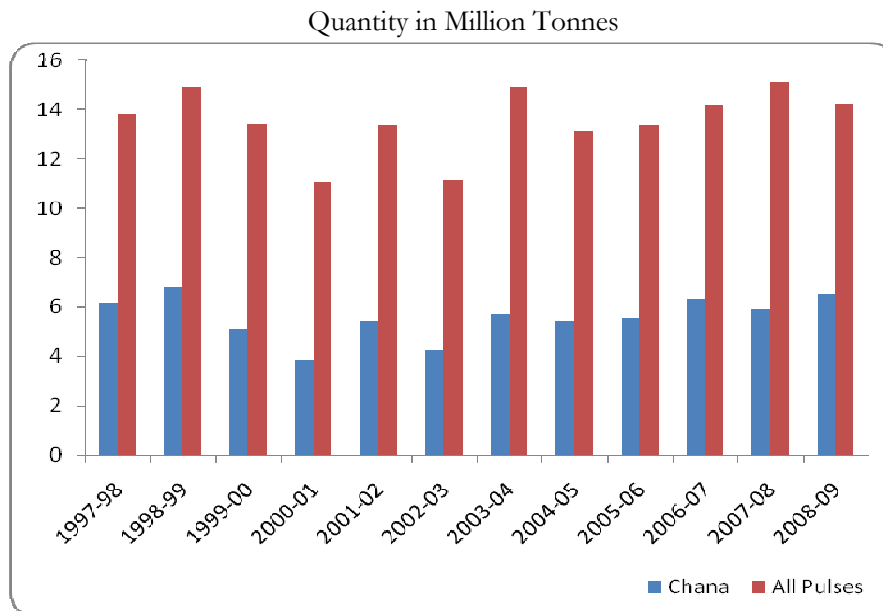
Area, production and yield of chana have almost been stagnant in the last decade. The average area, production and yield were 6.5 million hectares, 5.2 million tonnes, and 0.79 tonnes respectively. The area and production has shown a CAGR of 3.97% and 3.93%, respectively, since 2000. The chana yield has come down in recent years (showing negative CAGR of 0.04% in the last eight years), with no major technological breakthrough to bring in new varieties.

Figure 4: India—Chana area, production and yield



Chana contributes to 40% of the total domestic pulses output. Production of pulses, in general, has almost been stagnant in the last 10 years, at about 12-14 million tonnes, recording a CAGR of 0.63% during this period. According to the agriculture department, chana production stood at 5.91 million tonnes in 2007-08.

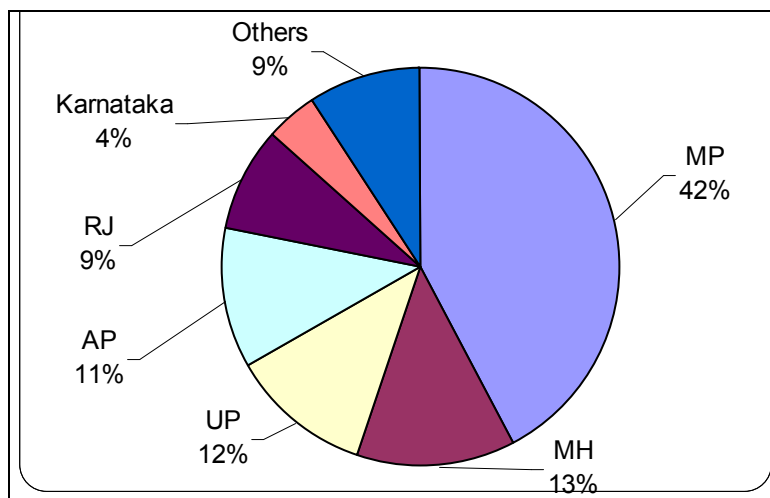
Figure 5: Pulses and Chana production in India



Source: Agriculture Department.

The major producing states in India are Madhya Pradesh, Maharashtra, Uttar Pradesh, and Rajasthan, which together constitute nearly 70% of the total production. Different varieties of chana are produced in different states. The prominent varieties are Rajasthan desi, Madhya Pradesh Kantawala, Maharashtra desi, Andhra Pradesh Annigeri etc.

Figure 6: Chana—Production share of states



Indian imports

Besides being the largest producer of chana, India is also the largest consumer and importer. Developing countries, including India, Pakistan and Bangladesh, import more than 38% of the world's chana exports. India purchased about 16% of the total world exports in 2007-08. Indian

imports have fluctuated in recent times as it depends mostly on domestic output and government policy on imports. The country imported a record quantity of 5.17 lakh tonnes in 2001-02, but this figure declined to 1.46 tonnes in 2007-08. The major exporters of chana to India are Australia, Myanmar and Tanzania, which account for more than 90% of the total import quantity.

Figure 7: Indian imports

Lakh tonnes

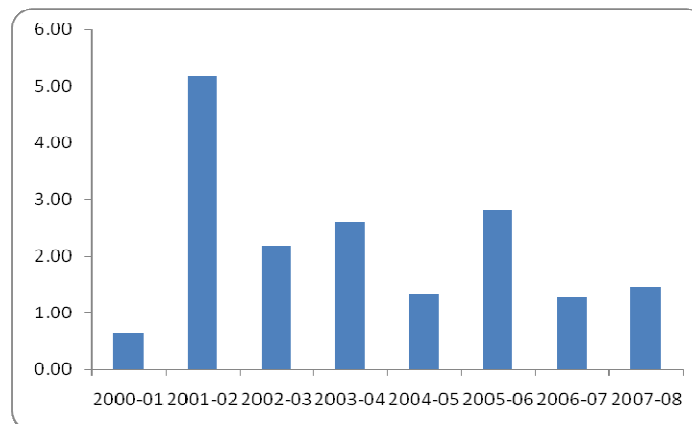


Figure 8: Major chana importers (2007-08)

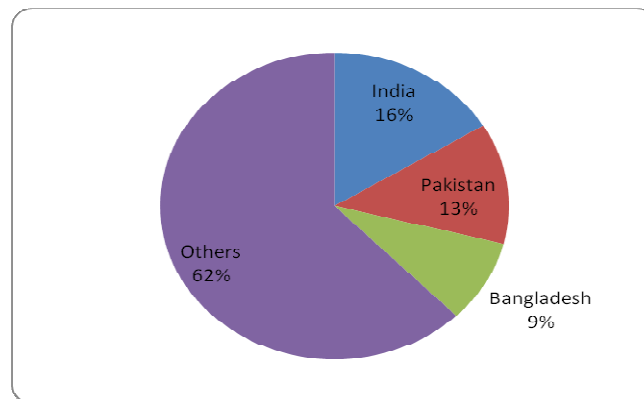
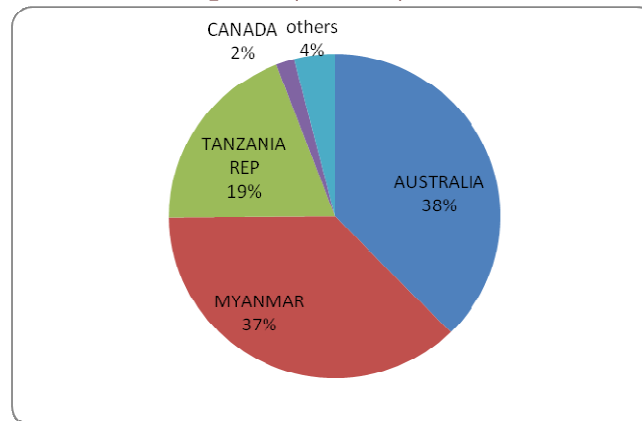


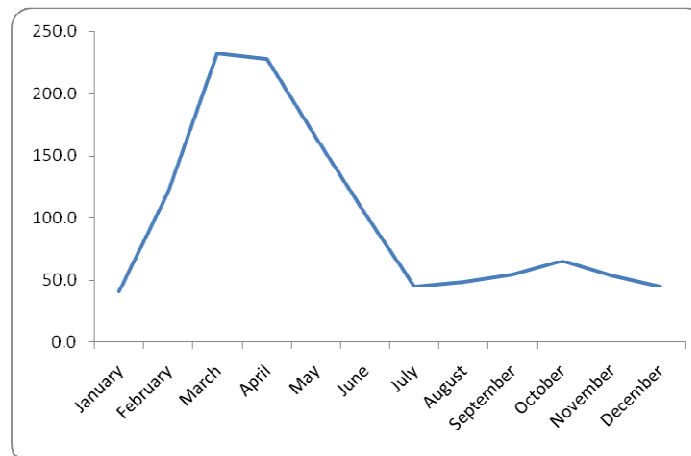
Figure 9: India’s sources of chana imports (2007-08)



Chana: Arrivals pattern

Arrivals differ from region to region according to the sowing pattern. It takes 2-3 weeks for processing and for arrivals to happen post the harvesting. Peak arrivals can be seen during February-April across the country. The arrivals data analyzed in the Indore market indicate a skewed movement during February-March. The arrivals decline from May onwards and we see lean arrivals during July-September. There is a marginal upmove in arrivals during November and December as traders dump all their stocks into the market due to better prices during the sowing season. Traders also liquidate their stocks during this period as new arrivals next year are preferred over old stocks.

Figure 10: Chana (Indore)—Seasonality of arrivals



Chana: Price analysis

The chana market is spread across the country, but major markets are located in the central and northern states. The major trading centers are Delhi, Indore, Jaipur, Mumbai, Latur, etc. Since it is one of the largest agricultural crops spread across a vast area, myriad factors from across the country will play a role in fair price determination. The major price influencing factors are:

- Rainfall pattern and moisture content in the soil
- Post-monsoon weather factors like cold and hot waves
- Area sown and the total output in the country
- Arrivals pattern in the major markets
- Demand from dal millers, retailers and consumers
- Imports from Australia and Myanmar
- Government policies, especially on imports and MSP

Spot prices (NCDEX Delhi)

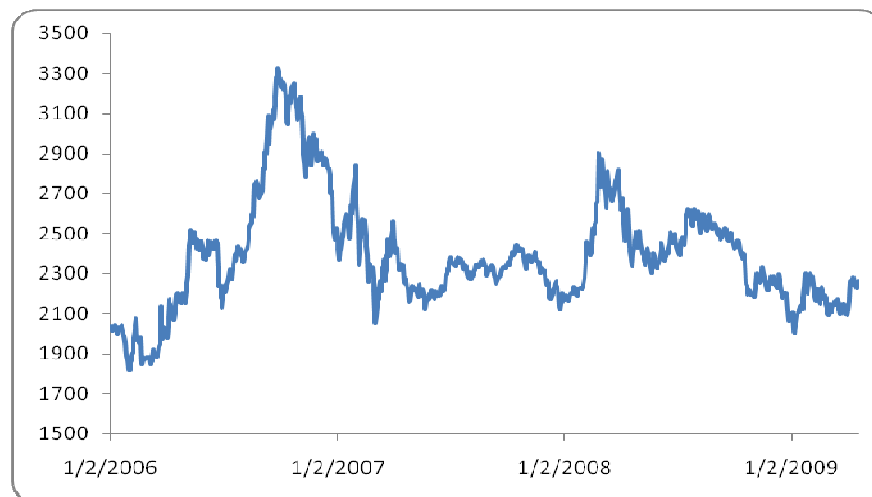
Chana prices (NCDEX spot rate at Delhi) witnessed the beginnings of a bull-run from early 2006, along with most agricultural commodities. The unprecedented rally continued until prices hit Rs3,300-per-quintal levels from as low as Rs1,800 per quintal. The rally came to an end by end-October 2006 and prices declined slowly in the first 2-3 months of 2007 due to commencement of new crop produce. The government banned futures trading in pulses like tur and urad in January 2007, which had some negative impact on chana prices as well. The demand for most pulses declined after prices recorded all-time highs in 2006, leading to a huge decline in prices in 2007.

Thereafter, chana prices stabilized during the second half of 2007 and 2008, except the short-term gain to Rs2,900 level during February-March 2008. Trading in chana futures was banned in March 2008, which, too, had a significantly adverse impact on domestic prices. Chana spot prices witnessed huge volatility during 2006, with a move of over Rs1,500 per quintal. The prices of chana never fell below the Rs2,000-per-quintal mark after 2007, but at the same time traded below Rs3,000 per quintal.

Table 1: Chana—Price movement in last three years (Delhi spot)

	Chana prices (Delhi spot)		
	2006	2007	2008
Average	2466	2329	2431
Max	3326	2839	2900
Min	1820	2052	2063

Figure 11: Chana—NCDEX spot prices (per quintal)



Chana: Current scenario

Area and production estimates for 2008-09

According to the Agriculture Department, the area sown under rabi chana 2008-09 has increased to 85.58 lakh hectares until end-January against 78.29 lakh hectares for the same period in 2007-08. The largest gain in acreage is seen in non-traditional producing states like Uttar Pradesh and Haryana. The area under the largest-producing state, Madhya Pradesh, has increased by 12% followed by 8.1% in Rajasthan. Given the higher acreage, the production is likely to increase in chana rabi 2008-09 compared to last year. However, there were news reports of lower yields in Andhra Pradesh and Maharashtra due to unfavorable weather conditions in the final stages of the crop.

Agriculture Department has estimated chana production for rabi 2008-09 at 65.4 lakh tonnes against last year output of 57.5 lakh tonnes. However, market sources are estimating at 55-58 lakh tonnes. As per our market study, the Chana output is expected to be around 57-58 lakh tonnes, which almost same as that of last year. The government has fixed the MSP for rabi 2008-09 chana at Rs1,730 per quintal, up by 8%, from Rs1,600 per quintal last year.

Table 2: Area estimates for rabi chana 2008-09

	2008-09*	2007-08
Madhya Pradesh	27.12	24.19
Rajasthan	13.89	12.84
Maharashtra	10.49	11.75
Andhra Pradesh	6.2	6.25

*Trade sources.

Table 3: Production estimates for 2008-09

State	Production 2008-09 (lakh tonnes)*
Madhya Pradesh	25
Rajasthan	11
Maharashtra	8
Andhra Pradesh	5
Karnataka	3
Others	5
Total	57

*Trade estimates.

Other factors

As per reports, Government agencies have imported about 13 lakh tonnes during 2008-09, 30 percent of lower than their targets. Prices of other pulses like tur and urad have sky-rocketed in last few months due to lower output in kharif 2008-09. Tur prices have made all time high of Rs4000 per quintal, while urad is trading at Rs2700-2800 per quintal.

Arrivals of rabi chana have improved in Rajasthan with peak season in this state. Daily inflow of 7000-8000 bags has been reported at Bikaner. While, arrivals in Indore market are seen declining with daily inflow of 5000-6000 bags. Overall arrivals may decline from May month and it can provide support to prices.

Price outlook

Although, output of chana is estimated to be marginally higher than last year, prices are likely to remain bullish in coming months mainly due to strong demand during monsoon and festival season. The lower output and firmness in other pulses like urad and tur is expected to support bullish tone in chana prices. Lower import of pulses during 2008-09 and higher import prices with depreciating Rupee are also likely to act as supportive factors.

Price forecast (Delhi spot) for 2009

- The Delhi spot is currently quoting at Rs2,250-2300 per quintal
- July-August forecast: **Rs2,600-2650** per quintal

Strategy in futures market

- Currently NCDEX and MCX May futures are trading around Rs2400 levels
- Long term (5-6 months): Buying on dips in far-month contracts is advised for a long-term target of **Rs2,700-2800** per quintal.

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