



Crop Report – Chilli (Red Peppers)

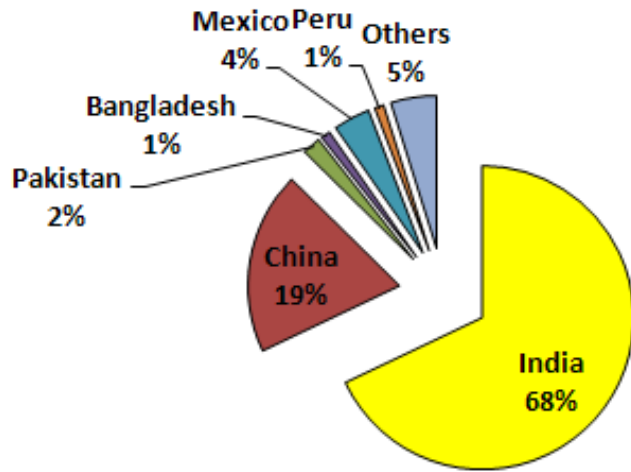
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Griffith Laboratories



Crop Overview

Major Producers of Chilli & Paprika



- ❑ The total production of Chilly & Paprika is in the range of 1.8 to 2 Million MT
- ❑ **India & China contribute close to 87% of the world's production**
- ❑ India is also the largest exporter.

- World Chilly and Paprika production has been increasing steadily mainly due to the increase in the two major growing countries: India & China
- The crop is on the decrease in Europe and Peru
- In India the crop has increased due to several newer growing regions coming into reckoning during the last four to five years.
- Area in China has been increasing in the existing growing regions
- Guntur is the major market in India and determines the price of Chilly for all other domestic markets.
- With the advent of on-line trading the Market has also been used to reckon prices by most of the Importing world.

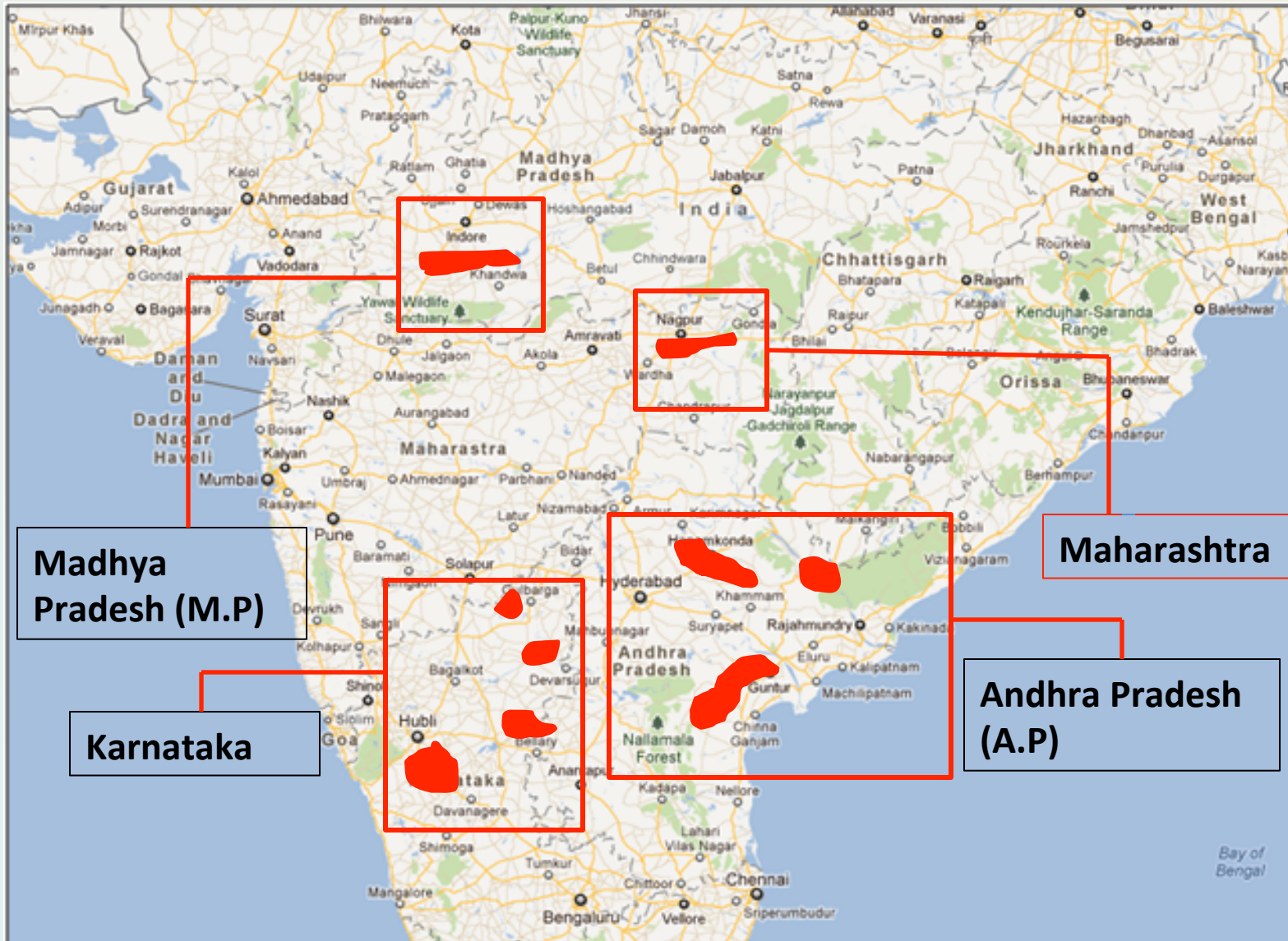
Supply Issues 2013

We now look at the Crop Situation in the major growing areas that contribute to about 85% of the Global Production

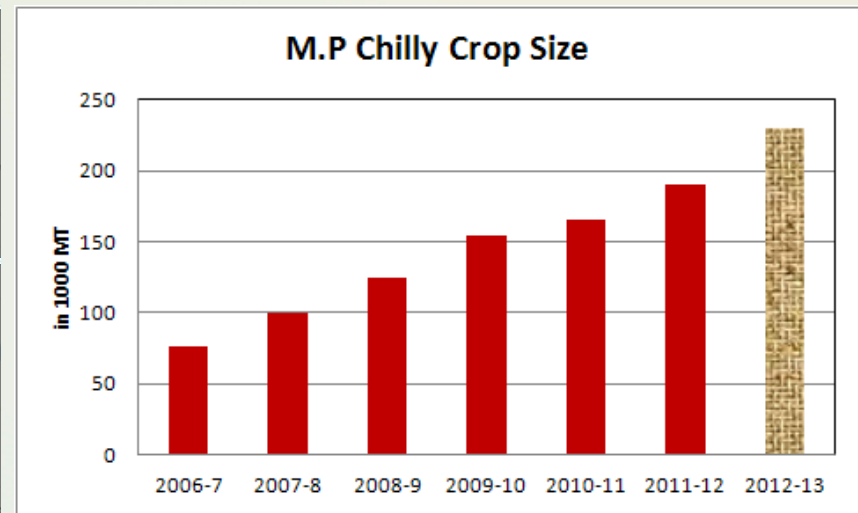
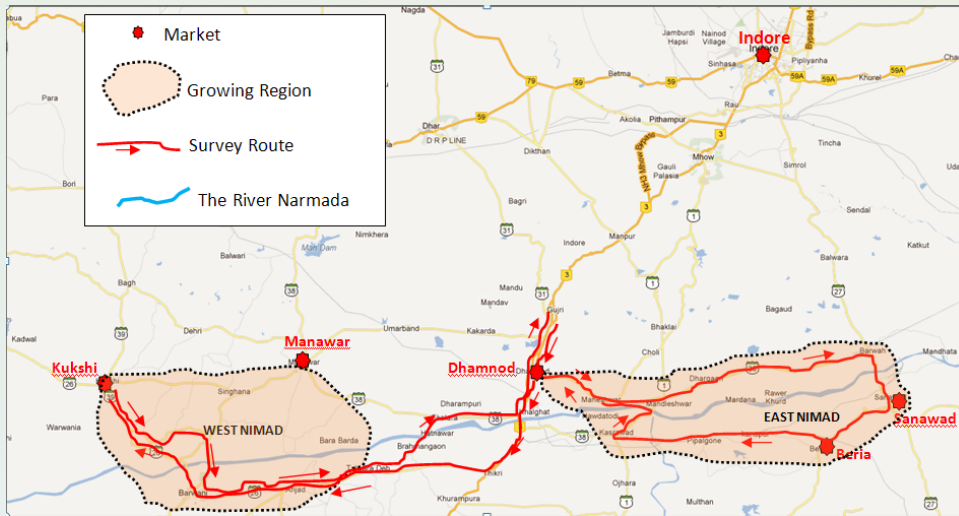
India

China

Major Growing Areas in India



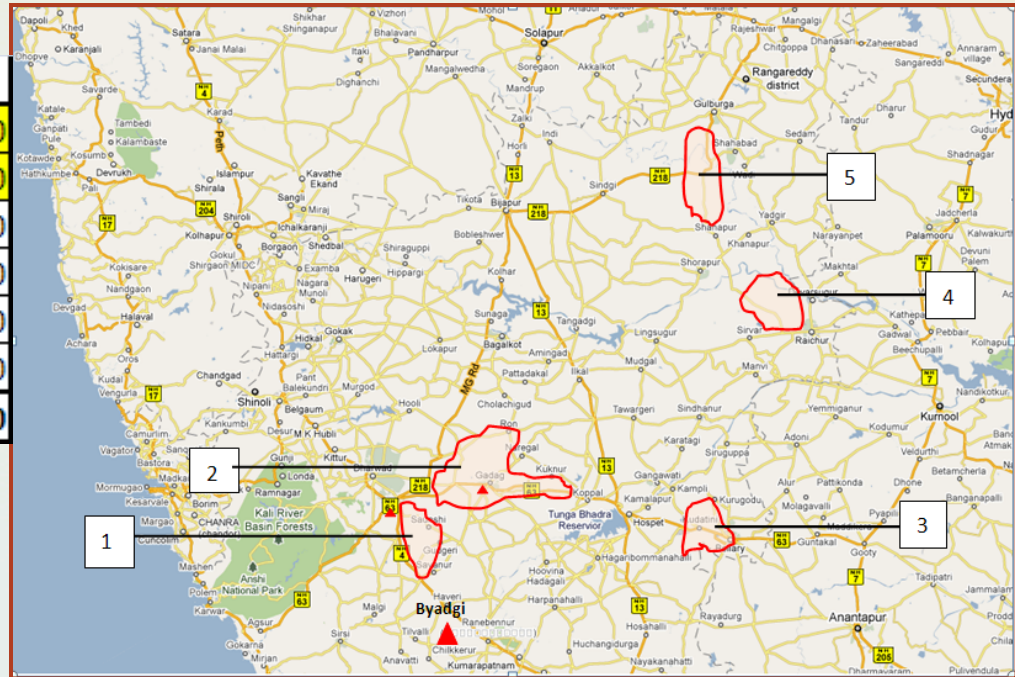
M.P Crop Report



- There are two major growing areas in M.P., East and West Nimad regions
- Based on a survey of the areas in early October, it was estimated that the acreage has increased by 25% on an average compared to the previous year crop of 190000 MT
- However, the yield has been affected by delay in Monsoon as well as untimely rains during the 2nd week of Sept. Which damaged several fields.
- The increase in the area was at the cost of Cotton. Farmers realized better returns during the previous year and went in for an increase in area of Chilly, replacing Cotton
- **The M.P Crop is expected to be to the tune of 232000 MT for the year 2012-13 and the season began in November 2012.**

Crop Report - Karnataka

	Regions	Normal	2011-12	2012-13
1	Byadagi (Kundgol)	12000	16000	4000
2	Byadagi (Annigeri)	21000	36000	9000
3	Bellary	58000	65000	55000
4	Raichur	47000	51000	45000
5	Gulbarga	28000	30000	26000
	Others	18000	22000	21000
	Overall	184000	220000	160000



- Area planted was very poor in the rain-fed traditional area (highlighted in the table) and the crop would not be more than 25% of last year. Also the yields would be poor due to much lower rainfall.

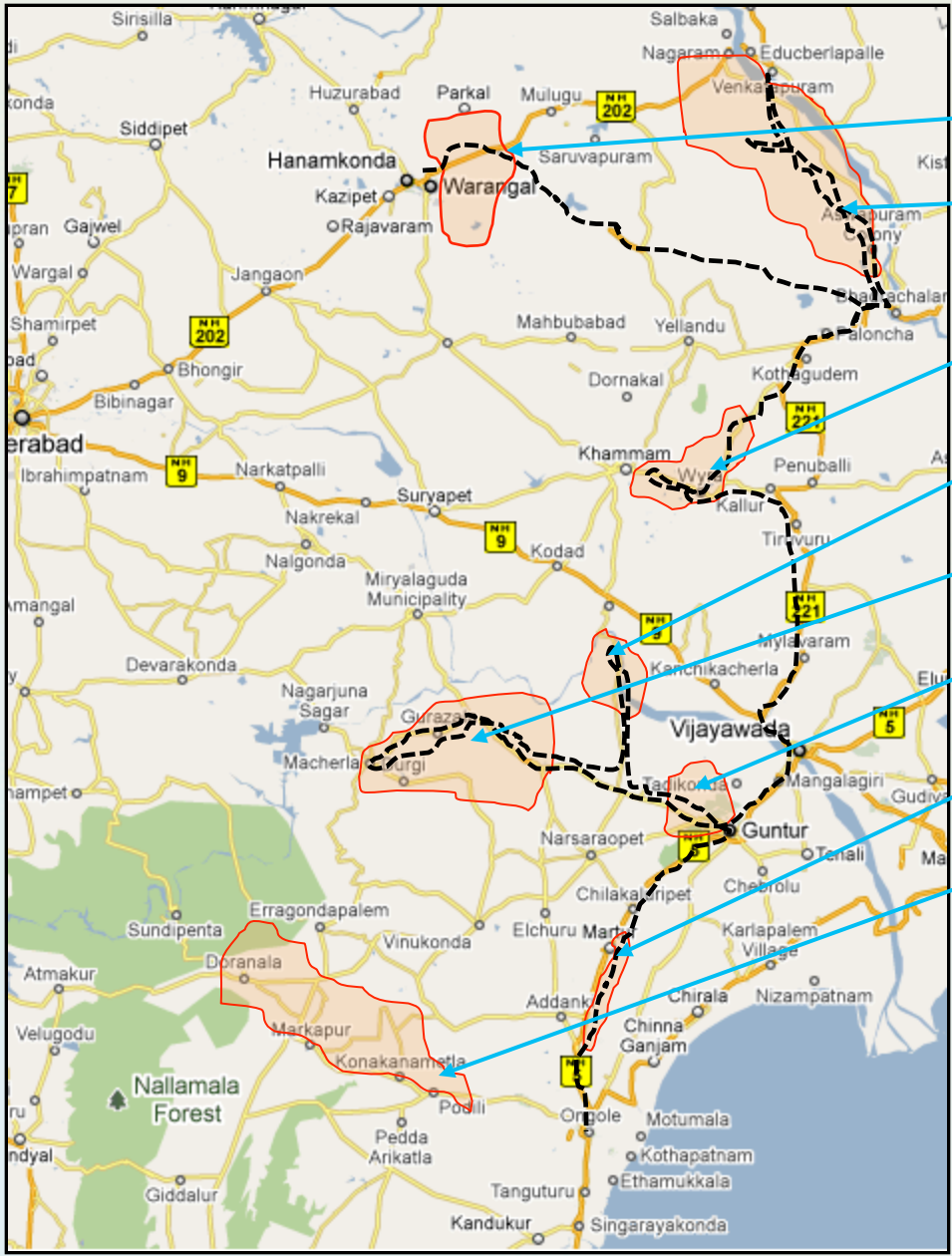
- In the non-traditional areas, the area is down by about 10%, although the crop is doing well.

- A major concern is the availability of water to facilitate a third picking

- Overall there is going to be a shortage of about 30% from this region.

Areas 1 & 2 comprise the “Traditional Growing” Paprika region and is the key source for extracting Oleoresin meeting EU Pesticide Residue and Illegal dyes norms.

This region mainly produces the Indian Paprika which is used for extraction of OR Paprika



1. Warangal

2. Bhadrachalam

3. Khammam

4. Amaravati

5. Palnadu

6. Around Guntur

7. Old Madras Highway

8. Markapur

MAJOR CHILLY GROWING BELTS IN ANDHRA PRADESH

Crop Report – Andhra Pradesh

Production Estimate based on Crop Survey in Feb. 2013

No.	Section of the Growing Region	Normal Yield (MT/Acre)	Normal Crop Size MT	LY Crop Size in MT	Assessment for 2013-14		
					Area Change (%)	Expected Yield (MT/Acre)	Expected Crop (MT)
1	Warangal	2	35000	35000	-20	1.9	26600
2	Bhadrachalam	2	100000	100000	-10	2	90000
3	Khammam	2.5	35000	40000	-10	2	25200
4	Amaravati	2.5	50000	48000	-30	2	28000
5	Planadu	2	150000	160000	-20	1.8	108000
6	Guntur	2	25000	20000	-20	1.8	18000
7	Old Madras Road	2	30000	35000	-30	2	21000
8	Markapur & Dornala	2	100000	120000	-20	1.8	72000
9	Karnool	2.5	35000	35000	-20	2.25	25200
10	Others	2	30000	40000	20	2	36000
	Overall	2.1	590000	633000	-17	1.92	450000

In the most Important Growing Region – State of A.P, which contributes nearly 60% of the chilly grown in India, the crop is lower than normal by about 24% and lower than last year's crop by 29%

Andhra Pradesh – Reasons for Poor Output

Reasons for lower Planted Acreage

- Prices of Chilly fell by almost 33% from Dec. 2011 to June 2012
- Steady Prices for Cotton last year: replaced 15% of Chilly acreage
- Anticipated lower water availability forced farmers to go in for Maize which swallowed another 10% of the acreage out of chilly
- Delayed planting due to unseasonal rains and delayed onset of Monsoon
- Attractive Prices for Chick Pea, which made inroads into 5% of Chilly Area
- Due to large scale Viral disease last years, many farmers choose to move over to Cotton or Maize.

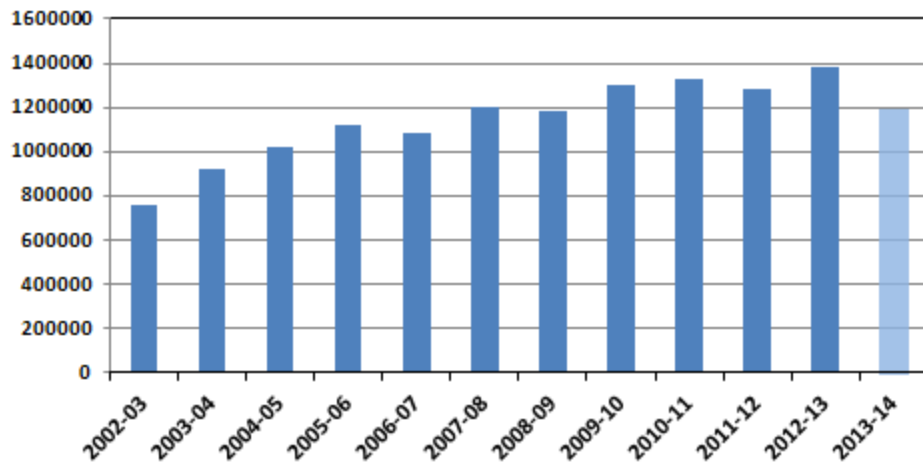
Reasons for lower Yields

- Cyclone Rains in December caused water logging in Chilly fields & due to this several plants died or had to be replaced
- Pest & disease like Whitefly & Virus effect has drastically reduced the yields
- Water shortage due to lower rains & due to this water is available only for first Picking & remaining pickings could be very poor yielders
- Late Planting due to delayed onset of Monsoon has reduced yielding
- Labour is in short supply and large farmers would not be able to provide the best of care to the fields.

Indian chilly Crop Production Estimate

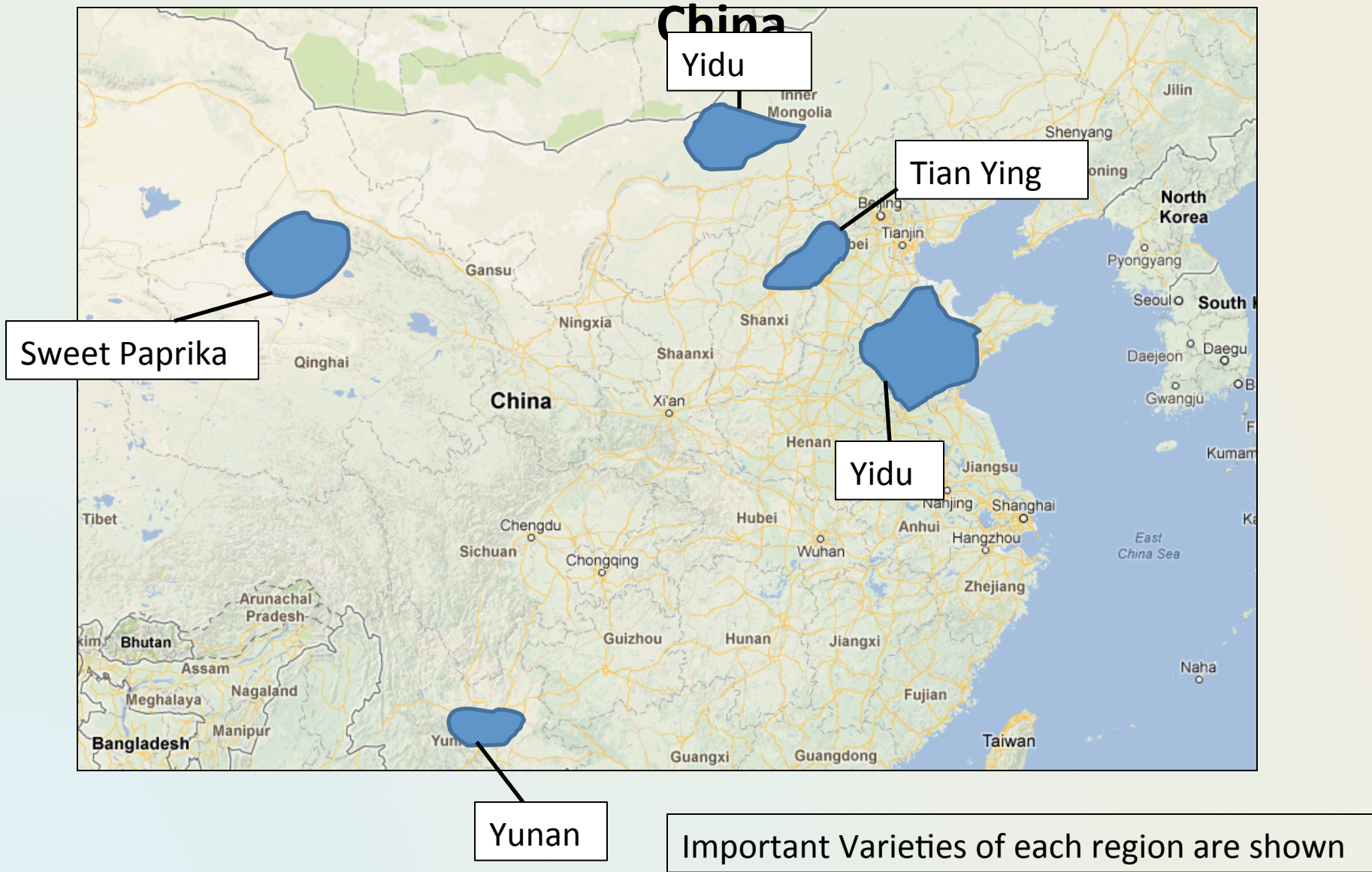
State	2012-13	2013-14	% Change
M.P	190000	232000	19.9
Maharashtra	50000	50000	0.0
Karnataka	220000	160000	-31.6
A.P	633000	450000	-33.8
Others	290000	300000	3.4
Total	1383000	1192000	-14.8

Indian Chilly Production (M.T)



- Based on the Survey, we expect the Chilli Crop of India to be about 15% lower than the previous year.
- The growth of Chilly production has been steady over the past 10 years with several new areas taking up chilli Cultivation.
- **During the current year, two of the major growing regions, namely Andhra Pradesh and Karnataka have been badly affected.**
- However, in the case of M.P the crop has surpassed last years and the crop of 2013-14 would be an all time high here.
- Although the production is lower by 15% compared to the last year, the effect of the lower crop in A.P would be larger than the mere statistic.

Chilli/Paprika Growing Regions in



Chinese Crop Reports

Chinese Sources have been reporting a higher crop for the year 2012-13

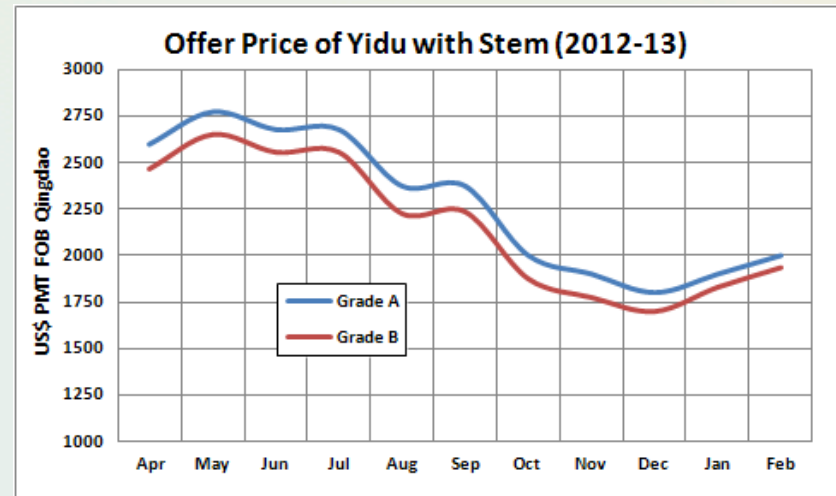
The Chinese prices for both Yidu and Paprika began to fall in anticipation of a much higher crop

The Paprika Crop is expected to be in the range of 45000 MT against a crop of 35000 MT last season.

Similarly Yidu is estimated to be about 250000 MT - higher by about 20% over last year's.

The New Crop arrivals began in October, as usual and the prices continued to rule easy

The availability remained good till Feb. 2013 till the annual Holidays and thereafter the material began moving to Cold stores.



(The above prices are Sale offer prices)

Key Factors Affecting the Markets

The Key Bearish factors

- 20% increase in the M.P crop creating initial pressure on the prices just before opening of the main crop from A.P
- No practice of storing chillies in M.P
- Expected lower exports from India due to good crop in the neighbouring regions
- Higher Chilly Crop in China, helped absorb demand away from India
- Healthy level of stocks currently held in cold storages in India which is about 60000 MT higher than the previous year

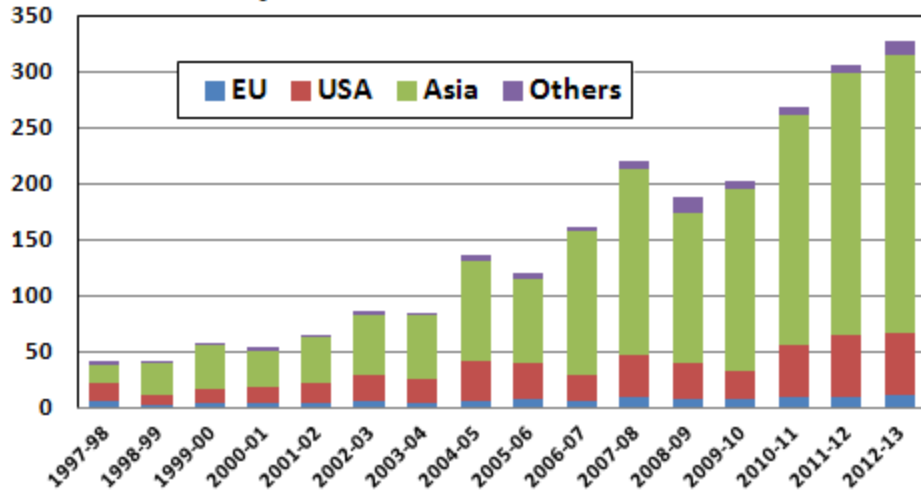
The bearish factors have so far kept the market under check. The Bullish factors are expected to began taking over slowly but surely.

The Key Bullish factors

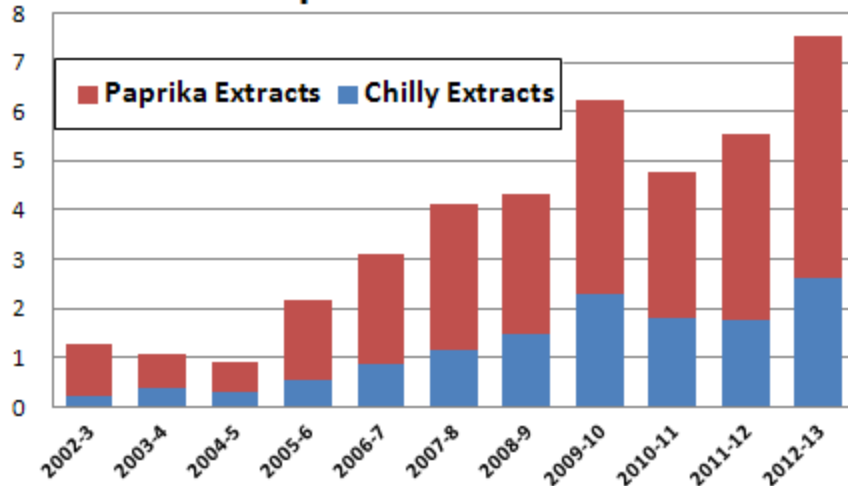
- Poor crops of A.P (Main crop) and Karnataka would impact prices in the post January scenario, when M.P arrivals begin to taper off.
- Good demand for high pungency varieties from Capsicum extractors would influence prices of other varieties. As this is not grown in China, we could see a spurt in demand in later months.
- Unseasonal rains in mid Feb., creates a minor damage to the crop.
- Speculators would jump in at lower price levels as the stocks begin to deplete.
- Unseasonal rains can cause problems up to early May.

Indian Exports

Exports of Chilli from India



Exports of Extracts



- All Quantities are in 1000 MT
- The Exports are steadily on the rise over the last few years.
- The figures of 2012-13 are projections
- One of the key reasons for robust exports during the last 24 months is the depreciation of the Indian Rupee against major currencies
- The low prices of 2012 has helped boost exports for the period 2012-13
- Export would continue to be healthy for 2013-14, but may not surpass the current year's figures.

Material Balance

Estimated Materias Balance table (Qty in M.T)

Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Crop Size	1200000	1180000	1300000	1330000	1280000	1383000	1192000
Carry Forward Stock	250000	290000	300000	320000	292000	300000	365000
Imports	878	1168	1683	821	2205	1568	2500
Imports Equv. Of OR	1780	11480	18320	14180	18560	15627	16000
Exports	219718	188044	203153	270020	307836	275000	275000
Equivalent of OR Exports	41330	43330	62420	47770	55280	56380	55000
Domestic Consumption	941610	951274	1034431	1055211	929649	1003815	950500
Closing Stock	250000	300000	320000	292000	300000	365000	295000

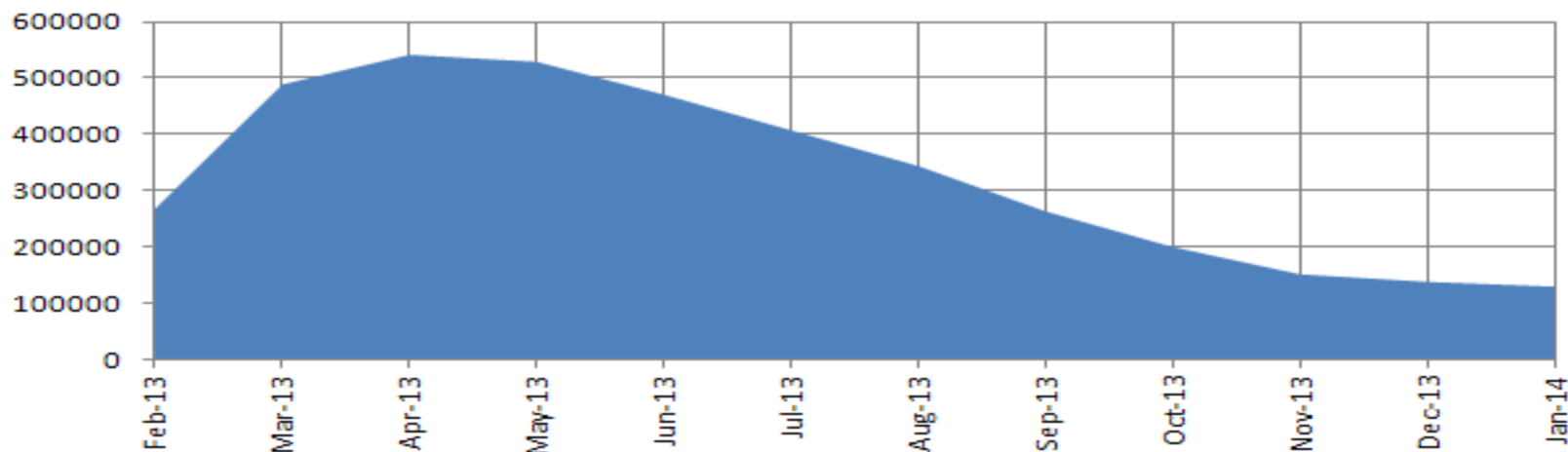
- The 2013-14 Season is expected to end with a much lower closing stock
- The Exports are expected to be a the same level as the last season.
- Domestic consumption on an overall basis could be lower due to higher level of prices compared to the last year.
- However, to get a better idea of the impact, we need to estimate the movement within the season.

Note: Domestic Consumption is the off-take from the growing regions.

Supply – Demand Forecast (Month wise) 2013-14

	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Total
Opening Stock	180000	302560	491520	540700	528320	469820	406320	342820	262320	198820	150320	136820	
Production A.P	42560	163960	152680	85120	30000								474320
Production M.P	40000	25000	5000	5000					30000	45000	50000	50000	250000
Karnataka	60000	70000	15000	5000							25000	30000	205000
Others	40000	60000	15000	10000								5000	130000
Domestic Consumption	75000	100000	100000	75000	50000	40000	40000	60000	75000	75000	80000	85000	855000
Exports	22000	35000	40000	44000	40000	25000	25000	22000	20000	20000	10000	10000	313000
Imports	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	18000
Closing Stock	267060	488020	540700	528320	469820	406320	342820	262320	198820	150320	136820	128320	

Closing Stock Projection (in M.T)



- ✓ The Stock level in the local Temperature Controlled Warehouses would be precarious from August to November 2013.
- ✓ Prices could be under stress during this period as the stored material would be the only source to meet domestic and export demand.

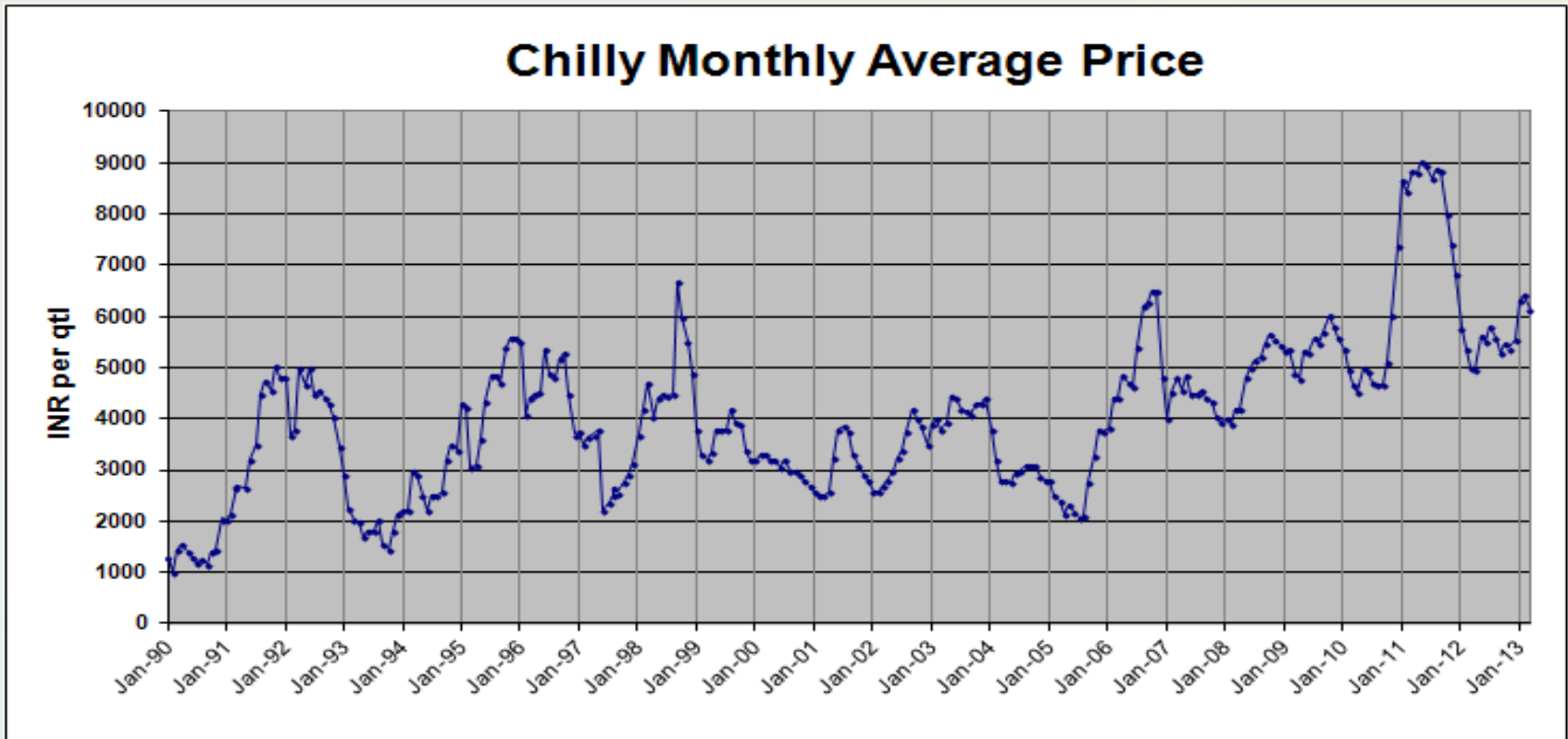
IPM (Integrated Pest Management) Chillies – S&D Analysis

- ❑ During the last year several containers came under USFDA detention due to the presence of Pesticide Residue
- ❑ Currently no Exporter from India is willing to risk sending non-IPM chill to the U.S
- ❑ Other countries too have started implementing the Pesticide Residue and Aflatoxin regulations, although not consistently as in the EC and the US
- ❑ As can be seen in the adjoining table, even if the Supply doubles, there is yet going to be a major gap between demand and supply of IPM chilly.
- ❑ The premium paid to organizers is likely to move up by about US\$ 50 per MT

in MT	Demand		Supply
Strictly Implemented	Europe	7000	15000
	USA	35000	
	ANZ	500	
	Total Demand	42500	
Loosely Implemented	Mayalsia	40000	
	China	12000	
	Others	10000	
	Total Demand	62000	
Total Overall Demand		104500	

Thus the demand for Chillies grown with special care to meet the regulations of EU and US would be in very great demand

Chilli Price Chart Since 1990



The Chilly prices seem to follow roughly a 4 year Cycle.

The price chart has four components

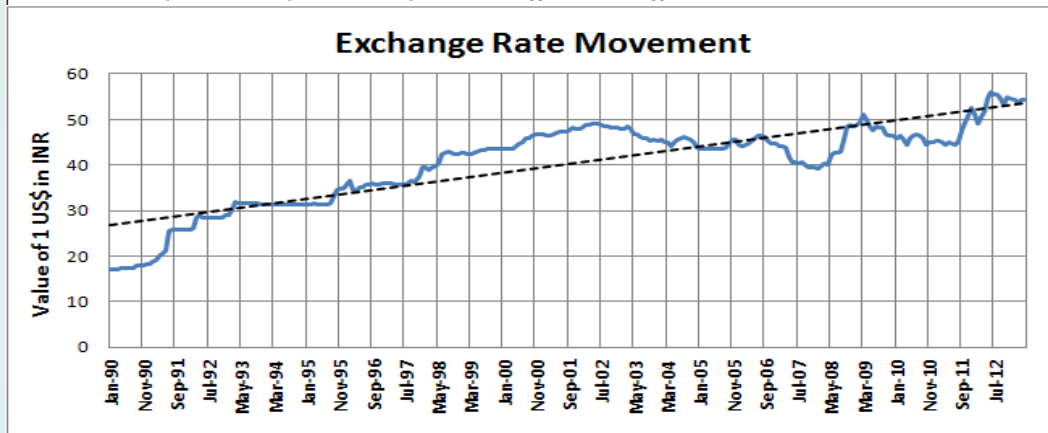
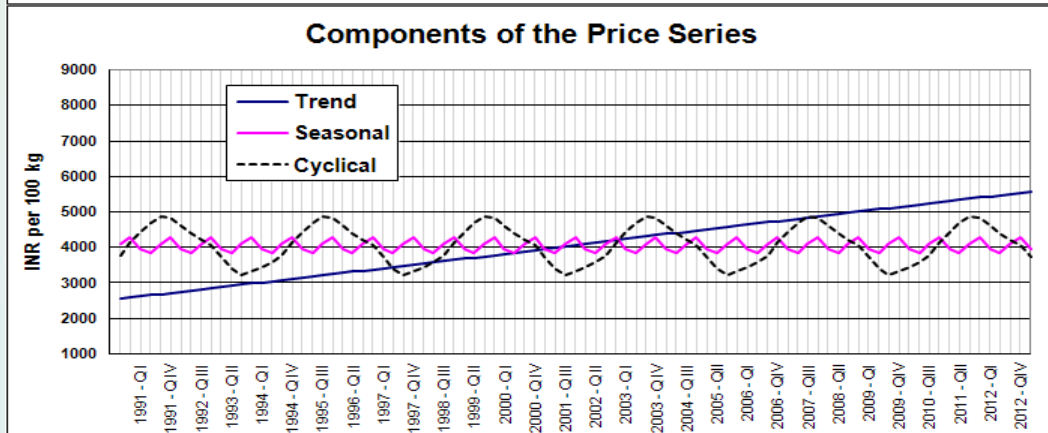
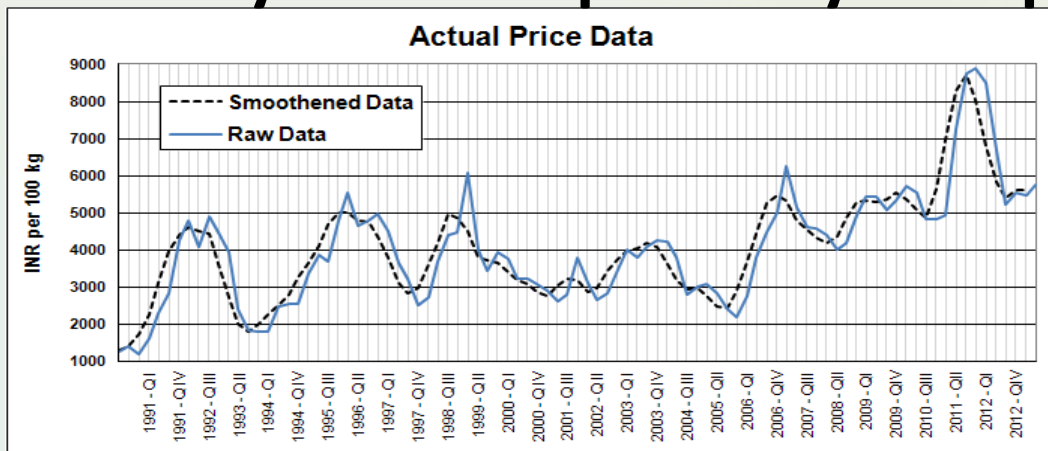
Cyclical

Trend

Seasonal

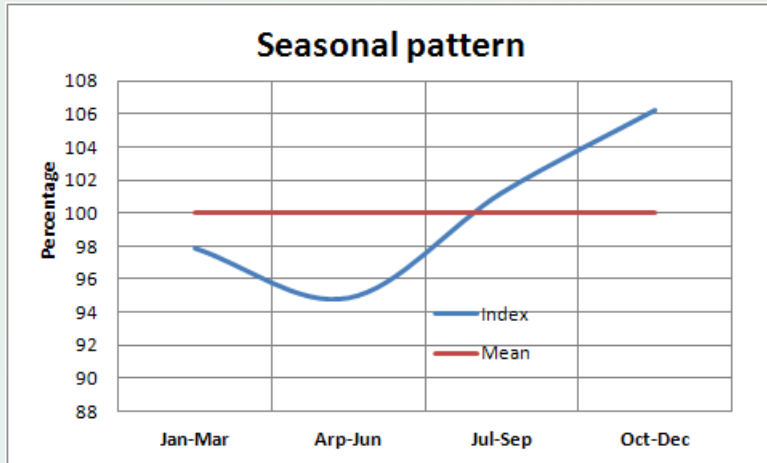
Random fluctuation

Analysis of the past 22 years' price data



- ❑ Apart from the 4-year Cyclical pattern, prices also seem to follow a long term trend.
- ❑ Approximately, the prices have a tendency to increase @ 3.5% per year in Rupee term
- ❑ The trend line reflects the impact of inflationary elements like production cost on the long term price movement
- ❑ Over the last 22 years, the Indian Rupee has depreciated nearly the same rate as can be seen in the last Chart.
- ❑ Due to this, on a long term basis, the price of Indian Chillies in Dollar terms has remained stable over a period of over 20 years.

Price Changes due to Seasonal Factors



- During the current season, the prices have so far reflected the same seasonal direction as the long term average.
- The fundamentals point to the prices changing direction post June as is the pattern forecasted by the long term price behaviour

- The 22 year data also show a seasonal pattern.
- Prices have shown tendency to remain steady or ease during the first two quarters (Jan to June)
- However, in the last two quarters, prices have shown tendency to take “off-season” upward correction.
- Caution must be exercised as there are a few years when the prices did not follow this pattern
- It may be noted, the average price fluctuation on seasonal factors have been well within a range of 10%

Conclusions

1. The Prices of Chilly are set by the Supply-Demand situation in the world's largest market – Guntur in India which is chiefly fed by the crop in the state of Andhra Pradesh.
2. All other growing regions act to influence demand off the Guntur Market
3. The Indian Chilly Crop is Short and the two major producing regions of A.P and Karnataka are woefully short compared to the previous year's production
4. The higher level of Carry forward stock, one of the best crop years in China and the all-time high crop recorded in M.P have been so far keeping prices under check
5. But from the month of April, the influences of these factors would fade away and the impact of the poor crop in the major regions of India would start having a telling effect.
6. The long term price trend show that the prices have a tendency to inflate in the 3rd and 4th quarters. This year, the d stock levels would be low during these quarters
7. Thus we should expect the markets to move into the bullish phase starting from July'13
8. Over the long period of time increasing trend in Chilly prices have been more than compensated by the depreciation of the Indian Rupee against the US Dollars.
9. There is going to be particularly a very high demand for the Chillies grown under IPM practices as the gap between Supply and Demand is extremely wide.

Questions?

Thank you

