

WORLD SPICE CONGRESS

Cochin

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Crop Reports – Chilly & Turmeric & Sustainability Issues

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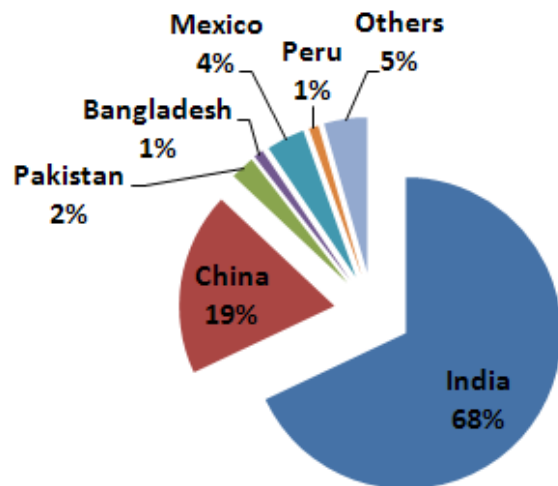
GRIFFITH LABORATORIES



Chilli Crop Reports

Crop Overview

Chilli - Major Producers



- ❑ 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 production has been increasing steadily mainly due to the increase in the two major growing countries: India & China
- In India the crop has increased due to several new 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 derive prices by most of the Importing world.

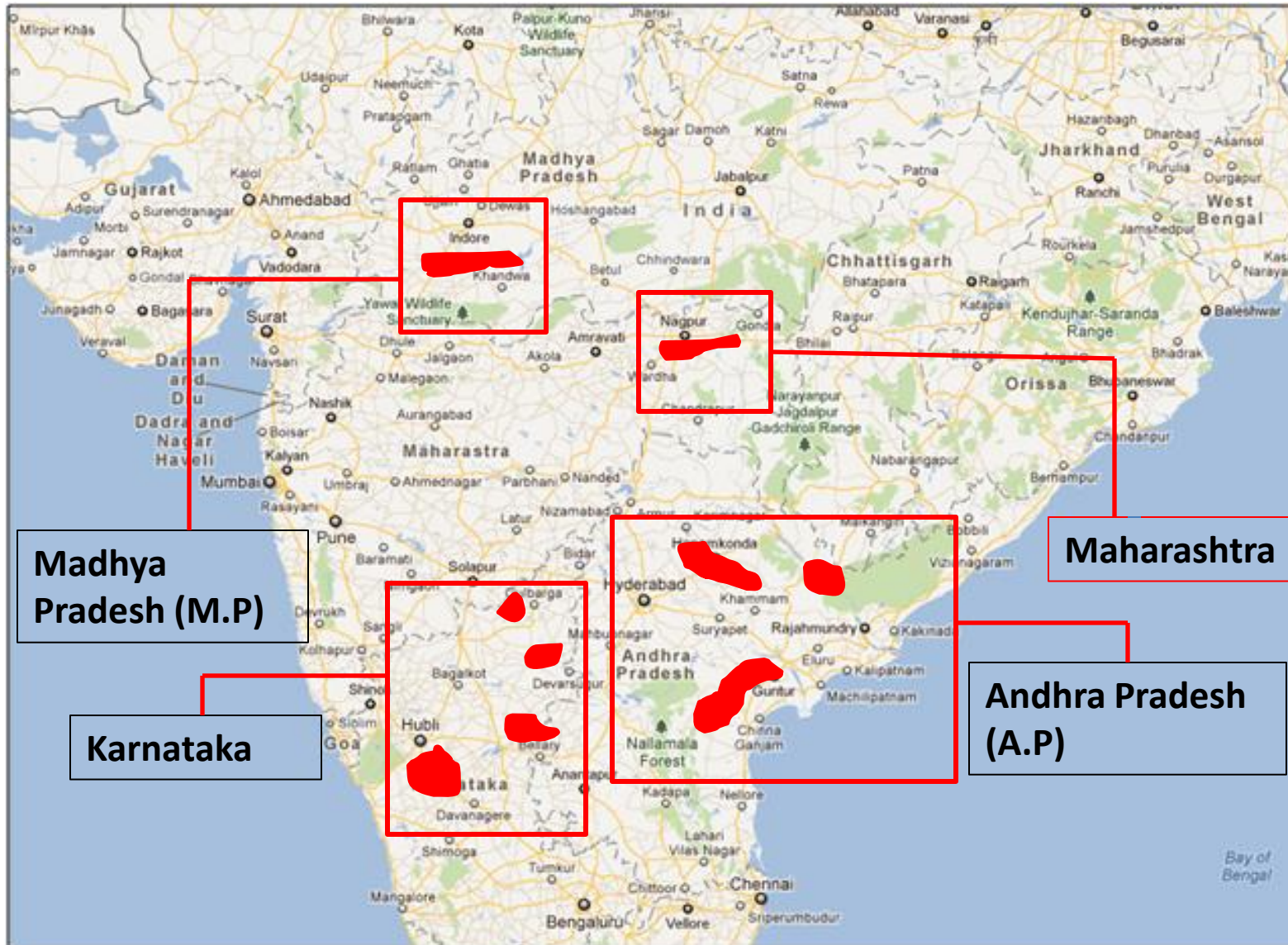
Supply Issues 2013

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

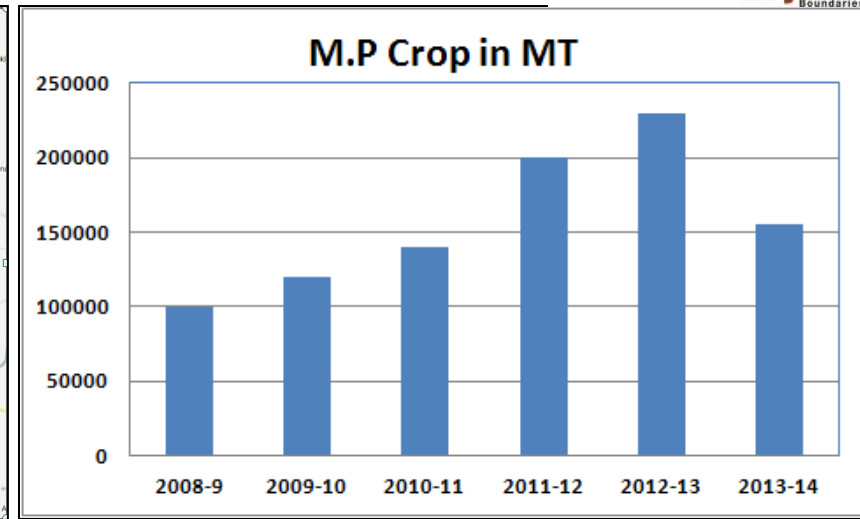
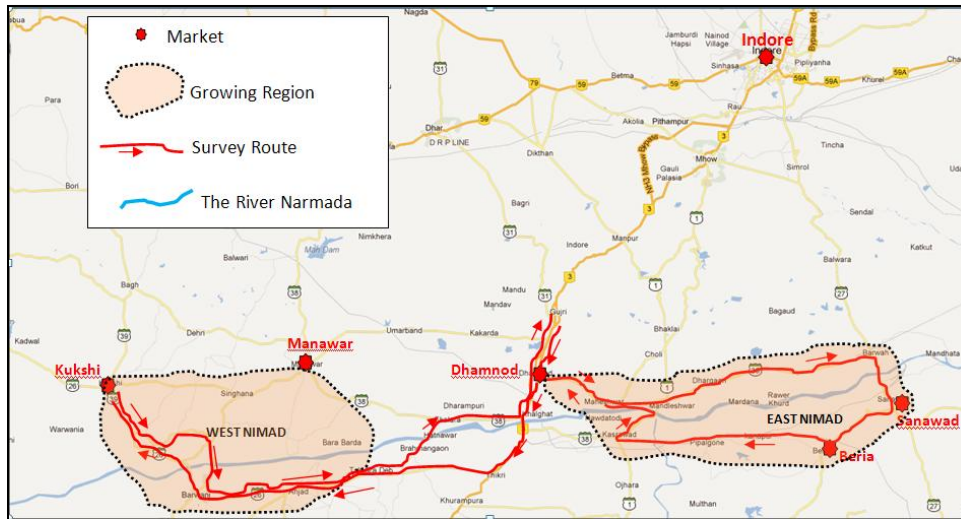
India

China

Major Growing Areas in India



M.P Crop Report



- There are two major growing areas in M.P, East and West Nimad regions
- The crop for 2013-14 badly affected due to
 - a) *Delay in Rainfall*
 - b) *Continuous rains for 5 months up to the end of Sep.*
 - c) *Particularly heavy rains in the 2nd week of Sep., leading to water logging in a majority of fields*
 - d) *Widespread disease “Viral disease” across both the growing belts.*

The M.P Crop for 2013-4 is estimated to be about 155000 MT, which is considered to be a poor crop.

Madhya Pradesh Crop Report (Contd...)

Even though the planted area was higher than last year, the crop was badly affected



Photographs taken on 24th & 25th Oct. 2014 shows effect of water logging



Photographs taken on 24th & 25th Oct. 2014 shows effect of viral disease

M.P Market Arrivals

The Same market seen during October 2012 and 2013 captures the situation better in picture than in words

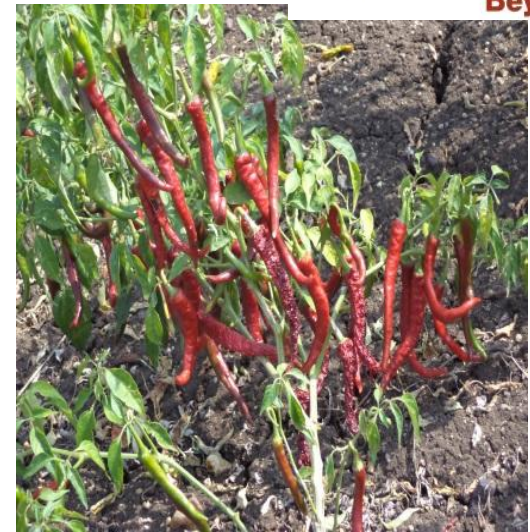


Oct. 2013



Oct. 2012

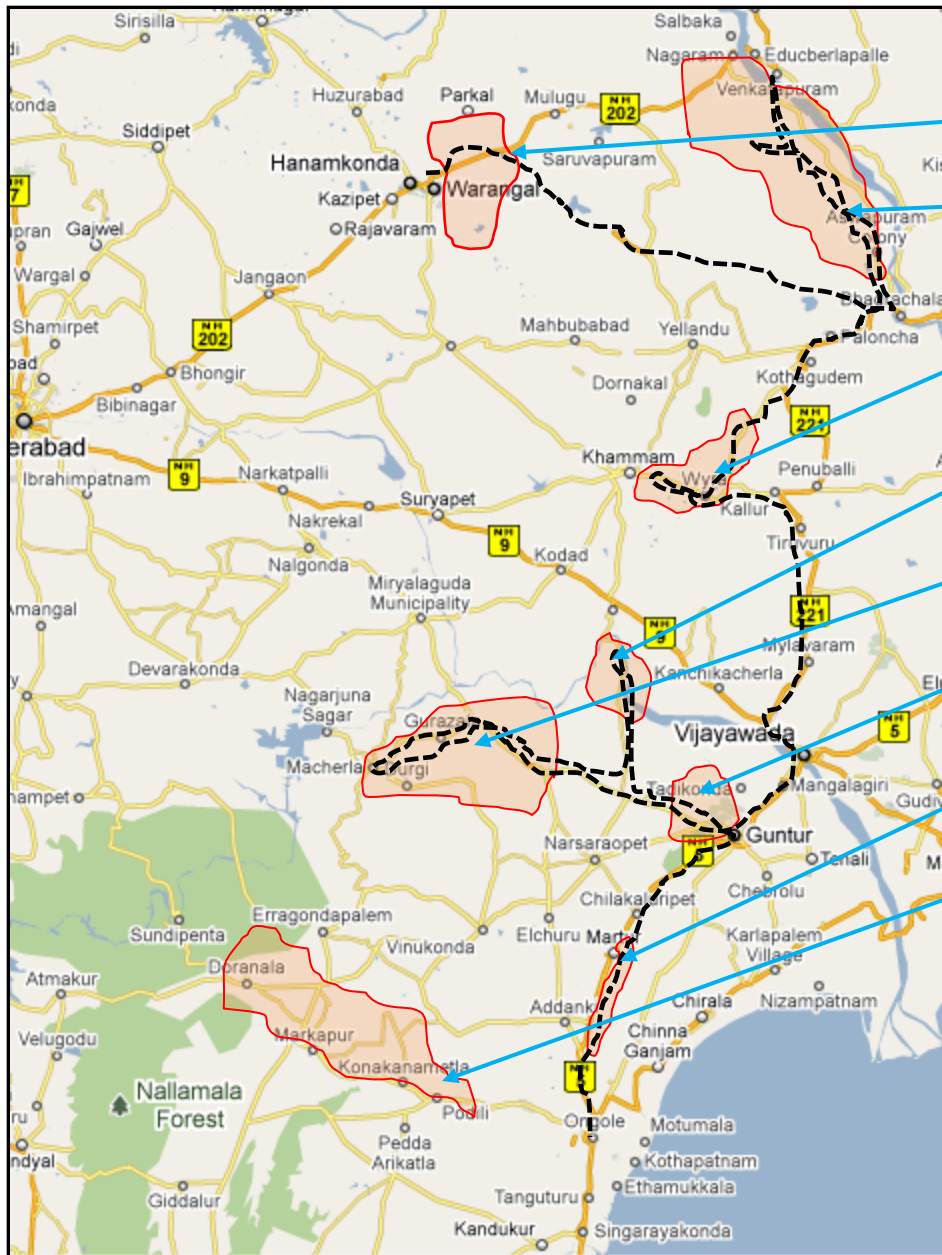
All major markets in M.P were still awaiting the new crop in October, whereas, during the previous years, the arrivals has begun in full swing during October.



Fields in Hubli & Gadag showing a healthy crop



Some fields damaged by heavy rains at Raichur & Shahapur (9-11 Nov. 2013)



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. 2014

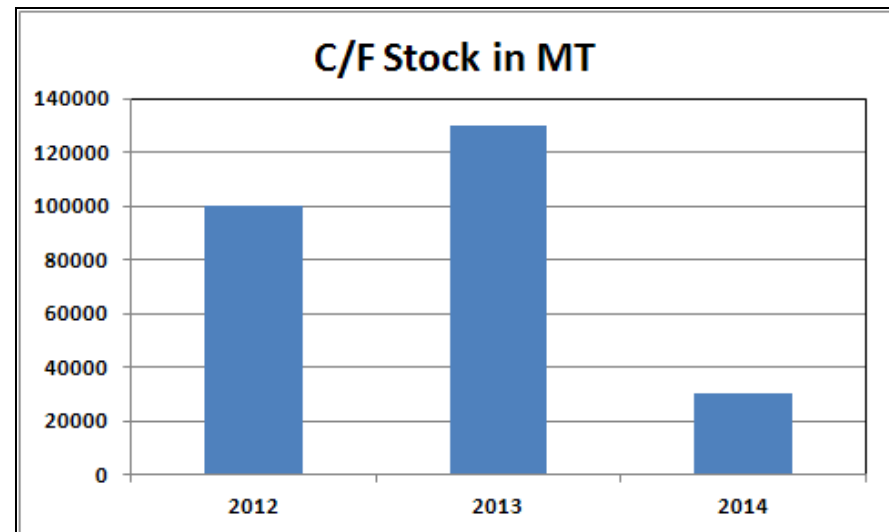
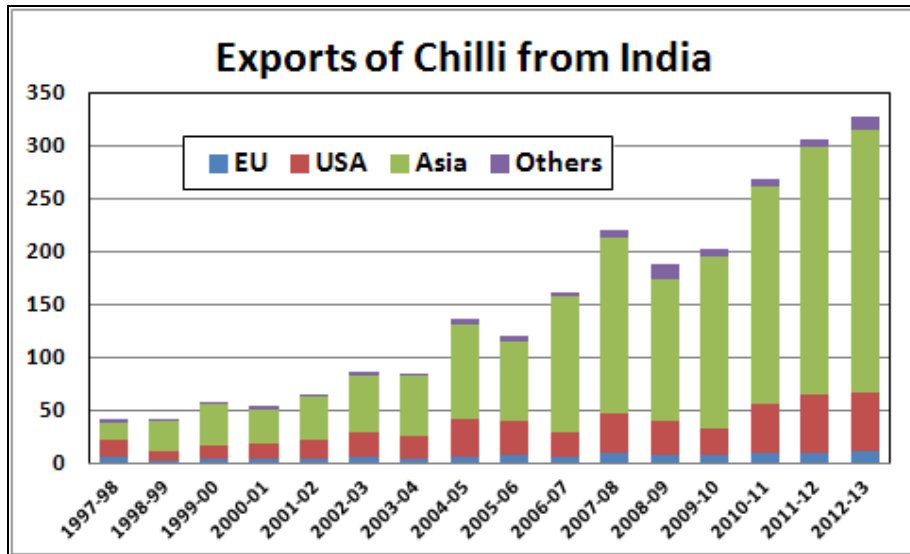
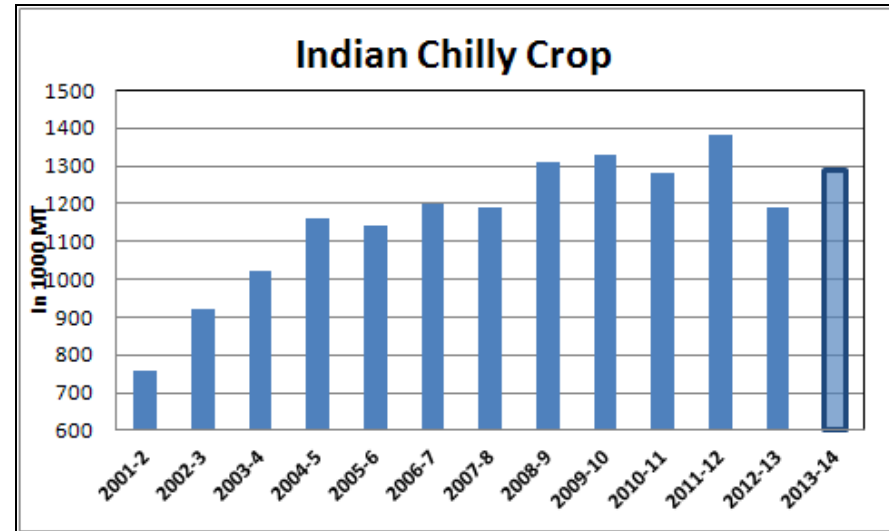
No.	Section of the Growing Region	Normal yield (MT/Acre)	Normal Crop Size MT	LY Crop Size in MT	Assesment for 2013-14		
					Area Change (%)	Expected Yield (MT/Acre)	Expected Crop (MT)
1	Warangal	2	35000	26600	0%	2	35000
2	Bhadrachalam	2	100000	90000	Normal	2.5	103500
3	Khammam	2.5	40000	25200	Normal	2.5	31500
4	Amaravati	2.5	48000	28000	5-10% less	2	35712
5	Palnadu	2	150000	108000	5-10% less	2.25	150000
6	Guntur	2	22000	18000	5-10% less	2.5	24750
7	Old Madras Road	2	35000	21000	5-10% less	2.2	34650
8	Markapur & Dornala	2	100000	72000	5%	2.5	118750
9	Kurnool	2.5	30000	25200	Normal	2.5	30000
10	Others	2	40000	36000	5%	2	38000
Overall			600000	450000			601862

- In Most areas of A.P, there is a reduction in area of chilly to an extent of 5 to 10%. However, the Yields have been very good.
- The crop has been delayed by a month, though

Courtesy: The above table is built on the survey made by the Sourcing team of A.B Mauri & Co, Cochin

Indian chilly Crop Production Estimate

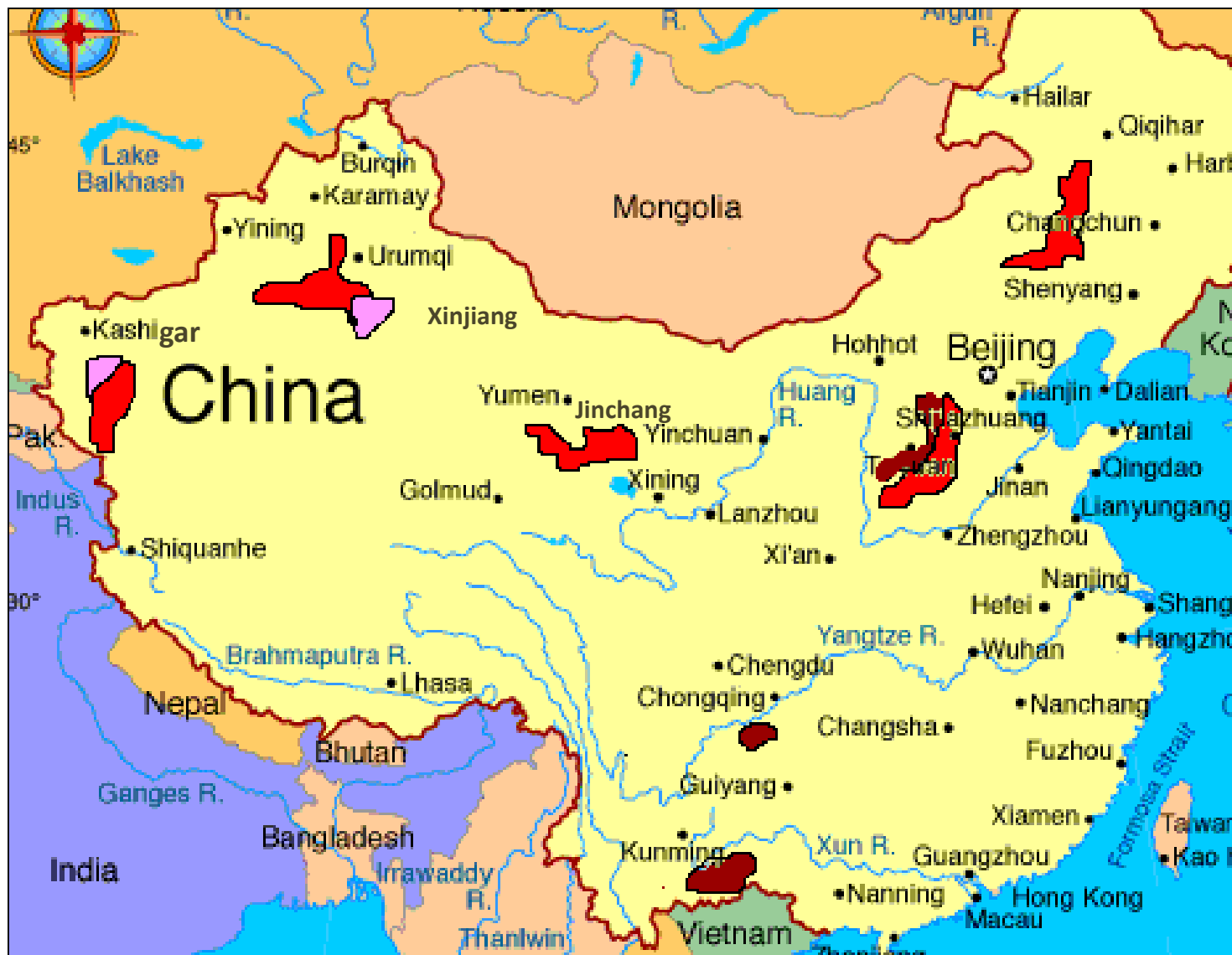
States	Normal	2012	2013	2014
M.P	190000	187000	212000	160000
Karnataka	184000	220000	160000	187000
A.P	600000	633000	465000	600000
Maharastra	50000	50000	48000	50000
Others	276000	290000	305000	293000
Total	1300000	1380000	1190000	1290000



Indian Chilly Crop: Summary

- ✓ **MP Crop** was damaged by heavy and prolonged rains
- ✓ **Karnataka** is much better than the last year, however acreages in many non-traditional areas has reduced
- ✓ **Andhra Pradesh**, has normal acreage and yields. Compared to the last year, the crop is much better.
- ✓ AP Crop may be **delayed by a month** due to delayed planting
- ✓ Far lower **Carry forward stock for 2014**
- ✓ **Exports** from India is expected to be good due to the poor performance of the Chinese Crop and should be close to 0.23MMT against last year's 0.21MMT

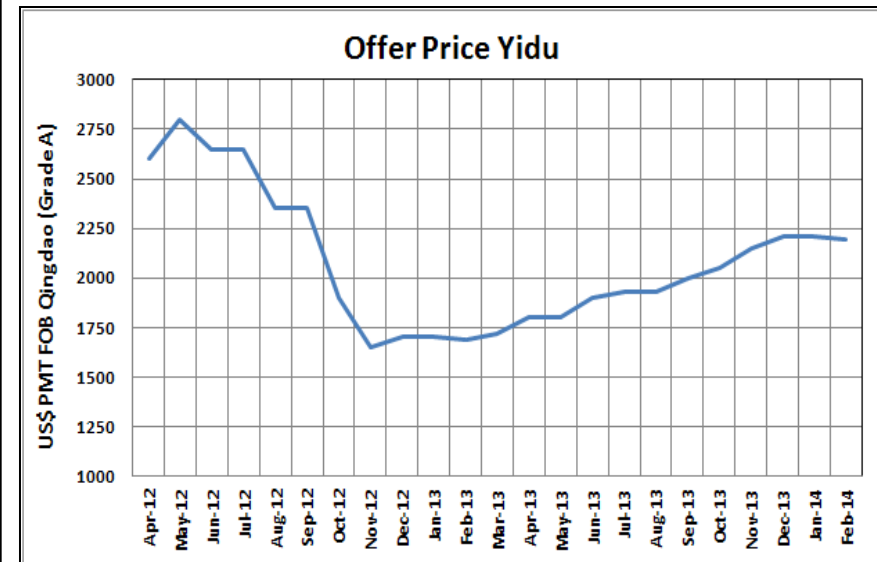
Chilli/Paprika Growing Regions in China



-  Low Pungent
-  High Pungent
-  Paprika

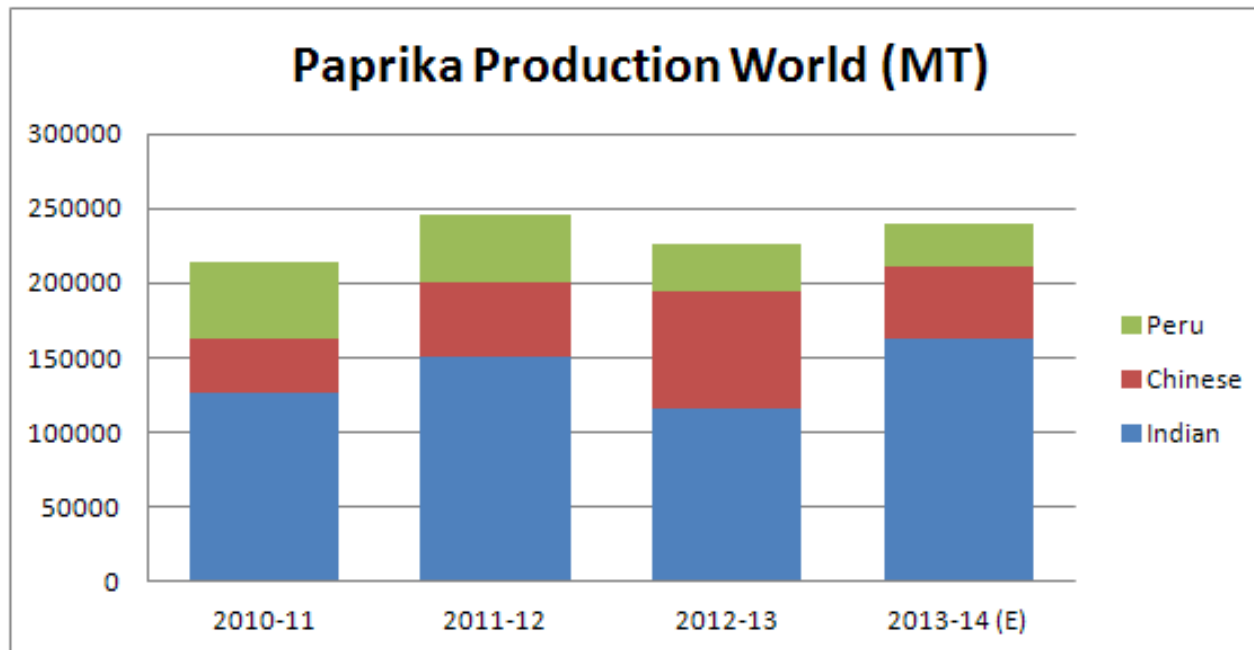
Chinese Crop Reports

- Low returns to farmers during 2012 lead to a drop in acreage of cultivation in China for 2013
- China has been reporting a 30% drop in the acreage of both Sweet Paprika and the Low Pungent Chillies for 2013-14
- Most factories began covering up quantities leading to an increase in the prices



Chinese Chillies & Paprika Estimates

Type	Normal	2012	2013	2014
Paprika	50000	55000	65000	45000
Chillies	200000	200000	240000	175000
Total	250000	255000	305000	220000



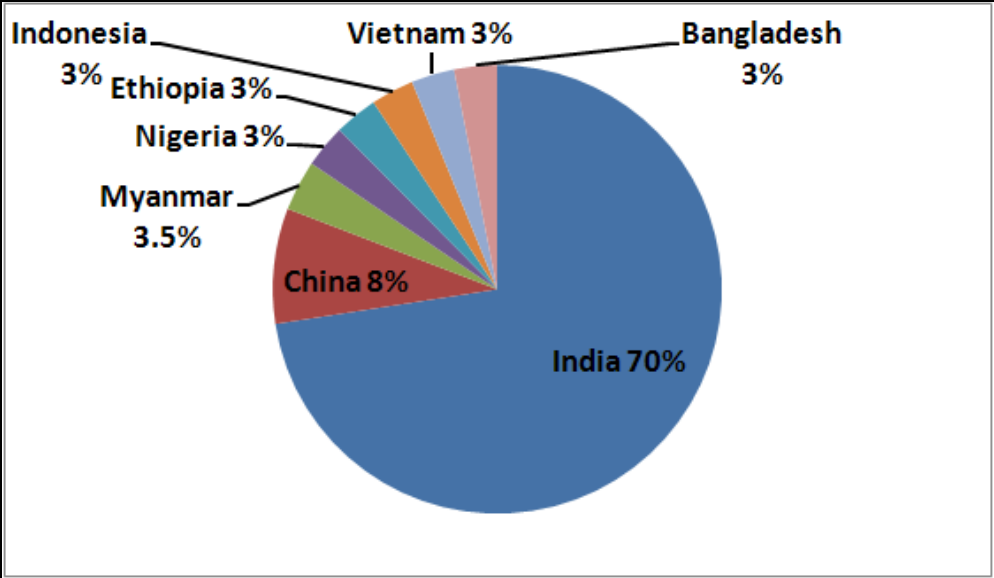
Overall Chilly Outlook

- ❑ The market has already absorbed and discounted the double impact of a Poor Madhya Pradesh crop and Chinese crop
- ❑ In China the market arrivals diminished completely and in M.P arrivals still continue to happen in the local markets
- ❑ The good news is that both the A.P and Karnataka Crops are better than last year. In fact A.P is much better
- ❑ The arrivals from A.P should pick up steam in March (crop being delayed by a month)
- ❑ This should exert pressure on the prices during March – May 2014. In fact, prices are already declining
- ❑ The year promises to be a good one for Indian Chilly Exports in keeping with the trend of the last few years and also due to the demand for High pungent chillies
- ❑ This, along with lower cold storage stocks would define a lower resistance level and could check the downtrend in prices beyond last year's levels
- ❑ ***The off-season months are the ones to watch out for and one would not want to hold a short position during the period of June to November during this year.***

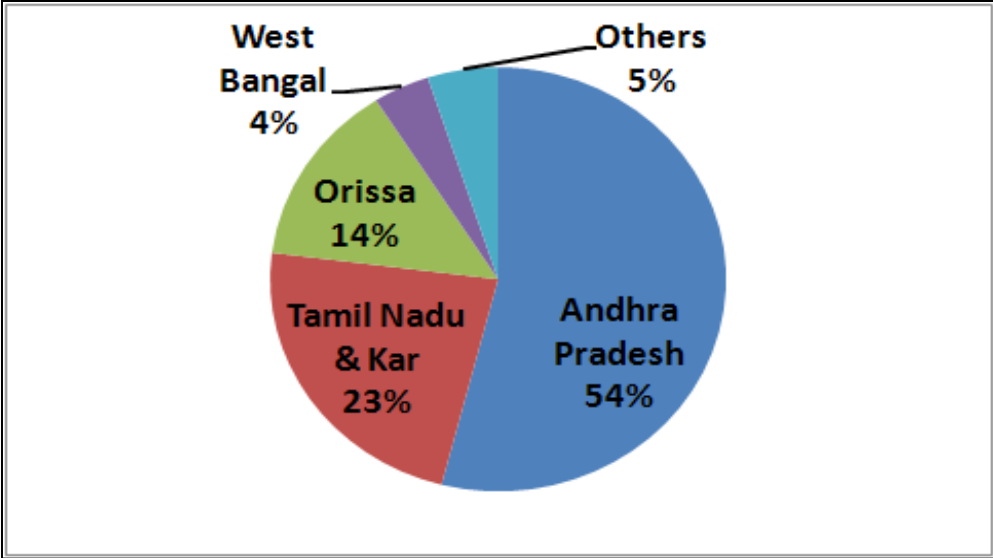
TURMERIC CROP REPORT

Major Producers

WORLD

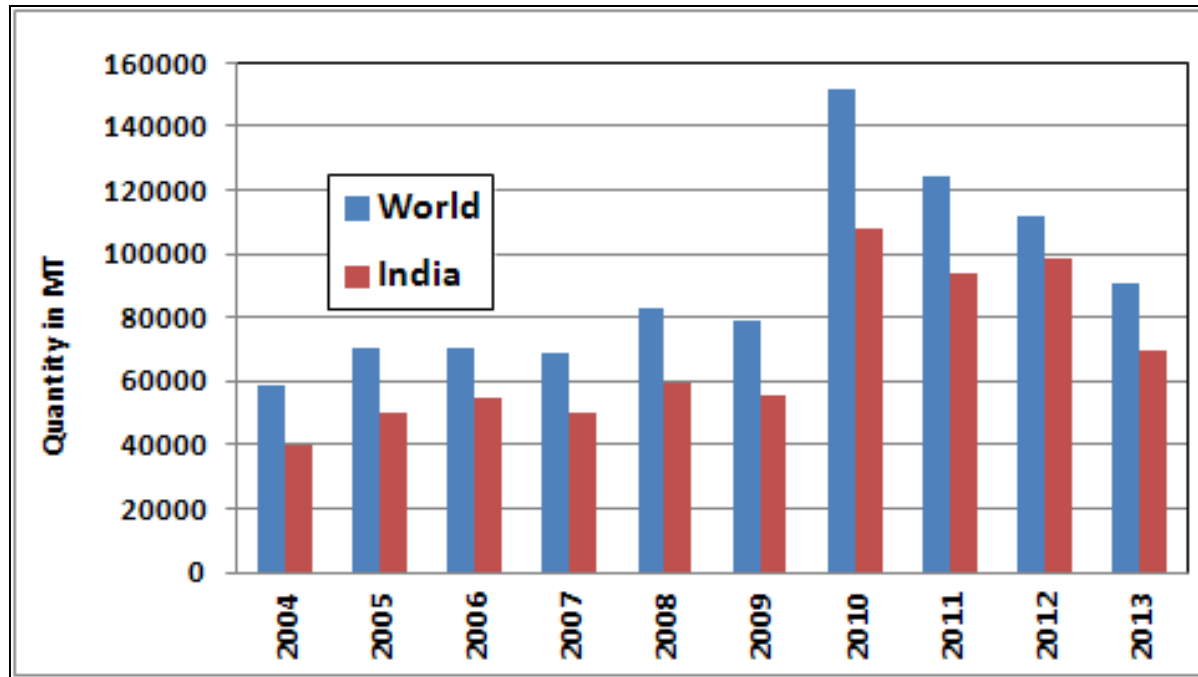


INDIA



TURMERIC – EXPORTS

Source: International Trade Centre



Year	2010	2011	2012	2013
India	107924	94093	98707	69550
Myanmar	14439	2282	2061	3017
Ethiopia	1196	1794	1495	156
Indonesia	6119	2672	1212	501
Viet Nam	3245	556	756	1238
China	2184	1169	615	606
Others	16301	21769	7253	15932
Total	151408	124335	112099	91000

Quantities in MT

Crop Report MFT

Tamil Nadu & Karnataka

Yield Expectaion		Reason	2013	2014
Kodumudi/Karur	Lower by 50%	Dealy in Sowing, Root Wilt	120000	80000
Gobichettipalayam	Lower by 35%	Dealy in Sowing, Root Wilt		
Sathyamangalam	Lower by 30%	Lack of Water	40000	25000
Gundlepet/Chamrajnagar	Lower by 60%	Leaf Browing disease		
Total			160000	105000

- Area reduced as Farmers will holding large quantities of last year's stock during the planting months
- Banana and Maize cultivation were preferred over growing Turmeric in many places
- Planted field were effected by heavy and untimely rains
- Majority of fields were affected by diseases (mainly browning of leaves)



Turmeric is inter-cropped with Chilly in many fields in G'pet area



Most fields in Kodumudi were just 3 months old in Nov. 2013



Turmeric being replaced by Maize



Many fields were left barren



Nearly 60% of the fields had leaves similar to this. Normally leaves turn brown before harvest. However with harvest still 3 to 4 months to go this was due to quick wilt. This is expected to have an adverse impact on yield.



A few fields (less than 1%) were found to be totally destroyed by the disease.

MFT – Andhra Pradesh

Major Growing Belts in A.P	Crop Estimate MT	
	2013	2014
Krishna & Guntur Dists. (Duggirala)	45000	51300
Cudapph & Kurnool Dists (Cudappah)	78000	85800
Nizamabad & Karimnagar (Nizamabad)	200000	228000
East & West Godaveri Dists (Godaveri)	26000	29120
Srikakulam & Vizag (Coastal Zone)	21000	21630
Total	370000	415850

- In Andhra Pradesh, in all the major growing regions, the area under Turmeric is estimated to have increased from 5 to 15%
- The crop is not facing any problem and is in very good health
- Overall the production from this state is expected to increase by 10 to 12% during 2014 compared to the previous year.

Madras Turmeric Outlook

State	Curcumin %	Crop Size in MT			
		Normal	2012	2013	2014
Andhra Pradesh	2%	400000	450000	370000	415000
Tamil Nadu	3%	150000	160000	120000	80000
Karnataka	3.25%	50000	58000	40000	25000
Other Areas	3%	100000	100000	85000	100000
Total		700000	768000	615000	620000

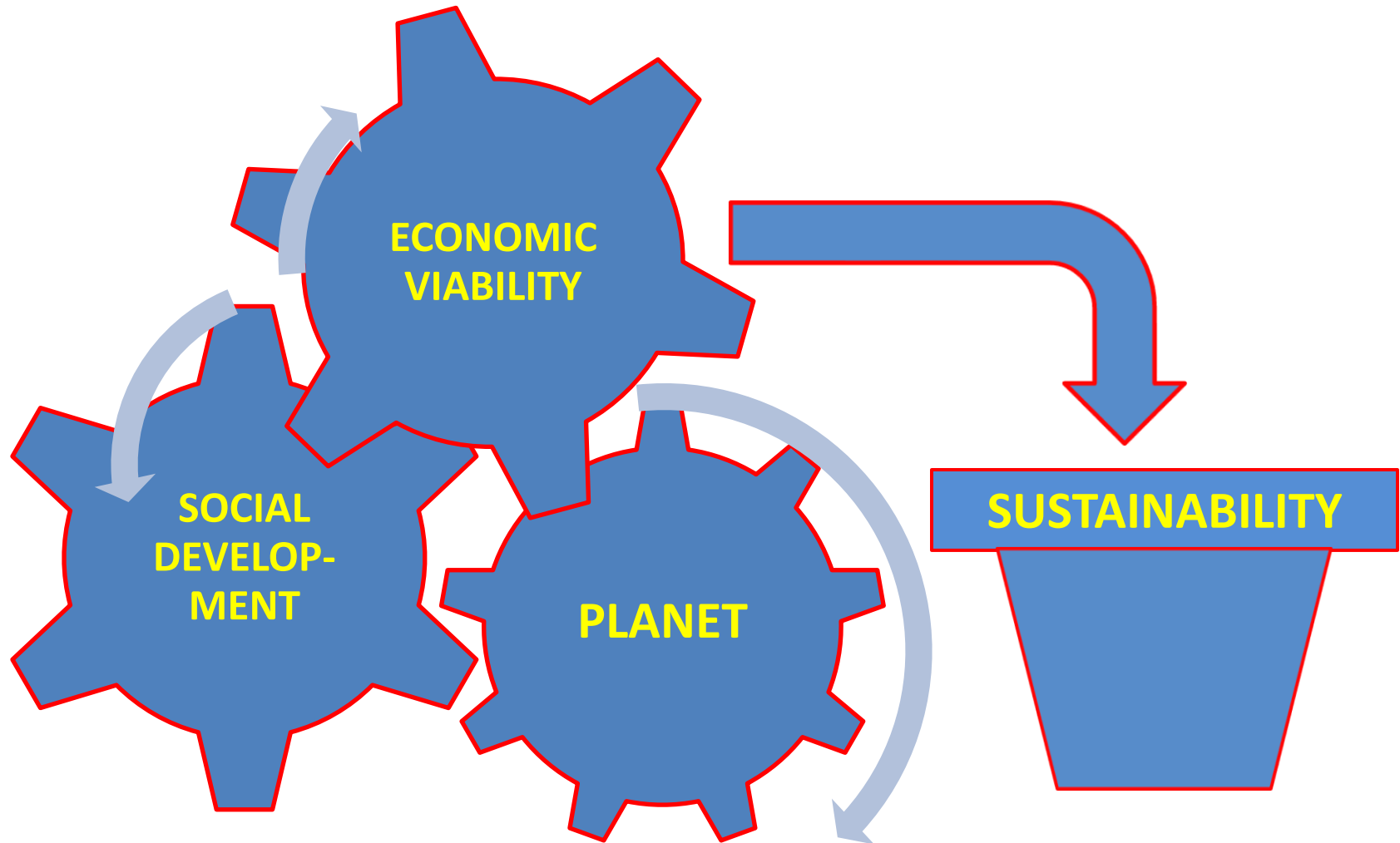
- Although, there is a major set back to the MFT crop in Tamilnadu/Karnataka, the crop in Andhra Pradesh is expected to be much better
- Overall production would be of the same order as the last year
- However, there would be shortage of MFT with higher curcumin levels
- It could be another difficult year for Madras Turmeric

The AFT Situation

- Kerala, the major producer of AFT
- The area has dropped by nearly 40%
- The crop faces severe competition from lower labour intensive competitors like bananas, pineapples and so on
- Overall curcumin levels have reduced mainly due to mixing of other varieties at the planting stage or at the post harvest stage
- Current prices are at about US\$ 1.80 per kg (farmer's realization) about 25% higher than the last year at the same time
- Exporters have not shown much interest
- As we have seen there will not be much support from other countries, where Turmeric production is declining year after year.

Sustainability in Chillies & Turmeric

Sustainability Model



The 1st Requirement of Sustainability: **Economic Viability**

FIELD LEVEL ACTION POINTS	ELEMENTS OF INTERVENTION									
	IPM	R&D (New Seeds)	Mechanization	Stable Prices	Regulations	Irrigation	Organized Crop Loans	Warehousing	Village level training	Market Development
Good Agricultural Practices	✓					✓				
Improvement of Yields		✓								
Reduction in Cost of Cultivation	✓		✓			✓				
Avoid over production				✓						✓
Emphasis on Quality of Produce	✓							✓		
Efficiency in Post Harvest Handling	✓							✓		
Maximize realization				✓			✓	✓		✓
Timely availability of Funds							✓			

The 2nd Requirement of Sustainability: **Planet**

	IPM	R&D (New Seeds)	Mechanization	Stable Prices	Regulations	Irrigation	Organized Crop Loans	Warehousing	Village level training	Market Development
Waste Reduction	✓					✓		✓		
Energy Efficiency		✓								
Water Conservation	✓					✓				
Emmission Reduction	✓				✓					
Re-cycling of Farm waste	✓	✓								
Transport efficiency	✓									
Post Harvest Handling efficiency	✓		✓		✓			✓		

The 3rd Requirement : **Social Development**

	FIELD LEVEL ACTION POINTS	ELEMENTS OF INTERVENTION									
		IPM	R&D (New Seeds)	Mechanization	Stable Prices	Regulations	Irrigation	Organized Crop Loans	Warehousing	Village level training	Market Development
SOCIAL DEVELOPMENT	Gainful Employment (off season)									√	
	Family Support									√	
	Education & Vocational Training									√	
	Ethical Employment	√				√					
	Health and Family Welfare	√					√			√	
	Savings Management				√			√		√	

All Three Requirements shown together

ELEMENTS OF SUSTAINABILITY	FIELD LEVEL ACTION POINTS	ELEMENTS OF INTERVENTION									
		IPM	R&D (New Seeds)	Mechanization	Stable Prices	Regulations	Irrigation	Organized Crop Loans	Warehousing	Village level training	Market Development
ECONOMIC VIABILITY	Good Agricultural Practices	√					√				
	Improvement of Yields		√								
	Reduction in Cost of Cultivation	√		√			√				
	Avoid over production				√						√
	Emphasis on Quality of Produce	√							√		
	Efficiency in Post Harvest Handling	√							√		
	Maximize realizaton				√			√	√		√
Timely availability of Funds							√				
PLANET	Waste Reduction	√					√		√		
	Energy Efficiency		√								
	Water Conservation	√					√				
	Emmission Reduction	√				√					
	Re-cycling of Farm waste	√	√								
	Transport efficiency	√									
Post Harvest Handling efficiency	√		√		√			√			
SOCIAL DEVELOPMENT	Gainful Employment (off season)									√	
	Family Support									√	
	Education & Vocational Training									√	
	Ethical Employment	√				√					
	Health and Family Welfare	√					√			√	
	Savings Management				√			√		√	

IPM ticks the maximum number of boxes

SHARING OF RESPONSIBILITY FOR SUSTAINABILITY

		ELEMENTS OF INTERVENTION								
		IPM	R&D (New Seeds, etc)	Stable Prices	Regulations	Drip Irrigation	Organized Crop Loans	Farm Mechanization	Village level training	Market Development
STAKE HOLDERS										
SPICES BOARD (Facilitator)	EXPORTERS									
	IMPORTERS									
	INPUT COMPANIES									
	DEPT. OF AGRICULTURE									
	AGRI-UNIVERSITIES									
	CENTRAL/STATE GOVT									
	LOCAL BANKS/ CO-OP BANKS									
	FARMERS ORGANIZERS									
	NON GOVT. ORGANIZATIONS									

Sustainability Issues

We have seen that Chilly production in the World is on the increase, while Turmeric is not doing well

In the case of Chilly, a number of Elements are already in place as compared to Turmeric

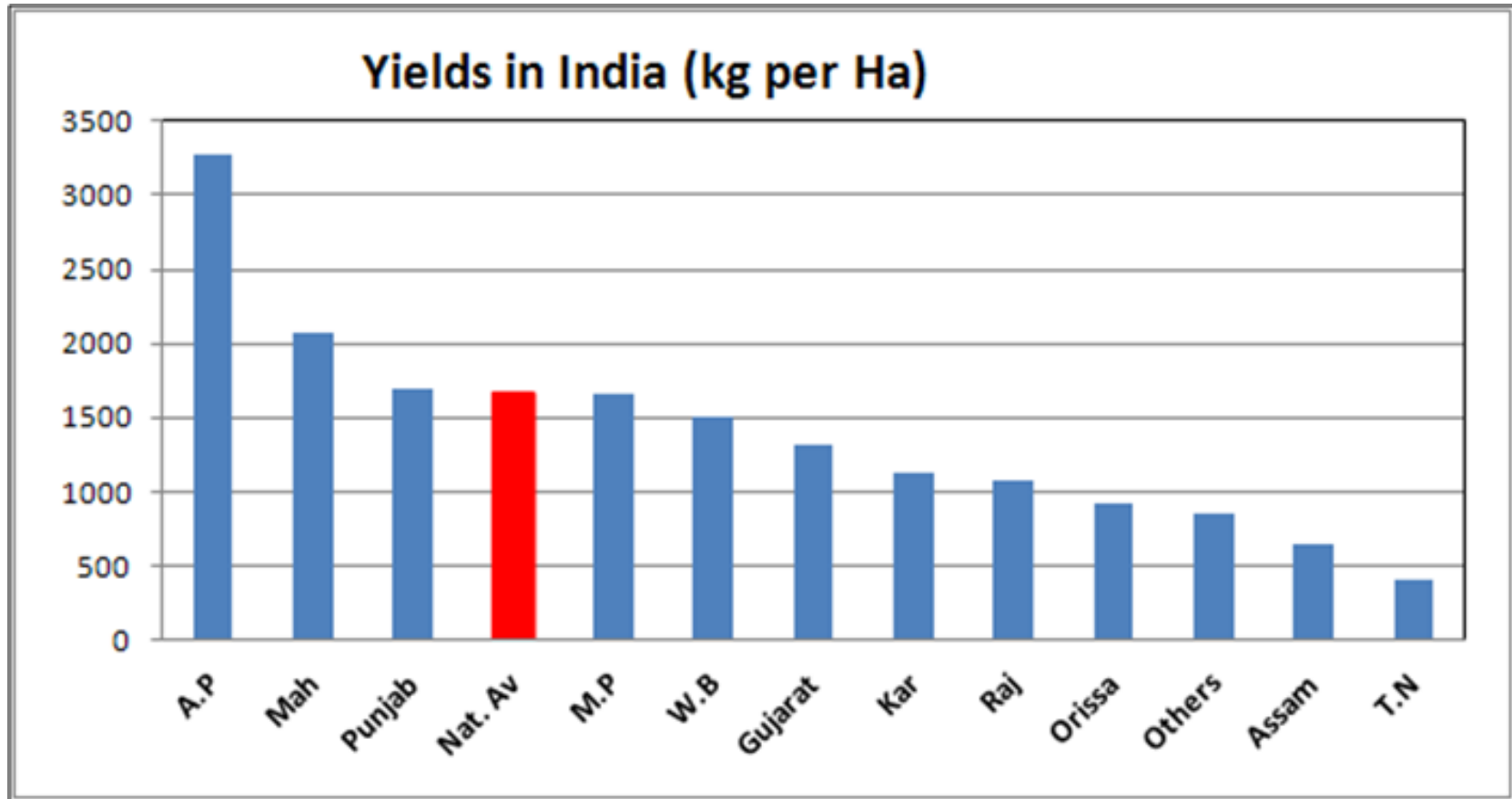
- ✓ IPM,
- ✓ Better varieties of Seeds,
- ✓ warehousing,
- ✓ Market Development

In the case of turmeric, the erratic production seen the last few years is an area of major concern

The crop is losing out to other competing crops especially in Tamil Nadu, Kerala, Karnataka which are important growing regions

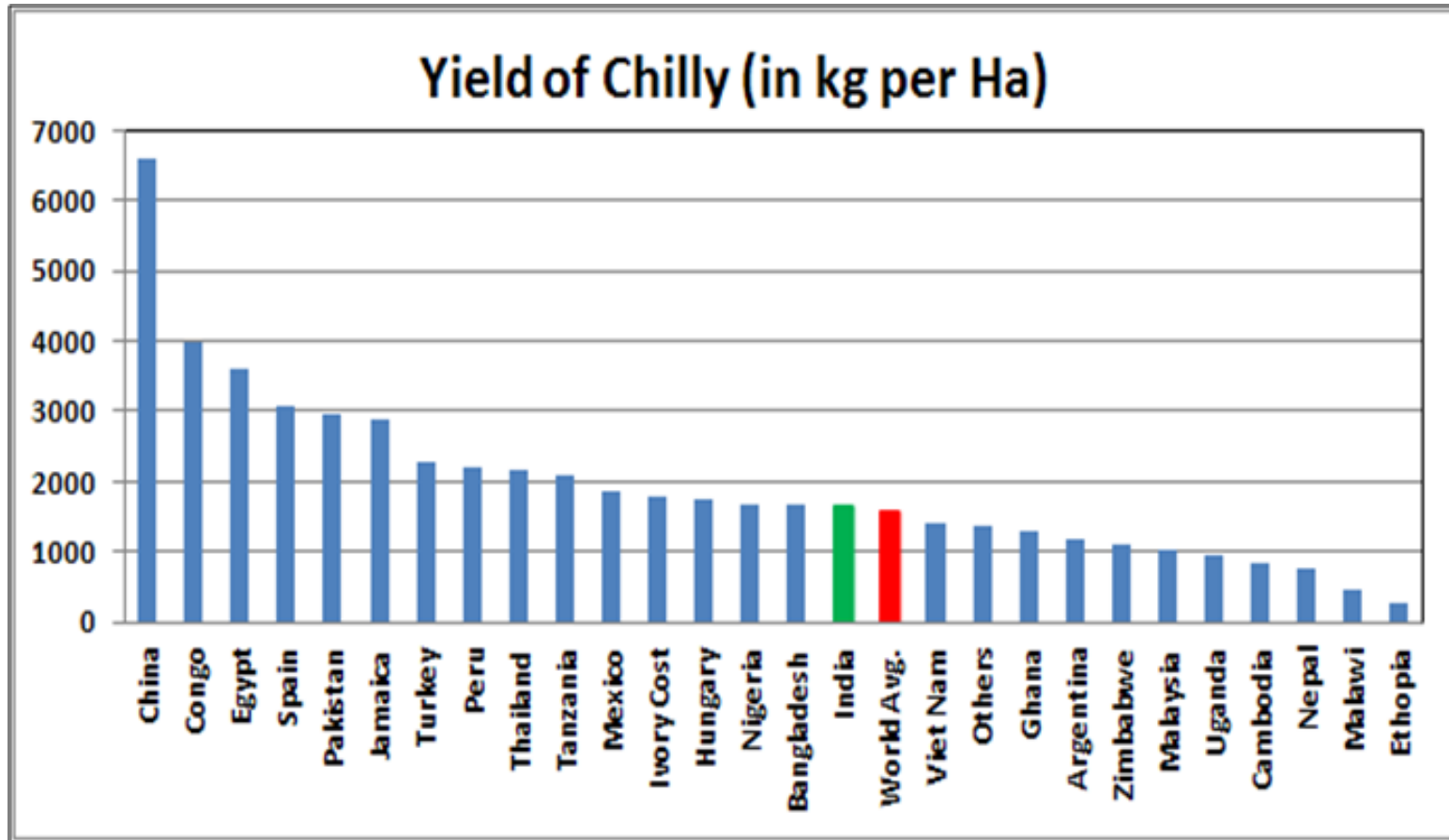
Level of technology infusion is far-behind that in Chilly

Yields of Chilly State-wise - India



Source: Spices Board Statistics

Yield of Chilly: World



Source: FAO STAT

China exporting fruits could be the reason for a high yield. Nevertheless, India has plenty of catch up to do

KEY STEPS FOR SUSTAINABILITY

- Integrated Pest Management should and other sustainable cultivation practices should be promoted.
- IPM practices need to spread out to other major chilly growing regions like M.P, Tamil Nadu and other states. In the case of Turmeric, it is a good way of improving yields
- We need better seeds, especially those producing raw material suitable for the industry (Example high Capsaicin, High Curcumin) along with being resistant to major pests and diseases
- With labour becoming scarce, farm mechanization is another key step that needs to be brought in so that farmers are not left high and dry when critical operations need to be carried out
- We need more stability in the prices of these commodities if we are to have our farmers consider these crops consistently year after year. ***As a rule, during a downtrend in prices, the farmer loses and during an uptrend, the trader gains.***

KEY STEPS FOR SUSTAINABILITY (Continued)

- We need better regulations which are in tune with the International regulations so that we force all stake holders to upgrade current practices and a greater proportion of these spices produced meet international quality and standards
- Water management through better irrigation technology is the need of the hour. In many areas farmers depend solely on rains. The easiest and quickest way is to promote adoption of drip irrigation on a large scale.
- Organized crop loans to ensure timely availability of funds to the farmers and also to ensure the maximum price realization to farmers would help in reducing risks arising from being dependent on local sources of funds.
- A lot more needs to be done to improve the quality of life in the villages and to ensure that the farmers put the realization for their produce to the best of use
- Creating of greater demand for the spices and products by greater R&D efforts by the industry so that Chilly and turmeric find application beyond those in the food industry and make inroads into healthcare, pharma, cosmetic, oral care and toiletries market segments.

Thank you

