

19th Annual Conference on
Indian Economic Policy:
Priorities for the New
Government

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The Indian Express

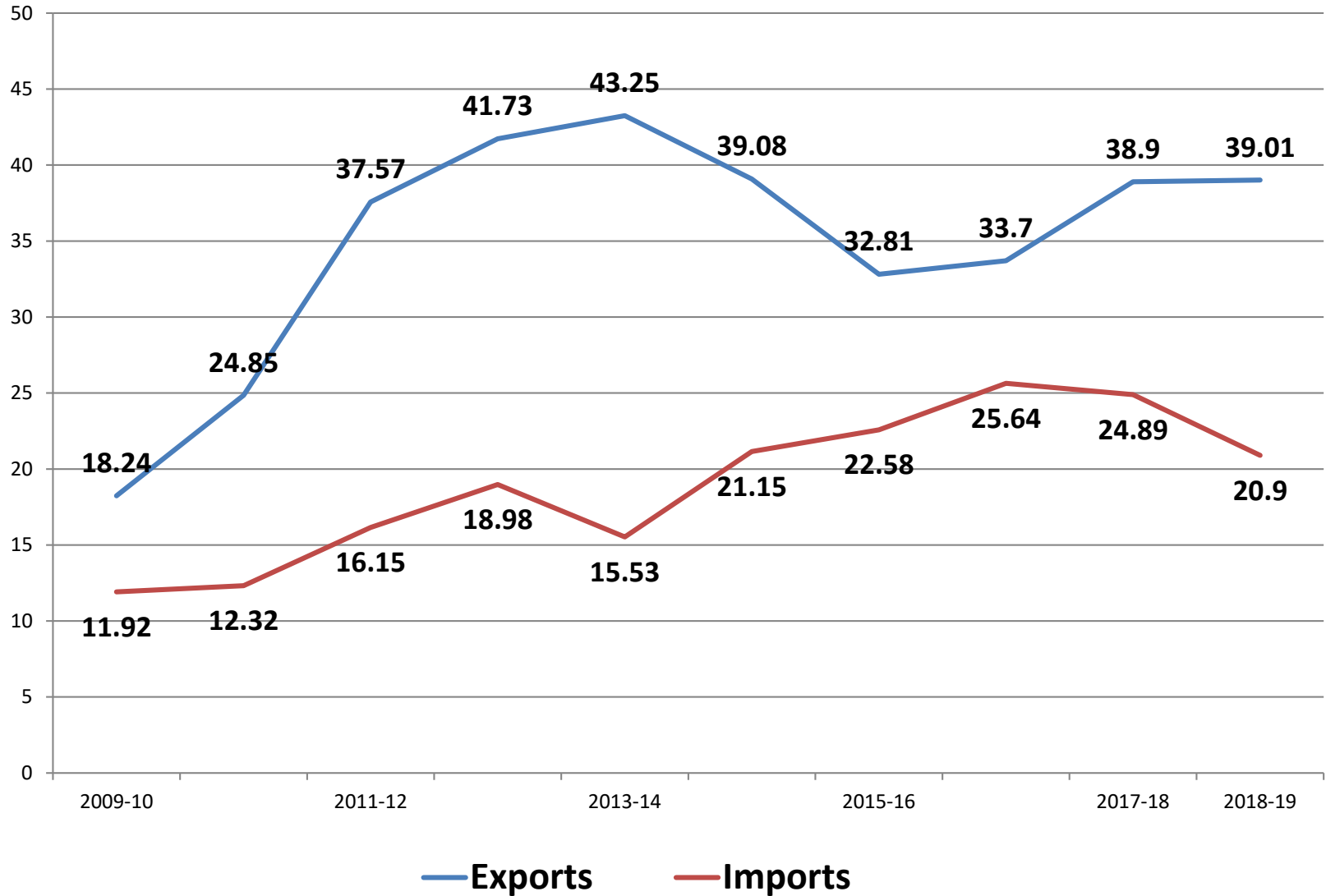
OPPORTUNITY!

- India has comparative and, to some extent, absolute advantage in agriculture.
- Strategic location and geographical proximity to populous, low/middle income, developing markets: Bangladesh, Southeast & East Asia, China, West Asia and Africa.
- Voyage time from Kakinada to Hanoi, Shanghai, Busan or Nagoya ports 15-25 days. It is 4-6 days from Kandla to Bandar Abbas, Dubai and Jubail.
- The same from Brazil's Santos or Argentina's Buenos Aires ports to these destinations is 38-59 days.

OPPORTUNITY!

- Bihar *rabi* (winter-spring) corn harvested by early-May for dispatch to Indonesia, Malaysia and Vietnam from Kakinada/Vizag by end-May. South American crop not ready before mid-June; longer voyage time.
- Indian buffalo meat cheaper than cattle beef. Exported to low/middle income markets in SE Asia, West Asia & North Africa.
- India world's No. 1 rice exporter: Basmati to West Asia, non-basmati (long-grain parboiled) to West & East Africa and Bangladesh.
- World's No. 2 cotton exporter – mainly to China, Bangladesh, Pakistan & Vietnam. Also, major exporter of soybean meal to Iran, Japan, Pakistan and SE Asia.
- Exploit opportunity from large market: Domestic + Near Overseas.

India's Agricultural Trade (\$ billion)



The Farm Export boom (\$ million)

	2003-04	2013-14		2003-04	2013-14
TOTAL AGRI EXPORT	7533.09	43251.66	Processed foods	368.54	1909.61
Marine products	1328.71	5016.46	Wheat	520.36	1569.03
Basmati rice	433.73	4864.69	Oilseeds	282.60	1291.67
Non-basmati rice	473.31	2925.05	Sugar	268.97	1201.56
Bovine meat	336.53	4350.23	Tobacco	238.61	1011.35
Raw cotton	205.08	3637.53	Maize (corn)	77.14	1009.87
Oil meals	728.68	2796.34	Cashew	371.01	848.65
Spices	336.05	2497.22	Coffee	236.32	798.80
Guar gum	110.53	1979.63	Tea	356.32	798.76
Fruits & vegetables	378.21	1495.08	Castor Oil	142.77	725.68

Unleveraged Opportunity

- India has not leveraged its agriculture advantage.
- Three reasons:
 1. Legacy of 1943 Bengal Famine and World War-II shortages.
 2. Structural deficit in most agri-commodities in much of post-Independence period.
 3. Policymaking geared to managing shortages: Essential Commodities Act, 1955 (ECA); restrictions on trade, stocking, movement and export of farm produce.

Structural Deficit?

- In late-1990s, India turned surplus in rice and wheat. FCI warehouses started overflowing. Shortages now episodic, not structural.
- In 2000s, structural surplus extended to sugar. Cereals plus Sugar equals Calories!
- In Oct 2010, new term “protein inflation” coined by RBI Dy Governor Subir Gokarn. Linked to structural deficit in nutritious and protein-rich foods (pulses, milk, egg, meat and fruits & vegetables), as against calorie-based items.

Deficit vs. Reality

- IFPRI (*Praduman Kumar, et al 2017*) projects domestic pulses demand at 21.87 mt in 2020 and 26.58 mt in 2030 (based on “existing” GDP growth rates) and 22.36-28.07 mt (under “high” GDP growth scenario).
- Actual pulses production up from 16.32 mt in 2015-16 to 24.02 mt in 2018-19. Imports down from 6.6 mt in 2016-17 to 2.2 mt in 2018-19.
- Milk production trebled from 22 mt in 1970-71 to 66.2 mt in 1995-96 (Operation Flood). Since then, risen 2.5 times to 165.4 mt in 2016-17!

Deficit vs. Reality

- Between 2001-02 and 2016-17, potato output has doubled (23.92 mt to 48.60 mt), tomato trebled (7.46 mt to 20.71 mt) and onion quadrupled (4.83 mt to 22.43 mt).
- Policymakers still stuck in ECA/shortages era. RBI's inflation targeting (45.86% weight for food items in CPI-Combined) further legitimizes "supply management" measures.
- In July 2014, onion & potato brought under ECA to impose stockholding limits against "hoarders". Minimum Export Price restrictions on onions in 2014, 2015 and 2017 and on potatoes in 2014 and 2016. In Sep 2017, Income Tax raids on onion traders in Nashik for "indulging in hoarding and artificial manipulation of prices"!

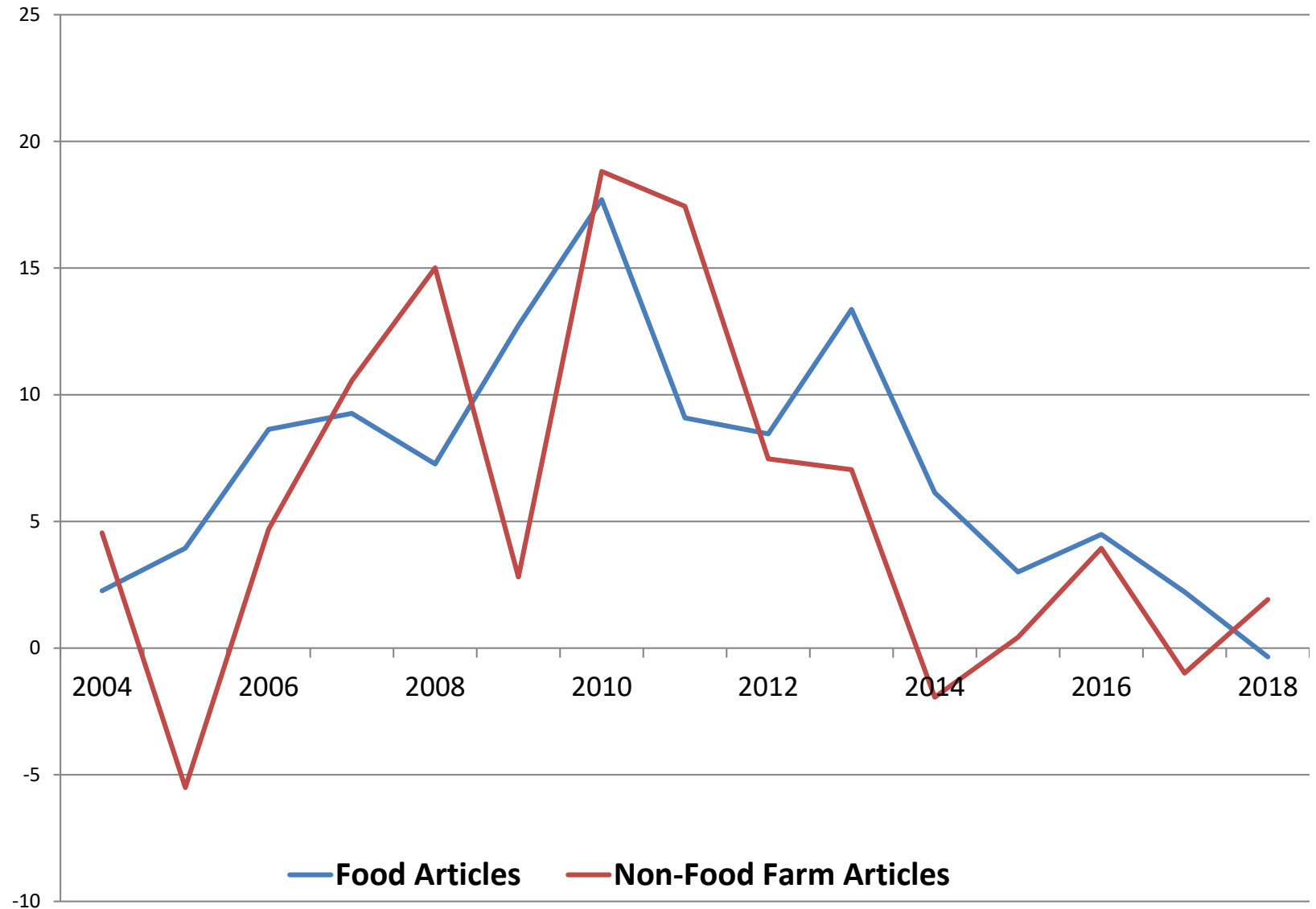
Pro-Consumer, Anti-Producer

- In pulses, stock limits on traders, *dal* millers and large retailers, plus “coordinated action” of Directorate of Revenue Intelligence and Intelligence Bureau against black-marketing and cartelization. Ban on exports alongside unlimited duty-free imports. Record imports in 2016-17 despite bumper domestic crop. Lifting of stockholding and export curbs only by mid/end-2017.
- In sugar, stock & turnover limits on dealers during Apr 2016-Dec 2017. Extended to mills in Sep-Oct 2016 and Sep-Oct 2017. 20% export duty from Jun 2016 to Mar 2018.
- Alacrity in imposing controls, no urgency in withdrawal. The victim: Farmer. Demonetization and strong rupee (15.6% REER appreciation between 2013-14 and 2017-18) no help.



Agrarian Crisis

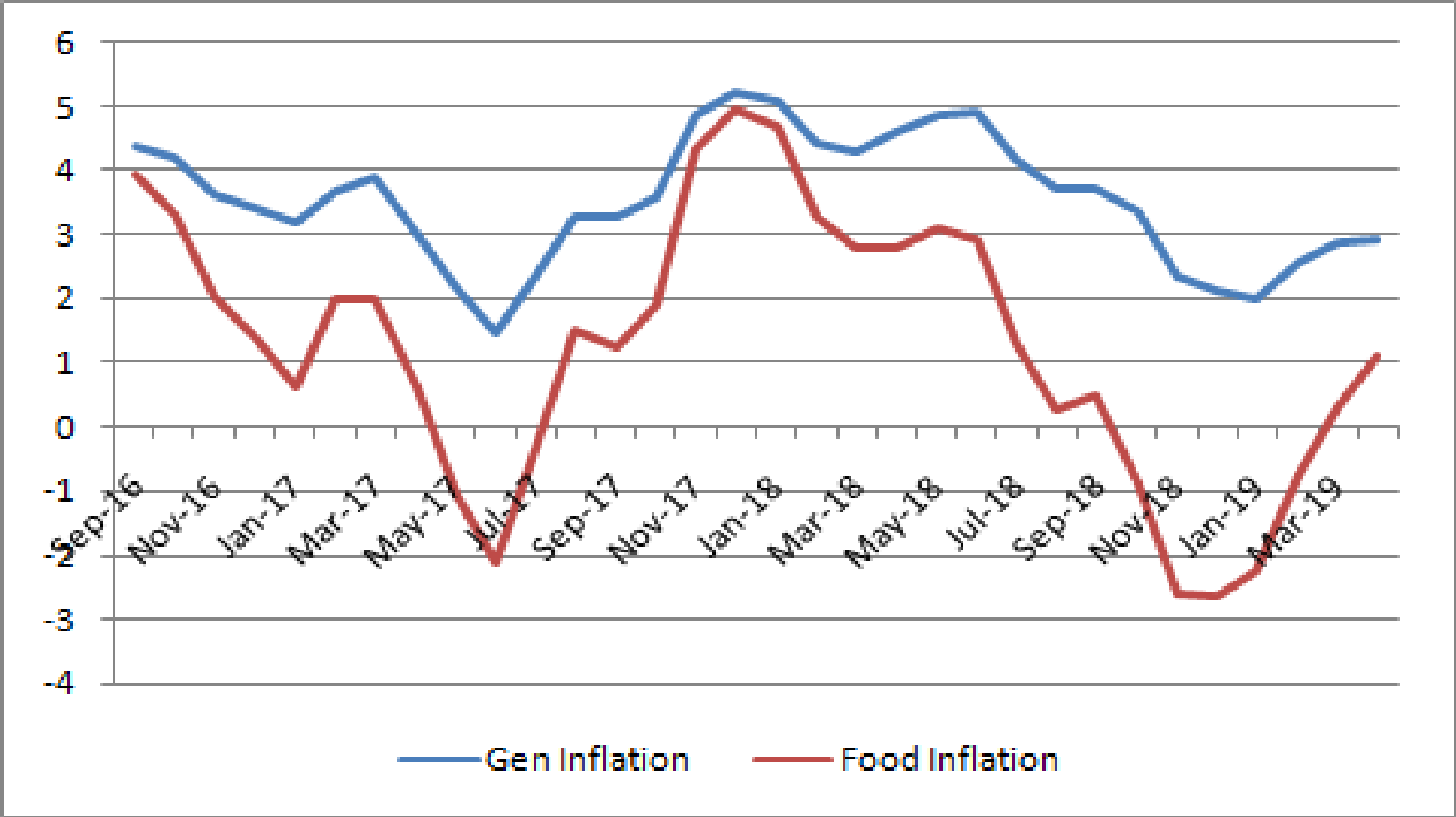
Average Annual WPI Inflation (%)



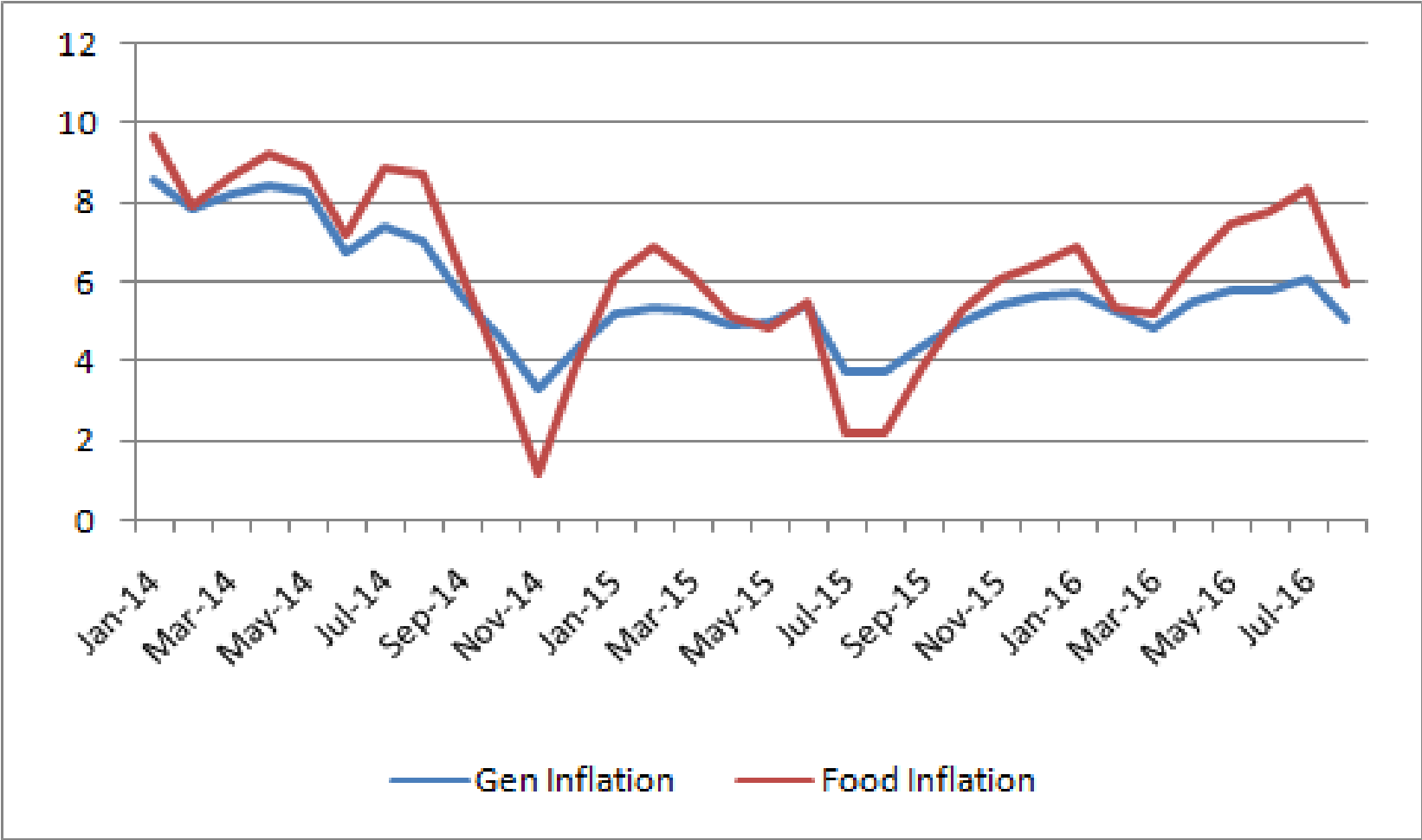
Farm Sector Growth (% year-on-year)

Quarter	Constant Prices	Current Prices
Apr-Jun 2016	4.58	13.91
Jul-Sep 2016	6.01	13.85
Oct-Dec 2016	6.73	10.03
Jan-Mar 2017	7.37	11.71
Apr-Jun 2017	4.16	2.78
Jul-Sep 2017	4.48	7.30
Oct-Dec 2017	4.58	9.12
Jan-Mar 2018	6.53	7.74
Apr-Jun 2018	5.05	6.78
Jul-Sep 2018	4.93	4.17
Oct-Dec 2018	2.79	2.07
Jan-Mar 2019	-0.13	3.78

Annual CPI Inflation: General vs. Food



Annual CPI Inflation: General vs. Food



Opportunity from Crisis

- Agrarian crisis opens political window to correct entrenched pro-consumer policy bias.
- New govt should scrap ECA and APMC (agriculture produce market committee) laws through an omnibus Swaraj to the Kisan Act. Give farmers unfettered rights to sell any quantity of produce to anybody, anywhere, any time. No controls on sale, stocking, domestic movement and export via executive order/department notification. Only Parliament may approve under exceptional circumstances of war or national calamity.
- Above reforms will create predictable environment and spur investments in agro-processing as well as backend procurement, extension, grading, warehousing & transport infrastructure. Will unlock India's true agri potential.

Producer vs. Consumer?

- Producer is the Consumer's best friend.
- Agricultural supply curve in India no longer vertical. Farmers' supply response – ability to ramp up production when prices go up – vastly improved in the last two decades. Response time for most crops is one year or one season; 3-5 years in other industries.
- Reason: Better seeds through advances in plant breeding & genetics and faster technology diffusion.
- Farm supply curve also flattened by better rural roads, electricity, irrigation and communication facilities, and increased awareness of latest varieties/hybrids, crop protection chemicals and agronomic practices.

Public Breeding Successes

- Between 2003-04 and 2018-19, India's basmati rice exports up from \$ 433.73 million to \$ 4.71 billion. 90% comprises improved IARI varieties: Pusa-1121 (2003), Pusa-1401 (2008) & Pusa-1509 (2013).
- Between 2012-13 and 2018-19, avg. sugar recovery of UP mills up from 9.18% to 11.49% and cane yields from 60 to 80 tonnes/hectare. All thanks to early-maturing variety, Co-0238, which covers 69% of UP's cane area.
- PAU's PBW-343 wheat variety, released in 1994, covered 6 million hectares by 2002. IARI's HD-2967 wheat, released in 2011, took only five years to cross 10 million hectares!
- Early Green Revolution varieties (Kalyan Sona and Sonalika) raised potential wheat yields from 1-1.5 tonnes to 4.5-5 tonnes/hectare. HD-2967 and HD-3086 have further raised to 7 tonnes-plus.

Private Sector's Green Revolution

- India's corn output doubled to 25-26 mt since 2000-01, due to privately-bred single-cross hybrids. 25-30 quintal/acre yields, against 7-8 quintals for local land races and 12-15 quintals for publicly-bred composites/double-cross hybrids. Many Bihar farmers harvest 50 quintals-plus, comparable to 180-200 bushels yields of US Midwest.
- Hybrid penetration 100% in cotton. 75%-plus in chilli, tomato, okra, cabbage, cauliflower, cucumber, capsicum and gourds. Private hybrid seed industry size Rs 12,000 crore: Cotton (4,500), vegetables (3,500), corn (1,200), rice (1,000), sorghum & pearl-millet (400).
- Open-pollinated tomato varieties yields <10 tonnes/acre, hybrids 20 tonnes-plus. Farmers adopting raised-bed planting, plastic mulching, drip irrigation and staking get 30-45 tonnes; invest Rs 1.5 lakh or more per acre. Most grow two crops: rainy season and *rabi*. In Kolar (Karnataka) and Junnar (Maharashtra), they take a third crop for summer season sale!

Private Sector's Green Revolution

- Spread of drip irrigation technology (water for one acre of cotton by flood irrigation can cover 10 acres via drip!) mainly due to private sector: Jain Irrigation and Netafim.
- Drip irrigation, with high-density planting (1,200-1,500 plants vs. 800-1,000 plants/acre) and tissue-culture, has doubled banana yields to 39-40 tonnes/acre. Converted a single district (Jalgaon, Maharashtra) into world's 7th biggest producing "country".
- High-density plantation using superior rootstock for grafting, plus drip irrigation-cum-fertigation and special pruning techniques, being tried out in mangoes: 500-800 trees/hectare, against 100-150 in conventional orchards.

Future Course

- Focus should not be only yield increases, but efficient use of resources to bring about unit cost reductions.
- Drip irrigation to save water. Laser land leveler for uniform distribution of water & placement of fertilizers and seed. Zero/conservation tillage for fuel, water and labour savings.
- Move away from high-analysis bulk fertilizers (urea, DAP, MOP) to products that deliver underlying nutrients more efficiently – with least volatilization, leaching and surface runoff losses.
 - 1) Water-soluble fertilizers suited for drip irrigation and foliar application;
 - 2) Secondary nutrients (Ca, Mg, S) and micronutrients (Zn, Bo, Fe, Mn, Cu, Mo) based products;
 - 3) Specialty fertilizers for crop-specific nutrient requirements.

**Producer is Consumer's best friend!
Swaraj is Farmer's birthright!
They shall have it!**



**Hybrid corn farmer Mohammad Mahir of Bharri village
Katihar district, Bihar**





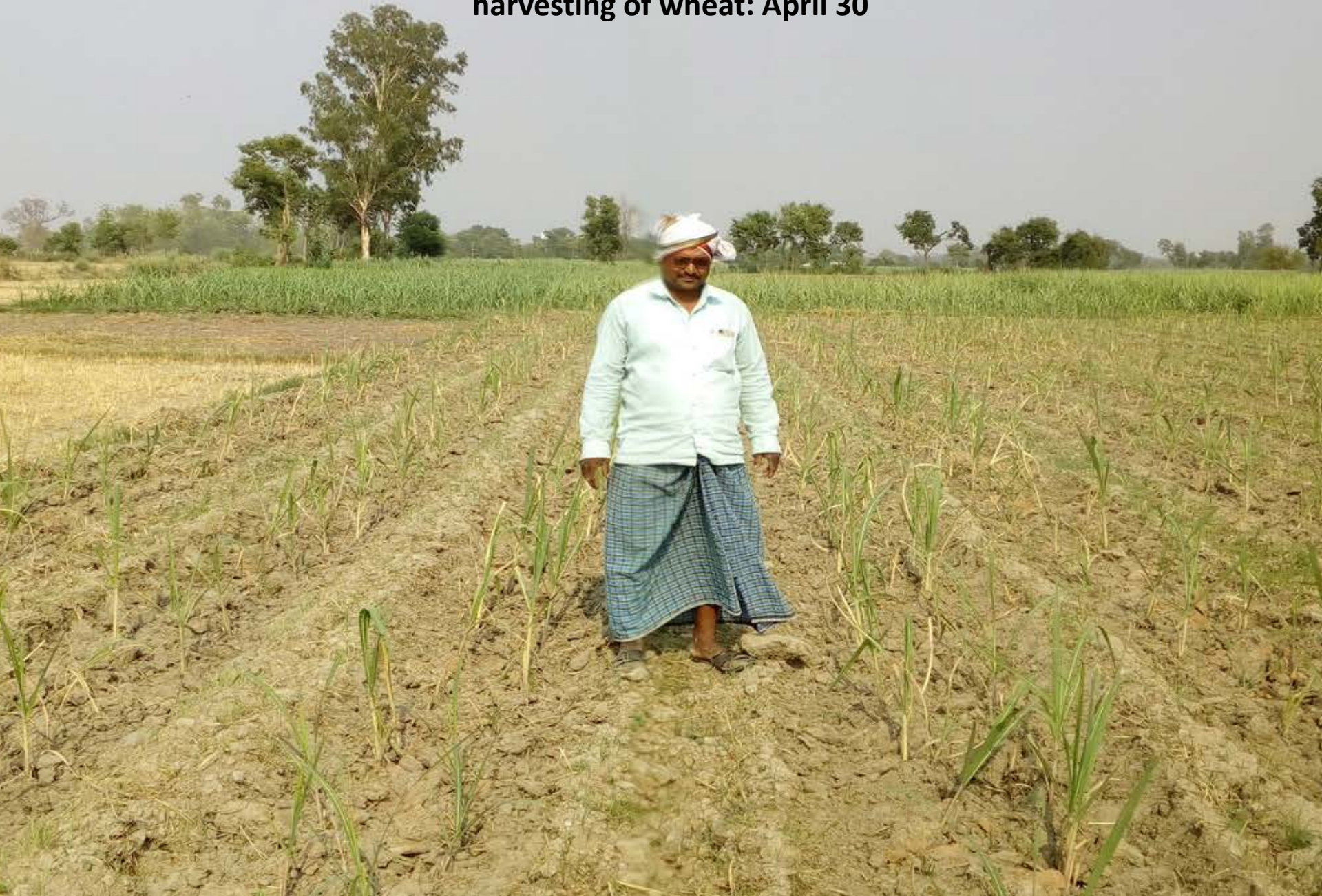
**Tomato farmer A.C. Ashwath of Anugondanahalli village,
Bengaluru Rural district, Karnataka**



**Sugarcane plants in nursery raised in mid-February
Subhash Singh of Pipra Urf Titala village, Kushinagar, Uttar Pradesh**



**Sugarcane transplanting after
harvesting of wheat: April 30**



**Laser land leveler at field of Dinesh Saini
Raghunathpur village, Hapur district, Uttar Pradesh**







D.A.W.

SPECTRA

**Vikas Chaudhary of Taraori village, Karnal district, Haryana
Grows HDCSW 18, a zero-tillage climate change-resistant wheat**

