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## **Constraints, Opportunities and Options to Improve Indian Agricultural Commodity Futures Market**

**M.S. Jairath\***

I

### INTRODUCTION

The agricultural products prices are highly volatile. There is considerable time lag between the time of initial spending and procuring of receipts from the final farm produce. A farmer is highly susceptible to price fluctuations both of farm produces and farm inputs. Traditionally, this risk is borne mainly by the producer (sometimes by the government) more than the consumer for a variety of reasons. However, in recent years, the government has reduced its interventionist role in price determination. This has made farmers look for alternatives to mitigate the risk. Futures market is one such option. This provides a convenient mechanism through which a farmer, who is uncertain about the price of his produce, can cover his risk by selling a futures contract before the harvest day. UNCTAD and World Bank joint Mission Report (1996) highlighted the role of futures markets as market based instruments for managing risks. Associated Chambers of Commerce and Industry estimates the trading volumes will grow at double the rate of growth in the gross domestic product (GDP). The trading volumes in Indian commodity futures are estimated to be equivalent to over a quarter of India's GDP. However, the trading value of the agricultural commodity was Rs 6.27 lakh crores only during 2008-09. The total value of commodity futures traded in India is much less compared to other countries in the world. The low volume in commodity trading in India calls for the reason thereof and identify the constraints which Indian commodity futures trading is facing. Keeping this in view, this paper is an attempt to examine the (a) growth and composition of Indian agricultural commodity market, (b) profiling commodity exchanges and prevalent commodity trading system and settlement, (c) existing and potential size of market in relation to physical output and (d) identifying the constraints, opportunity, and options to improve the performance of futures market in India.

The paper is divided in to five sections besides introduction. The approach followed is described in Section II. Section III discusses the growth and composition of commodity futures in agricultural commodities in India. The profile of commodity

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\*Director, National Institute of Agricultural Marketing, Ministry of Agriculture, Government of India, Kota Road, Bambala, Near Sanganer, Jaipur - 303 906 (Rajasthan).

exchanges in India along with prevalent trading system and settlement has been mentioned in Section IV. The next section examines the existing and potential size of the market in relation to physical output. Opportunity and options available are given in Section V. The constraints encountered by various stakeholders are discussed in Section VI. The last section highlights the options with policy measures for improving the performance of Indian commodity futures market.

## II

### APPROACH

The study utilises both primary and secondary sources of information. To meet the objectives data has been collected from the Office of Forward Markets Commission, Mumbai. Some of the information has been culled out from the Report of Financial Market International Inc. on Roadmap-Commodity Futures Market and Development in India 2005, Futures Industry Association and various websites on the subject. The information about opportunity, options and constraints faced by various stakeholders, i.e., commodity exchanges, traders and farmers have been gathered personally by visiting various exchanges and discussions with the experts in the field of futures trading. Growth and compositional changes have been worked out for two periods. Government permitting futures trading in 2002-03 to 2004-05 is the initial period and called as Period I. Government intervention during 2006-07 for delisting some commodities and thereafter till 2008-09 is termed as Period II. In order to estimate the existing size of futures market to physical output, CSO estimates of value of Output for Agriculture and Allied Activities (with base year 1999-2000) published during 2008 has been utilised. The net value of marketed surplus has been calculated for agricultural commodities by applying estimated marketable surplus ratio used in weightage diagram of index number of wholesale prices in India. The entire information has been analysed with the help of simple statistical tools.

## III

During 2003, prohibited commodities were opened up for forward trading, along with establishment and recognition of three new national exchanges with on-line trading and professional management. Not only was prohibition on forward trading completely withdrawn, including in sensitive commodities such as wheat, rice, sugar and pulses which earlier committees had reservations about, the new exchanges brought capital, technology and innovation to the market. These markets notched up phenomenal growth in terms of number of products on offer, participants, spatial distribution and volume of trade. Starting with trade in 7 commodities till 1999, futures trading is now available in 95 commodities. There are more than 3000 members registered with the exchanges. More than 20,000 terminals spread over more than 800 towns/cities of the country provide access to trading platforms. The volume of trade has increased exponentially as is evident from Figure I.

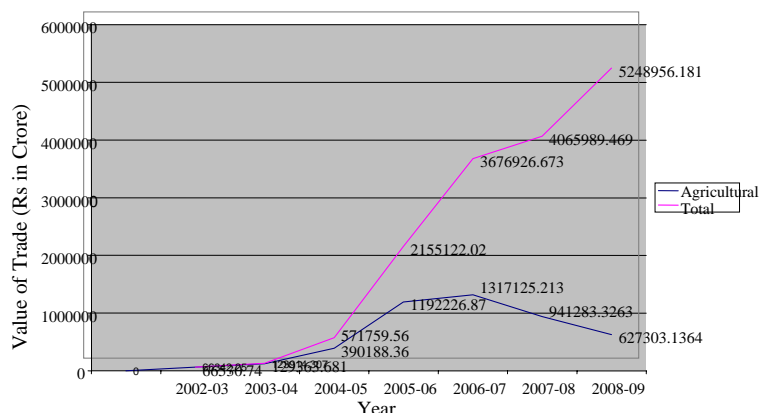


Figure 1. Growth of Futures Trading Vis -a - Vis Agricultural Commodities

TABLE 1. VOLUME AND VALUE OF FUTURES TRADING IN INDIA  
(volume-lakh metric tonnes)  
(value – crore Rs.)

Sr.No. (1)	Name of the commodity (2)	Volume			Value		
		Period I (3)	Period II (4)	Percentage Change (5)	Period I (6)	Period II (7)	Percentage change (8)
A	Bullion	0.369 (0.04)	3.811 (0.06)	933.26	60789.38 (23.76)	2140991.78 (49.44)	3421.98
B	Metals other than Bullion	1.314 (0.14)	357.239 (5.77)	27079.93	980.26 (0.38)	640708.95 (14.79)	65261.12
C	Agricultural commodities	914.833 (99.82)	3490.764 (56.41)	281.57	193481.64 (75.61)	961903.89 (22.21)	397.16
D	Energy	0.000 (0.00)	2276.243 (36.78)	-	633.38 (0.25)	586032.04 (13.53)	92424.56
E	Plastic	0.000 (0.00)	0.065 (0.00)	-	0.00 (0.00)	41.28 (0.00)	-
F	Other	0.000 (0.00)	60.608 (0.98)	-	0.00 (0.00)	946.18 (0.02)	-
	Grand Total	916.516 (100.00)	6188.728 (100.00)	575.25	255884.66 (100.00)	4330624.11 (100.00)	1592.41

Source: Compiled from the data obtained from website <http://www.fmc.gov.in>.

Note: Figures in parentheses indicate percentage to total value.

Table 1 indicates the average volume handled in futures trading during the period of study. During period I the volume of trade was about 917 lakh MT valuing Rs. 255885 crore. This increased to 6189 lakh MT having a value of Rs. 4330624 crores. The percentage increase recorded in the volume of trade was about 575. However the value of trade recorded much higher growth as compared to volume of trade.

Agricultural commodities led the initial spurt, and constituted the largest proportion of the total volume and value of trade during Period I. No change was noticed in the position of various commodities in terms of volume of trade during Period II. However, their position changed for value of trade. Bullion took over the

first place followed by agricultural commodities and metals. The change in the position of agricultural commodities was partly due to the stringent regulations, like margins and open interest limits, imposed on agricultural commodities and the dampening of sentiments due to suspension of trade in few commodities.

Futures trading in agricultural commodities comprises cereals, pulses, oilseeds, spices, vegetables, guar gum and seeds, rubber and other commodities. The composition of value and volume of agricultural commodities are examined in Table 2. There has been a very significant increase in the volume of futures trade in agricultural commodities during the Period II, by about 282 per cent. The overwhelming bulk of this increase is accounted for by chana, wheat, maize, guar

TABLE 2. COMPOSITION OF AGRICULTURAL COMMODITIES FUTURES MARKET

Sr. No. (1)	Agricultural commodities (2)	Volume (lakh MT)			Value (Rs./crores)		
		Period I (3)	Period II (4)	Change (per cent) (5)	Period I (6)	Period II (7)	Change (per cent) (8)
1.	Chana/Gram	36.21 (3.96)	554.46 (15.88)	1431.24	5595.38 (2.89)	140694.13 (14.63)	2414.47
2.	Urad	21.74 (2.38)	54.88 (1.57)	152.41	3425.83 (1.77)	17848.71 (1.86)	421.00
3.	Tur	0.12 (0.01)	17.97 (0.51)	14467.91	20.16 (0.01)	3565.76 (0.37)	17587.29
4.	Wheat	12.48 (1.36)	78.41 (2.25)	528.27	959.77 (0.50)	7398.19 (0.77)	670.83
5.	Rice	1.60 (0.17)	0.79 (0.02)	-50.83	210.86 (0.11)	152.01 (0.02)	-27.91
6.	Maize	0.68 (0.07)	36.00 (1.03)	5219.92	36.56 (0.02)	2812.39 (0.29)	7591.84
7.	Soy oil	151.86 (16.60)	327.35 (9.38)	115.56	62359.12 (32.23)	160786.91 (16.72)	157.84
8.	Mentha oil	0.00 (0.00)	3.96 (0.11)	0.00 (0.00)	0.00 (0.00)	23379.79 (2.43)	0.00
9.	Guar seed	267.05 (29.19)	955.34 (27.37)	257.74	43249.40 (22.35)	184188.57 (19.15)	325.88
10.	Guar gum	9.61 (1.05)	14.82 (0.42)	54.19	4470.72 (2.31)	7119.71 (0.74)	59.25
11.	Potato	0.00 (0.00)	122.75 (3.52)	0.00	0.00 (0.00)	7235.17 (0.75)	0.00
12.	Chillies	0.00 (0.00)	33.84 (0.97)	0.00	0.00 (0.00)	17693.72 (1.84)	0.00
13.	Cumin seed	0.00 (0.00)	52.79 (1.51)	0.00	0.00 (0.00)	57797.67 (6.01)	0.00
14.	Cardamom	0.04 (0.00)	0.89 (0.03)	2451.56	148.24 (0.08)	4454.63 (0.46)	2904.95
15.	Pepper	4.86 (0.53)	56.59 (1.62)	1064.41	3635.11 (1.88)	74930.76 (7.79)	1961.31
16.	Rubber	2.21 (0.24)	5.07 (0.15)	129.95	1261.31 (0.65)	4758.47 (0.49)	277.26
17.	Other agricultural Commodities	405.10 (44.28)	1174.87 (33.66)	190.02	67107.28 (34.68)	247087.29 (25.69)	268.20
	Total	914.83 (100.00)	3490.76 (100.00)	281.57	193481.64 (100.00)	961903.89 (100.00)	397.16

Notes: Figures in parentheses indicate percentage to total value.

seed, potato, guar gum, cardamom and pepper. Trade in these eight commodities, which accounted for about 38 per cent of total futures trade in agricultural commodities in Period I, increased to over 85 per cent during period II. The percentage increased in these eight commodities exceeded the increase of futures trading volumes in all agricultural commodities taken together.

Four commodities (wheat, rice, urad and tur) were de-listed for futures trading towards the end of financial year 2006-07. This de-listing has been held responsible in many circles for the recent general downturn in futures trading in agricultural commodities. These four de-listed commodities together accounted for only 6.65 per cent of the total value of futures trading in all agricultural commodities in 2006-07. Thus, although this may have affected market sentiments adversely, the delisting did not have any major direct contribution to the decline in trading observed during Period II.

#### IV

With the resumption of trade, government realised and made a beginning in liberalising the commodity futures sector, with an advice to Forward Markets Commission to bring vibrancy in commodity futures and develop enabling conditions to participate in Global Trade. FMC decided to encourage commodity futures and allowed the creation of national electronic exchanges to overcome some of the structural impediments to the modernisation of commodity futures in 2002. Accordingly, the first National Multi-Commodity Exchange of Ahmedabad (NMCE) was started during November 2002. A year later, two more exchanges opened their doors in Mumbai—the Multi-Commodity Exchange (MCX) and the National Multi-Commodity Derivatives Exchange (NCDEX).

Almost all of futures trading in agricultural commodities are now accounted for by the three national exchanges. The other Exchanges have a miniscule share in the total volume. These exchanges though list large number of commodities, but the number of contracts actively traded is less than 20 per cent. There is only one exchange where 16 of the 49 listed commodities are traded. These exchanges also dominate for trade in selected agricultural commodities, i.e., NCDEX in guar and soy, NMCE in jute, pepper and coffee and MCX in soya oil and guar seed.

As against National Commodity Exchanges, the position and functioning is in a dismal state in Regional Commodity Exchanges (details are given in Annexure I). Most of the Regional Exchanges are quite old; however, one third of them have been promoted after 1997. Only in four regional Commodity Exchanges, trading system is electronic. Trading system of out crying is in practice in majority of exchanges. The dissemination of price information has been adopted by though about 80 per cent of regional Commodity Exchanges but the method is still very old. The use of banks has not been adopted by many exchanges. There is only one regional Commodity Exchange where percentage delivery settlement is five. In spite of all these, the growth in commodity futures trading has been substantial both in agricultural vis-a-vis others.

This section attempts to assess the size of existing and potential futures market for agricultural commodity. It is generally said that the size of the futures market should be in multiple of production. What is the desirable level? The information about the desirable ratio of production to volume of trade is hardly available. Further more there is no evidence about appropriateness of such ratio, i.e., production to volume of trade of futures market for agricultural commodities which can be taken as benchmark. An attempt have been made to estimate the same with the help of volume of trade of futures market (value of trade of agricultural commodities at current prices) to production level (value of the agricultural commodities at market prices) for the period 2002-03 to 2005-06. It may be seen (Table 3) that during the initial year the ratio for pepper was 2.014, gradually increased to 2.295 in 2003-04 and peaked to a level of 14.622 in 2004-05. Later this ratio declined to a level of about 12 times in 2005-06. In the pulses group, the chana/gram recorded the ratio of much below 1 during 2003-04, but increased to more than 4.4 times in 2004-05 and reached a peak level of 50 times in 2005-06. Similarly, for tur this was observed as 17 times. Urad was one such pulse where this ratio increased from about 7 times to about 104 times in 2005-06. In cereals group such ratio never touched a value of even one. In spices group except for pepper, this ratio hovered between 0.014 to 2.036 times during 2003-04 to 2005-06. It is interesting to mention that in guar seed such ratio was less than 1 during 2003-04, reached a alarming level of 112 times in 2004-05 and touched a dangerous level of 200 times in 2005-06. Such situation in futures trading of agricultural commodities indicates that market for this commodity is very deep and there is a tendency of speculation among traders of guar seed. The situation calls for defining desirable ratio of production to futures market for each agricultural commodity.

The discussions with the Experts in the subject reveals that there exists opportunity for each stakeholders of futures trading. Farmers quite often are faced with a risk of what to grow and when to sell. The futures trading offer such solutions both at pre-harvest model (the usual stories of futures prices determining what to grow, sell before harvest) and post harvest model (when to sell). There is huge opportunity for Indian growers – producers to take advantage of the futures trading. For governments, futures prices can be used for fixing Minimum Support Price/Statutory Monetary Price (MSP/SMP). For liquid commodities, these prices are good indicators for the government on the state of the crops and the futures price can be used as an input when fixing the MSP/SMP. Government can also use futures prices for intervention prior to the crisis i.e. it was known that the sugar production was going to be low this year and the signals came in November-December. Ideally, the government should have started work on say imports by reading these signals. This happened in case of wheat too in 2005-06 when the futures prices indicated a sub-optimal crop. All Agri –Business Companies can also avail this opportunity by hedging on the exchanges to protect their profit lines; both on the sales and raw

TABLE 3. RATIO OF FUTURES TO PHYSICAL VALUE OF TRADE FOR IMPORTANT AGRICULTURE COMMODITIES IN INDIA

Sr. No (1)	Name of the Commodity (2)	2002-03			2003-04			2004-05			2005-06		
		Value of futures (3)	Value of physical output (4)	Ratio of futures to physical (5)	Value of futures (6)	Value of physical output (7)	Ratio of futures to physical (8)	Value of futures (9)	Value of physical output (10)	Ratio of futures to physical (11)	Value of futures (12)	Value of physical output (13)	Ratio of futures to physical (14)
1.	Chana/Gram	0	3106.38	0.000	31.55	3924.45	0.008	16754.59	3793.16	4.417	234774.10	4782.62	49.089
2.	Urard	0	1724.80	0.000	0.01	1552.61	0.000	10277.49	1570.62	6.544	196904.49	1894.74	103.921
3.	Tur	0	1887.80	0.000	0.01	2120.49	0.000	60.47	2068.72	0.029	41548.02	2455.84	16.918
4.	Wheat	0	26181.25	0.000	39.99	29021.68	0.001	2839.31	28834.78	0.098	15970.18	32905.06	0.485
5.	Maize	0	3651.91	0.000	0.00	4714.90	0.000	109.69	4470.59	0.025	927.23	4933.63	0.188
6.	Guar seed	0	316.13	0.000	225.21	1474.64	0.153	129522.98	1158.11	111.840	330439.41	1651.88	200.038
7.	Potato	0.14	6434.79	0.000	0.00	6576.05	0.000	0.00	7159.97	0.000	579.17	8417.95	0.069
8.	Chillis	0	3228.95	0.000	0.00	4859.86	0.000	60.50	4243.72	0.014	7487.16	3678.15	2.036
9.	Cardamom	0	682.43	0.000	24.17	434.04	0.056	420.56	372.04	1.130	292.72	395.10	0.741
10.	Pepper	1235.60	613.40	2.014	1335.44	581.99	2.295	8334.28	570.00	14.622	8029.83	675.47	11.888
11.	Rubber	1.64	2529.64	0.001	1036.46	3445.37	0.301	2745.84	3817.90	0.719	4830.48	4116.16	1.174
	Total	1237.38	50357.49	2.457	2692.84	58706.10	4.587	171125.71	58059.61	294.741	841782.79	65906.61	1277.236

(value in Rs. crores)



materials fronts. Entities like those that Food Corporation of India (FCI) can also be made to hedge on Indian exchanges- FCI have done it on CBOT. So why not on Indian exchanges. The National Commodity Exchanges have opined that agricultural commodities have the potential to trade between 15 to 25 times of the underlying physicals. Taking a desirable level of ratio of say 20 times into consideration, and “Ministry of Agriculture” plan to double agricultural production by 2012, there is a huge potential for growth of futures market in agricultural commodities.

## VI

The commodity market is in its nascent stage. It is consensus that by the advent of commodity derivatives trading, a silent revolution is building up in the economy. Though trading volume in this new market is gradually catching up compared to that in the stock market, yet commodity exchanges are facing challenges that need to be addressed now. These are discussed in various groups, i.e., policy level, support infrastructure, APMC level and farmer level (Table 4).

TABLE 4. MAJOR CONSTRAINTS FACED BY VARIOUS STAKEHOLDERS OF COMMODITY FUTURES IN INDIA

Sr. No.	Type of constraints
(1)	(2)
(A)	Policy Level
1.	Definition of Goods under Futures Trading
2.	Absence of Options on Futures in Commodity Markets
3.	Absence of Banks Participation in Commodity Markets
4.	Absence of Warehousing Accreditation Agency
5.	Lack of Awareness & Information Dissemination
6.	Support Infrastructure
7.	Lack of Uniform Sales Tax
(B)	Trader Level
1.	Unorganised Physical Markets
2.	Lack of Adoption of Standardisation and Grading Practices while selling Agricultural Commodities
3.	Lack of Price Transparency in Mandis
4.	Lack of Interface between Spot and Commodity Exchanges
5.	Absence of Aggregators at Market Level
6.	Lack of Awareness among Traders
7.	Variation in Membership Fees, Trade Guarantee Fund, Base Capital, etc.
(C)	Farmer Level
1.	Poor Accessibility at Grassroots Level
2.	Lack of Knowledge of Commodity Future Trade
3.	Lack of Integration and Grouping at the Farmer Level
4.	Absence of Direct Participation of Farmer
5.	Lack of Availability of Support Infrastructure

The policy level constraints relate to definition of goods under futures trading, absence of options in commodity futures, lack of effective warehouse receipts and accreditation agency, absence of banks participation, mutual funds and foreign investors. At present, there is no policy or plans for creating awareness and information dissemination about futures market in India. Besides this, sales tax rates

on commodities are not uniform across states. The point of levy also differs from state to state. Multiple provisions for levy of taxes and additional levies, recoverability from the purchasers, exemptions and deductions, etc., create complexities. This does not allow commodity exchanges to function smoothly and with a single price language.

Commodity futures trading requires the presence of a well-developed support infrastructure in the country in the form of modern weighing, grading, standardisation and storage facilities at the mandis, chain of road/rail and electronically linked modern warehouses, affordable and reliable grading, standardisation and quality certification facilities, and e-linked rural knowledge centers. This support infrastructure helps in increasing the linkages between the physical and futures market, efficient price discovery and increased involvement of a larger number of commodity players including farmers. The investment required to bring India's agri-marketing infrastructure at par with the developed countries would be huge and cannot be borne by the government or private players alone. This calls for separate initiative drive for promotion of support infrastructure on massive scale.

The majority of the traders feel that the Indian agri-commodity sector is still lacking in a well-developed, organised and integrated market for spot trading of commodities. Any development in this front will directly facilitate the growth of the commodity futures markets also on those agri products. This will lead to ready availability of information on price, supply and demand and remove monopolistic and regulatory measures as seen in some cases in today's condition. To create physical and electronic linkages of all important mandies/centers trading in agri-commodities huge investment from public and private sector is needed. Further the bulk of products brought to the market are very often contaminated with dust, stones and other foreign matter added either by accident, or deliberately. Sometimes the product is immature, not properly dried, contains shriveled grains or damaged and rotten material. Such a product fetches a lower price to the farmers. Though India has developed standards and quality assurance/certification procedures, as well as standard quality tests and testing equipment, yet their spread is minimal. A good system of grading allows commodities to be traded by specification. Presently, the Directorate of Marketing and Inspection through APGM Act 1937 is involved in grading of agricultural commodities. The graded commodities under the Act bear the label of AGMARK. There is a need to develop uniform standards closely aligned to commercial practices. A farmer expects that there should be transparency in price offered, prevalent prices, other charges, etc. However, there is lack of transparency at the yard level. Transparency in marketing practices and information display will further empower farming community at the grassroots level. There is no interface between Spot and Commodity Exchanges. There is a complete absence of aggregators at the market level. A farmer may be producing 5 quintals of wheat, while the minimum contract size could be 50 quintals or one tonne. There is a need for aggregator who can pool the produce as per specification of contracts and offer

the produce for futures trading. Therefore, the farmer requires an aggregator who can suitably represent the farmer's interests on the commodity futures exchange on commercial terms.

Only about 22 per cent of the trader respondents were aware about futures trading. Traders lack in knowledge about commodity futures trading. They are unable to make distinction presently between speculation and futures trading. Knowledge about working pattern and procedure adopted by various exchanges are also not known to trader community. There is a large variation in the admission fees charged by various commodity exchanges. The admission fee is also non-refundable. Variation in trade guarantee fund among National Commodity Exchanges has also been observed. Further lock-in period for such fund as well as initial base capital is also high. The system of net worth requirement for becoming member needs to be streamlined. Huge amount of fees for becoming the members is one of the limiting factors for spreading of membership at the grassroots level.

There exists huge opportunity for farmers to take benefit of futures trading. The Guru Committee (2001) emphasised the role of futures trading for price risk management and marketing of agricultural produce. Farmers can derive benefit from futures markets (i) By participating directly/indirectly in the market to hedge their price risks and (ii) To take benefit of prices discovered on the platform of commodity exchanges by taking rational and well informed cropping/marketing decisions. Farmers complained about poor accessibility of commodity exchanges at the grassroots level. Majority of the farmers feels that commodity exchanges are confined to either close to mega markets or markets serving urban consumers. Currently, the commodity exchanges are present in around 500 cities. However, to reach to the farmers located in villages, the exchange terminals should penetrate to the far interiors of the country. Not many members have the capacity to expand to that extent with their own resources. Also the exchanges are not in a position to support such members by providing terminals and connectivity solutions to expand their business reach due to resource constraints. The market regulator is also ill-equipped in today's date to support such measures. As the commodity futures trading was officially banned in India for almost four decades, the domain knowledge and expertise for dealing in commodity futures is not widespread in the country. The rural community is immensely lacking in this regard. In the absence of awareness the actual benefit of commodity futures trading cannot be reaped by the rural masses and farming community. There is lack of integration and grouping at the farmer level.

The farmers can use agri-futures markets to transfer their price risks. The structure of markets, contract designs and other requirements of trading on these markets should be simple and easy to enable farmers to participate in these markets. There has been a significant increase in market infrastructure during the last three/four years. The network of screen-based Trader's Work Stations (TWS) of three National exchanges has spread to about 800 cities/towns of the country. Besides, there are 21 regional commodity exchanges trading in different commodities. The

number of commodities offered for futures trading has also been growing. The contract designs are tailored to meet the needs of the physical market. Despite these enabling facilities and provisions, the farmers are not yet patronising these markets in sufficient numbers except in some commercial commodities in specific regions, e.g., spices and rubber in Kerala. The low participation of farmers in futures trading is not unique to India alone. In fact, the direct participation of farmers in agri-futures markets is very low even in developed markets of US and Europe. A CFTC (USA) report submitted to the Committee on Agriculture of the House of Representatives in 2001 clearly states: "Available data indicate that overall direct producer use of futures and options market is relatively low, although many, mostly larger, farmers are regular user of the markets for hedging cash market positions. However, many producers benefit indirectly from active futures and options markets, either as member of co-operatives or through price discovery and price basing benefits offered by futures markets". The Indian farmer is less likely to participate directly as these markets are complex and the support infrastructure of warehousing and commodity finance is inadequate. Moreover, at the early stage of development of these markets, where liquidity in many commodities is low, they are prone to high impact costs. The awareness and knowledge of accessing these markets among farmers is yet not adequate. The farmers need to track these markets continuously. FMC and exchanges are making efforts to spread awareness and knowledge of these markets among farmers and also to make these markets safe for trading by them. A large number of awareness programmes have been conducted during the past two years. But they have to go a long way to attract farmers to participate in these markets. The cutting-edge traders no doubt have the understanding and capacity to participate in these markets. But how much benefit of these markets percolates to farmers through them depends on the level of competition among traders and the degree of awareness and capacity among farmers to extract these benefits for themselves.

Information provided by NCDEX suggests that there has been significant recent improvement in the participation of hedgers in agri-commodity contracts of NCDEX, which is the major exchange for agri-commodities. The data on Hedger-ratio of select agricultural commodities contracts of NCDEX (during 2007) shows a good participation by hedges. However, it is not clear from the data as to how many of these hedgers are the farmers. Most of them are corporate, stockiest, traders and co-operatives like NAFED/HAFED. To the extent actual commercial users are using these markets – these markets are getting aligned to physical markets is a good indication of the robust growth of both futures markets and cash markets. The direct participation of farmers, as found in the survey conducted for that study, is almost negligible. Another indicator of access of these markets by agricultural producer/trader is that the clients who are using these markets are not concentrated in metro and big cities. The client base of NCDEX is spread to small towns/cities. The places other than Delhi, Mumbai, Kolkata, Chennai, Bangalore, Hyderabad, Ahmedabad and Jaipur account for 68 per cent of total clients. Being based in small

in mofussil towns it can be presumed that users are closer to the farmers and therefore, the benefits of this market may be percolating to actual producers also, though indirectly.

## VII

To improve the performance of futures market in India the following suggestions are offered:

(a) Awareness at various levels, i.e., Government, media, influential thinkers, corporate, farmers, traders, etc., is to be created on war footing. The entire value chain as well as bureaucracy needs to be educated as these markets are susceptible to regular calls for bans, which harms the market. Even recently, higher prices dictated by fundamentals, forced the exchanges to increase margins and lower position limits, as there was pressure from above. Clearly, people need to understand that futures trading is not responsible for higher prices. (b) The absence of link between spot and futures market is creating inefficiencies. There is a strong need to develop the spot market and related it with the futures market. (c) There is a strong need to improve the delivery system. More deliveries have to take place to make the market more efficient, get in more value chain participants, and make the market more credible. Accordingly, there is a need to build on this infrastructure and processes. (d) There should be larger position limits for traders so that more value chain participants can come in. Presently we have limits set at lower levels to avoid concentration. However, this keeps several corporates out of the market, as their requirements are huge. By changing these limits, one can get buoyancy. (e) The fear psyche needs to be removed. Today a large number of traders are worried about bans being imposed as in the past they have had to settle at the existing prices, which meant losses for them. There is hence apprehension in their minds, which has been raised further by the sudden increase in margins, which normally drives the small player out who cannot get in the funds and has to close his position. In short, this ambivalence to trading should go. (f) As part of (e) we need to have an independent regulator who can take decisions on its own and not be directed by the government. (g) Options are necessary if farmers are to benefit. In the past, we have seen that farmers have questioned us that while futures protect against downsides, they do not give the benefit of upside movement in prices. (h) From the point of view of getting in liquidity, there is a need to have larger players like mutual funds, and banks participate. The FMC is apprehensive about allowing them in farm products. (i) Getting in farmers is important. This calls for quickly devising a scheme for aggregators so that there is someone who can pool the produce of farmers and hedge on their behalf. (j) In order to maximise the benefits to the farmers, awareness about negotiability of warehouse receipt (WR) should be created among the farming community. Warehouse Accreditation Agency should be promoted on a priority basis so that the confidence of bankers could be earned and farmers reap the benefit of

good prices (K) Variation in sales tax calls for introduction of VAT in all the states. Further, there is no need to levy sales tax when delivery takes place in electronic form, instead, purchase tax may be levied as and when commodities are withdrawn from the accredited warehouses. The purchase tax on the basis of the settlement price may be levied on the holder of goods. (L) Central Authority may be promoted to institute a system of designated surveyors to inspect and certify delivery. The Central Authority, under the Ministry of Agriculture, could establish a system of inspection, monitoring, and surveillance to ensure that the licensed graders comply with the prescribed standards, and the commodities truly reflect the quality and quantity. This would improve the collateral value of the goods, and consequently the credit flow to the commodity sector (M). To reach at the grassroots level, there is an urgent need to spread members in important production centers. Membership fee with a provision to deposit in instalments may also be introduced. Lock-in period should be reduced to one year instead of three years presently practiced by National Commodity Exchanges. The net worth for the new members may also be reduced in consultation with regulatory authority.

One must remember that when India goes in for capital account convertibility, we will have the comparative advantage in farm products and there will be a lot of international attention. Hence, we need to develop and deepen these markets, or else we will miss the bus.

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## ANNEXURE I

## SETTLEMENT AND TRADING SYSTEM IN NATIONAL AND REGIONAL COMMODITY EXCHANGES IN INDIA

Sr. No. (1)	Exchanges (2)	Year of establishment (3)	Memberships (4)	No. of contracts actively traded (5)	Trading (6)	Settlement (7)	Per cent delivery as settlement (8)	Price dissemination (9)	Use of Banks (10)
1.	National Multi-Commodity Exchange of India Limited.	November 2002	110	49	Electronic	Delivery, Cash	Plus/minus 1% for all commodities	Yes	Yes
2.	Multi Commodity Exchange of India Ltd.	November 2003	739	22	Electronic	Delivery, Cash	Less than 1% for most commodities	Yes	Yes
3.	National Commodity and Derivatives Exchange Ltd.	Recognised as of November 2003	563	26	Electronic	Cash, WRs	Not provided	Yes	Yes
4.	Ahmedabad Commodity Exchange Ltd., Ahmedabad	1956	213	1	Outcry	Delivery, Cash	Zero	No	Yes
5.	Bhatinda Om and Oil Exchange Ltd., Bhatinda.	1973	90	1	Outcry	Delivery, Cash	Zero	Yes	No
6.	Bikaner Commodity Exchange Ltd., Bikaner	2003	51	6	Outcry	Delivery, Cash	Less than 1% of all commodities	No	Yes
7.	The Bombay Commodity Exchange Ltd. Mumbai	1927	419	4	Outcry	Delivery, Cash	n/a	Not provided	Yes
8.	The Central India Commercial Exchange Ltd. Gwalior	1960	14-16	2	Outcry	Cash	n/a	Yes	Yes
9.	The Chamber of Commerce, Hapur	1923	181	2	Outcry	Delivery, Cash	Zero	Yes	No

(Contd.)

ANNEXURE I (CONCLD.)

Sr. No.	Exchanges	Year of establishment	Memberships	No. of contracts actively traded	Trading	Settlement	Per cent delivery as settlement	Price dissemination	Use of Banks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10.	The Coffee Futures Exchange India Ltd, Bangalore	1997	64	4 varieties of coffee	Outcry (elec. From October 2000-October 01)	Delivery or off-set	Less than 4% for all commodities	No	No
11.	First Commodity Exchange of India Ltd, Kochi	2001	54	2	Electronic	Delivery, Cash	Less than 1% for all commodities	Yes	Yes
12.	The Meerut Agro Commodities Exchange Co. Ltd., Meerut	1983	41	1	Outcry	Cash	n/a	Prices posted every 30 min.	No
13.	National Board of Trade, Indore.	July 1999	118	6	Both	Delivery/cash	1.9% for soy oil	Yes	Yes
14.	India Pepper and Spice Trade Association, Kochi	1957	187	3	Electronic	Delivery	All	Yes	Yes
15.	Rajdhani Oils and Oilseeds Exchange Ltd., Delhi	1976	67	2	Outcry	Delivery, cash	Zero	Yes	No
16.	The Rajkot Seeds oil and Bullion Merchants Association Ltd.	1991	100	2	Outcry	Delivery, cash	Zero	Yes	Yes
17.	Surendranagar Cotton oil and Oilseeds Association Ltd, Gujarat	1964	90	3	Outcry (going online)	Delivery	Approx. less than 10%	Yes	Yes
18.	Vijai Beopar Chamber Ltd., Muzzafamagar	1950	112	1	Outcry	Cash	n/a	Yes	No
19.	Haryana Commodities Ltd., Hissar	2004	59	1	Outcry	Cash	Zero	No	Yes
20.	Esgarindia Limited, Mumbai	2003	21	1	Electronic	Cash	n/a	Yes	Yes

Source: Roadmaps: Commodity Futures Market Development in India 2005 and Forward. Financial Markets International, Inc.