NCDEX
Pragati ka Solid Exchange

AGRIDEX

INDEX METHODOLOGY

NOVEMBER 2019

Contents

1 Introduction

NCDEX AGRIDEX is India's first return based agricultural futures Index which tracks the performance of the most liquid commodities traded on NCDEX platform. The index represents the basket of ten commodities that are selected based on the liquidity on the exchange platform. The NCDEX AGRIDEX serves as a benchmark and one can replicate the performance of the underlying commodities. These underlying commodities contracts are mostly deliverable, settled on spot prices, have circuits governing daily price limits and also restrict the size of participation using position limits at the client and member level. Strong surveillance exists both at the exchange and the regulator to prevent any abnormal trading behavior in these commodities. The index, therefore, will be a robust indicator of the broader market.

NCDEX AGRIDEX is computed in real-time using the prices of the 10 most liquid commodities traded on the NCDEX platform. The eligibility of its constituents is decided by the average traded value on the exchange platform and based on other SEBI guidelines. Commodities are weighted based on their national production value and their total traded value on the exchange platform.

2 Selection criteria for commodity futures

The Exchange has identified a set of general eligibility criteria for the inclusion of commodities in the index. These criteria are as follows:

- Commodities selection will be based on both endogenous (liquidity criteria) and exogenous (importance in Indian/ Global commodities market) importance. NCDEX has specified that the commodity to be included in the index must be a **physical commodity**. *[Note: Contract on a particular commodity not necessarily required to be settled by physical delivery, for the commodity to be considered a physical commodity].*

- Initially most liquid commodities are proposed for inclusion, however, based on circumstances and need for inclusion of additional commodities in the Index, the Index Committee may approve the same.

- For a commodity to be eligible for inclusion in the index, futures contracts on the commodity should be in existence for at least the previous 12 months, and should have traded for at least 90% of the trading days during the previous 12 months.

- For a Commodity to be eligible for inclusion in the index, traded volume data for such Commodity must be available for at least 1 year.
- As per SEBI guidelines, commodities having at least 80% of combined weightage in the index must fulfill **ADTV*** >= 75 Cr. [*Note: ADTV of a commodity will be cumulative of all the symbols at the commodity level.*]

- A commodity futures contract that is part of the index would be removed (or replaced), in case of a ban/ suspension/ curb/ regulatory action on commodity trading by the Govt. agency/regulator or other appropriate agencies.
- The removed futures contract would be replaced by the commodity futures that are now eligible for inclusion in Index. The commodities shall be added and removed at the end of the trading session. No changes shall be made in the index during market hours.

3 Weight Calculations

NCDEX AGRIDEX is a value-weighted index. Ten selected commodities are assigned weights based on:

- The total traded value of the commodity on the NCDEX platform in the last 12 months. For a normal rebalancing event, the last 12 months represent Jan-Dec. For untimely rebalancing, the last 12 months are considered. For example, if rebalancing is done on 28 July 2016, then liquidity data from 01 July 2015 to 30 June 2016 is considered.
- The latest available annual value of production data or estimates of production (average of the preceding five years) for the commodity. For example, for calculating weights for FY 2019-20, production data for FY14-15, FY15-16, FY16-17, FY17-18 and FY18-19 are used.

After computing production weights and liquidity weights, both are combined in a 1:1 ratio to calculate the final weights (also called CIPs).

3.1 Production Data Sources

Annual Production Data for the commodities are taken from very reliable sources. The sources are as follows:

- Agricoop: Cereals and Pulses
- Spice Board: Spices
- USDA: Sugar and Soya oil
- State Data: Guar seed

For derived commodities amount of production is estimated as:

$$Guar\ gum\ Production = Guarseed\ Production \times 30\%$$

$$Raw\ Cotton\ Production = Cotton\ Lint \times 34\%$$

$$Cottonseed\ Production = Raw\ Cotton\ Production \times 63.5\%$$

$$Cottonseed\ oilcake\ Production = Cotton\ Production \times 80\%$$

3.2 Value of production

The value of production of a commodity is defined as the total monetary value (in INR) of the agricultural commodity produced in the past one fiscal year in India.

The value of production is calculated by multiplying the total quantity produced with the average spot market price of the commodity.

$$Value\ of\ Production = \Sigma\ (Spot\ Price\ of\ Commodity\ \times Production\ )$$

Price of Commodity is the Average Spot Price from NCDEX spot polling for the Period of Interest.

Assumptions for calculating the Price of Commodity are as follows:

- In case 2 prices are available on the same day, then the latest price available for that day is taken as the spot price for that day.
- In case spot polling is not performed on a particular day, then Spot price for that day is not used in the calculation.
- The average is calculated only for days on which Spot Price is available.

3.3 Commodity Production Percentage

The production value of each commodity (in INR) on the national scale forms the basis of calculation of the commodity Production Percentage. The data for production value is obtained from reliable government sources. Data for the past 5 financial years is obtained for all the 10 commodities in the index and averaged. Final production data or the latest

production estimates are used for weight calculations. The CPP for each commodity is calculated as a percentage of the production value of the particular commodity to the total production value of all the commodities.

The following expression shows the calculation of CPP:

$$CPP(i) = \frac{Value\ of\ Production\ (i)}{Total\ Production\ Value\ of\ all\ commodities\ in\ Index}$$

3.4 Commodity Liquidity Percentage

The notional value of commodity futures traded on the NCDEX platform forms the basis of calculating the commodity liquidity percentage. The sum of the traded value over a period of last 1 calendar year is calculated for each commodity. The Commodity Liquidity Percentage (CLP) for each commodity is given as the percentage of the commodities traded value to the total traded value of all commodities. The following expression shows the calculation of CLP:

$$CLP\ (i) = \frac{Trade\ Value\ (i)}{Total\ Trade\ Value\ of\ all\ commodities\ in\ Index}$$

Where trade value is given by total value (in Crores) traded on the NCDEX platform.

3.5 Commodity Index Percentage

The Commodity Production Percentage and the Commodity Liquidity Percentage are combined in a 1:1 ratio to calculate the commodity Index percentage. A generalized formula for computing the CIP is

$$CIP = (0.5\ \times CLP) + (0.5\ \times CPP)$$

CLP: Commodity Liquidity Percentage

CPP: Commodity Production Percentage

For example, if commodity ABC has a Production Percentage of 40% and a Liquidity Percentage of 20% its weight in the index will be $(0.5 \times 40) + (0.5 \times 20) = 30\%$.

3.6 Floors and Caps to Commodity Weights

A cap of 20% and a floor of 3% is enforced onto the individual Commodity Index Percentage. The cap ensures that no single commodity dominates the index performance. The floor ensures that each commodity, however small, has a meaningful contribution to the Index. To

ensure diversification, no related group of commodities (sectors) may constitute more than 40% of the weightage in the index. Categories for various commodities are as following:

Table 1: Sector-wise commodity classification

	Sector	Commodities
1	Edible Oils and Oilseeds	RM Seed, Soybean, Refined Soy Oil
2	Pulses	Chana, Moong
3	Industrial Products	Guarseed, Guargum, Castorseed
4	Grains	Wheat, Barley, Maize, Paddy
5	Cotton Complex	Cotton seed oilcake, Kapas, Cotton
6	Spices	Turmeric, Dhaniya, Jeera
7	Softs	Sugar

If a commodity has ADTV < 75 Cr over the last 12 months, its weight in the index is capped at 15% as per SEBI guidelines.

Step 1. Sector-wise Cap

CIPs are calculated from the above-mentioned methodology. Cap/Floor are enforced on these CIPs so that final weights satisfy all the guidelines mentioned in section 2 of the document.

Step 1a: Adjusting sector weight to 40%: If weight for any sector exceeds 40% (over-weighted sectors), the excess is distributed among remaining commodities in proportion of their original/latest (latest means weight at end of the last step) weights, and keeping their individual as well as sectorial cap in check.

Example:

Table 2 Step 1a

Commodity	CIP	Excess = 5.61%	Change	Final CIP
RMSeed	15.42%		1.90%	13.52%
Soybean	21.74%		2.67%	19.07%
Soy Oil	8.45%		1.04%	7.41%
SECTOR	45.61%			40.00%

Step 1b: Individual caps within the over-weighted sectors: If any commodity-specific weight exceeds the cap after this process, the new excess is obtained from the commodity-specific weight, and is distributed among the other commodities in the sector in proportion to their latest weights.

Below example clarifies things further:

Table 3 Step 1b

Commodities	CIP	Excess = 6.50 %	Commodities	Change	Final CIP	Excess = 1.94 %	Commodities	Change	Final CIP
RMSeed	12.50%		RMSeed	1.75%	10.75%		RMSeed	1.15%	11.91%
Soybean	25.50%		Soybean	3.56%	21.94%		Soybean	-1.94%	20.00%
Soy Oil	8.50%		Soy Oil	1.19%	7.31%		Soy Oil	0.79%	8.10%
SECTOR	46.50%		SECTOR		40.00%		SECTOR		40.00%

In the above case, an excess of 6.50% is removed from this sector and will be distributed among other sectors. Excess is removed in proportion (1.75%, 3.56% and 1.19% from RMSeed, Soybean and Soy Oil respectively) to their original weights. In this example, it can be seen that the weight for Soybean breaches the 20% cap, so need 1 additional step is needed in which the excess of 1.94% is distributed to the other 2 commodities proportional to their latest weights.

Step 1c: Individual floors within the over-weighted sectors

The above step is also performed in case a commodity is below the floor. Weights are distributed keeping individual caps and floors in check.

Example:

Table 4 Step 1c

Commodity	CIP	Excess = 2.40 %	Commodity	Change	Final CIP
RMSeed	17.00%		RMSeed	0.96%	16.04%
Soybean	23.00%		Soybean	1.30%	21.70%
Soy Oil	2.40%		Soy Oil	0.14%	2.26%
SECTOR	42.40%		SECTOR		40.00%

Excess = 1.70 %

Commodity	Change	Final CIP	Deficit = 0.53 %	Commodity	Change	Final CIP
RMSeed	1.49%	17.53%		RMSeed	-0.53%	17.00%
Soybean	-1.70%	20.00%		Soybean	0.00%	20.00%
Soy Oil	0.21%	2.47%		Soy Oil	0.53%	3.00%
SECTOR		40.00%		SECTOR		40.00%

In the last step, a deficit of 0.53% is taken from RMSeed only as Soybean is at 20% cap level.

For sectors whose weights are below 40%, the step 1 is not applicable.

Example:

Table 5

Commodity	CIP
RMSeed	12.00%
Soybean	23%
Soy Oil	2.40%
SECTOR	37.40%

For this case, step 1 is not applicable and jumps directly to step 2.

Following example shows the implementation of Step 1:

Table 6

BASE DATA			STEP 1		
	CIP			CHANGE	CIP
CASTOR	6.00%		CASTOR		6.00%
COCUD	10.00%		COCUD		10.00%
CORIANDER	2.00%		CORIANDER		2.00%
GUARGUM	6.00%		GUARGUM		6.00%
GUARSEED	21.00%		GUARSEED		21.00%
JEERA	8.00%		JEERA		8.00%
RMSEED	15.00%		RMSEED	-1.36%	13.64%
SOYBEAN	21.00%		SOYBEAN	-1.91%	19.09%
SOY OIL	8.00%		SOY OIL	-0.73%	7.27%
TURMERIC	3.00%		TURMERIC		3.00%
SECTOR	100.00%		SECTOR		96.00%
			EXCESS		4.00%

Step 2 Commodity wise cap and floor

In this step, commodity wise cap and floors are enforced. Any sector for which step 1 was applicable, is not modified in this step.

Step 2a: Individual Caps: Excess left from step 1 is added to any commodity-specific excess and is redistributed among the commodities (which were not a part of step 1 and whose weights are more than the cap itself) keeping the sector-wise cap in check. Applying step 2a to the example given above.

Table 7

STEP 2a	CHANGE	CIP
CASTOR		6.00%
COCUD		10.00%
CORIANDER		2.00%
GUARGUM		6.00%
GUARSEED	-1%	20.00%
JEERA		8.00%
RMSEED		13.64%
SOYBEAN		19.09%
SOY OIL		7.27%
TURMERIC		3.00%
SECTOR		95.00%
EXCESS		5.00%

STEP 2a	CHANGE	CIP
CASTOR	0.86%	6.86%
COCUD	1.43%	11.43%
CORIANDER	0.29%	2.29%
GUARGUM	0.86%	6.86%
GUARSEED	0.00%	20.00%
JEERA	1.14%	9.14%
RMSEED	0.00%	13.64%
SOYBEAN	0.00%	19.09%
SOY OIL	0.00%	7.27%
TURMERIC	0.43%	3.43%
SECTOR		100.00%

Excess from the commodity-specific cap is obtained (1% in this example for Guarseed), taking the total excess to 5%. This 5% is distributed to other commodities in proportional to their original/latest weights.

Step 2b: Individual Floors

In this step, Coriander weight is brought to the floor of 3% and is redistributed to other commodities in proportion to their latest weights.

Table 8

STEP 2b	CHANGE	CIP
CASTOR	-0.13%	6.73%
COCUD	-0.22%	11.21%
CORIANDER	0.71%	3.00%
GUARGUM	-0.13%	6.73%
GUARSEED	0.00%	20.00%
JEERA	-0.17%	8.97%
RMSEED	0.00%	13.64%
SOYBEAN	0.00%	19.09%
SOY OIL	0.00%	7.27%
TURMERIC	-0.06%	3.36%
SECTOR		100.00%

The final weights obtained above satisfy all the rules set forth earlier. In case the final weights obtained breach any guideline specified earlier, the steps are repeated.

Final weights obtained are rounded up to 8 decimal places. For example, 0.15232425163 is rounded to 0.15232425.

4 Index Construction Methodology

NCDEX AGRIDEX tracks the value of the hypothetical investment portfolio starting at 1000 on the day of the launch of the index. The portfolio is weighted as per CIPs, which are explained in the previous section. We define separate commodity-specific indices as the sum of value invested in front contract and value invested in the next contract.

$$Comm\_Index_t^c = V_t^f + V_t^n$$

At the time of launch of the index,

$$V_t^f = 1000 \ and \ V_t^n = 0.$$

NCDEX AGRIDEX is calculated from there Commodity Indices as the weighted sum of these commodity indices weighted by their CIPs:

$$Index_t = \sum_c Comm\_Index_t^c * CIP_c$$

At t = 0, Commodity Indices for all commodities start from 1000.

$$Comm\_Index_0^c = V_t^f + V_t^n = 1000 + 0 = 1000$$

$$Index_0 = \sum_c 1000 * CIP_c = 1000$$

During the non-roll period (after the expiry of contract), $V_t^n = 0$, and V_t^f is calculated as:

$$V_t^f = V_{t-1}^f * \frac{P_t^f}{P_{t-1}^f}$$

Here, P_t^f denotes the front month price at time t. P_{t-1}^f is the daily settlement price for front contact on the previous day. P_t^f refers to the last traded price for the front contract on the

current day for calculation of the index on the current day. For calculation of the closing price of the index, P_t^f refers to the daily settlement price for the front contract on the current day.

4.1 Roll-over Methodology

During roll-over, the hypothetical portfolio that the index represents is shifted from expiring front contracts (which are expiring in the current month) to next available contracts over a period of 3 days. On the first day of a roll-over, one-third of investment in the front contract is shifted to the next contract. On the second day of a roll-over, half of the remaining investment in the expiring front contract is shifted to the next contract. On the last day of a roll-over, all of the remaining investment in the expiring front contract is shifted to the next contract. Roll-over is done on the first 3 business days of the month.

Value invested in time 't' in front and next contracts respectively are calculated using:

$$V_t^f = \left(V_{t-1}^f * (1 - RW_t) \right) * \frac{P_t^f}{P_{t-1}^f}$$

$$V_t^n = \left(V_{t-1}^f * RW_t + V_{t-1}^n \right) * \frac{P_t^n}{P_{t-1}^n}$$

Where,

$$RW : Roll\ Weight.$$

$$RW = 1/3 \qquad for\ the\ first\ day\ of\ roll-over$$

$$= \frac{1}{2} \qquad for\ the\ second\ day\ of\ roll-over$$

$$= 1 \qquad for\ the\ last\ day\ of\ roll-over$$

After rollover and before the expiry of the contract, $V_t^f = 0,$ and V_t^n is calculated as:

$$V_t^n = V_{t-1}^n * \frac{P_t^n}{P_{t-1}^n}$$

An example of calculation for commodity index is provided below

Example (commodity-specific):

Table 9 Index Calculation during Roll-Over Period

Day	RW	Prices (Contract)		V_front	V_next	Index
		Front	Next			
0		750	800	1000	0	**1000**
1		760	810	$V_1^f = V_0^f * \frac{P_1^f}{P_0^f} = 1000 * \frac{760}{750} = 1013.33$	0	**1013.33**
2	0.33	740	785	$V_2^f = V_1^f * (1-RW) * \frac{P_2^f}{P_1^f}$ $= 1013.33 * (1-0.33) * \frac{740}{760} = 657.78$	$V_2^n = (V_1^f * RW + V_1^n) + \frac{P_2^n}{P_1^n}$ $= (1013.33 * 0.33 + 0) * \frac{785}{810} = 327.35$	**985.13**
3	0.5	765	805	$V_3^f = V_2^f * (1-RW) * \frac{P_3^f}{P_2^f}$ $= 657.78 * (1-0.5) * \frac{765}{740} = 340$	$V_3^n = (V_2^f * RW + V_2^n) + \frac{P_3^n}{P_2^n}$ $= (657.78 * 0.5 + 327.35) * \frac{805}{785} = 672.96$	**1012.96**
4	1	790	825	0	$V_4^n = (V_3^f * RW + V_3^n) + \frac{P_4^n}{P_3^n}$ $= (340 * 1 + 672.96) * \frac{825}{805} = 1038.13$	**1038.13**
5		775	815	0	$V_5^n = (V_4^n) * \frac{P_5^n}{P_4^n} = 1038.13 * \frac{815}{825} = 1025.54$	**1025.54**
T		P_T^f	P_T^n	0	$V_T^n = (V_{T-1}^n) * \frac{P_T^n}{P_{T-1}^n}$	$Index \cdot Value_T$
T+1		P_{T+1}^f	P_{T+1}^n	$V_{T+1}^f = (V_T^n) * \frac{P_{T+1}^f}{P_T^n}$	0	$Index \cdot Value_{T+1}$

*Where T denotes expiry date of the front contract

Post Expiry next month becomes front-month contract, V^n becomes V^f. Similarly, Prices P_t^n will be now calculated as P_t^f. *Where,*

P_t^n = Price of next month contract at the expiry date

P_t^f = Price of front-month contract at the expiry date

4.2 Rebalancing

The composition of the index is rebalanced after the financial year has ended i.e. on the first trading day of the new financial year. The commodities that qualify the selection criteria mentioned in section 2 of the document will be included in the index. The weights of the selected commodities will be recalculated. Once the changes in weights are approved by the Index Committee, the new composition of the Index is publicly announced (by the first trading day of January).

The formula for the index calculations changes due to rebalancing.

Let the Index value before the start of rebalancing is $Index_0$.

Normalization factor,

$$NF = \frac{Index_0}{1000}$$

Commodity indices for all commodities are reset back to 1000. The new Index formula becomes:

$$Index_t = NF * \sum_c Comm\_Index_t^c * CIP_c$$

This Normalization Factor remains constant throughout the year.

4.3 Conversion Ratio

Conversion Ratio shows that how many number of lots individual commodity contains in one lot of Index.

$$Conversion\_Ratio_c^f = NF * \left\{ \frac{V_t^f * CIP_c * 500}{P_t^f * \left(\frac{Lot_{Size_c}}{Base_{Value_c}}\right)} \right\}$$

$$Conversion\_Ratio_c^n = NF * \left\{ \frac{V_t^n * CIP_c * 500}{P_t^n * \left(\frac{Lot_{Size_c}}{Base_{Value_c}}\right)} \right\}$$

Here, Lot_{Size} is the quantity per lot. For example, 1 lot of Ref Soy Oil is for 10 MT. $Base_{Value}$ is a quotation unit. Ref Soy Oil is quoted per 10 kg.

One lot of Index has 500 units. Therefore, at the price of 1000, the index contract value is Rs. 5,00,000.

Example:

Conversion Ratio for Day1 (see Table 9 section 4.1) where the front-month contract price is 760 and next month's contract price is 860. Suppose CIP = 0.25, and normalization factor = 1.

$$Conversion\_Ratio_c^f = 1 * \left\{ \frac{1013.33 * .25 * 500}{760 * \left(\frac{10\ MT}{10\ Kg} \right)} \right\}$$

$$Conversion\_Ratio_c^f = 0.1667$$

$$Conversion\_Ratio_c^n = 1 * \left\{ \frac{0 * 0.25 * 500}{810 * \left(\frac{10\ MT}{10\ Kg} \right)} \right\}$$

$$Conversion\_Ratio_c^n = 0$$

4.4 Market Disruption events

Events that are not expected in the normal course of business will qualify as market disruption events. An example of such an event could be a ban/suspension of futures trading on the commodity by a regulatory organization. The index committee, responsible for index maintenance, will be the deciding authority in all such events and will take decisions related to index reconstitution and rebalancing.

In the event of such activity happens the following immediate actions shall be taken:

- Reselection of commodities (excluding banned/suspended commodities) (the logic for re-selection shall be the same).
- Recalculation of weights (using the same logic)
- Recalculation of the normalization factor

Index changes shall be implemented only after market hours. No change in the process will be made during market hours.

Disclaimer

NATIONAL COMMODITY & DERIVATIVES EXCHANGE LTD (NCDEX) BY PUBLISHING THIS DOCUMENT DOES NOT MAKE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, NOR ACCEPT ANY RESPONSIBILITY, REGARDING THE ACCURACY OR COMPLETENESS AS TO THE RESULTS TO BE OBTAINED BY NCDEX, OWNERS OF THE PRODUCT, OR ANY OTHER PERSONS OR ENTITIES FROM THE USE OF INDEX OR ANY DATA INCLUDED THEREIN.

THE NCDEX AGRIDEX ('INDEX') IS NOT SPONSORED, ENDORSED, SOLD OR PROMOTED BY NSE INDICES LTD. THE INDEX HAS BEEN EXCLUSIVELY CUSTOMIZED BY NSE INDICES LTD. FOR NCDEX AND HAS BEEN DEVELOPED AND IS BEING MAINTAINED AS PER THE SPECIFICATIONS AND REQUIREMENTS OF NCDEX. NCDEX DOES NOT MAKE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED REGARDING THE ADVISABILITY OF INVESTING IN THE PRODUCT LINKED TO INDEX AND AVAILING THE SERVICES GENERALLY OR PARTICULARLY OR THE ABILITY OF THE INDEX TO TRACK GENERAL COMMODITIES MARKET PERFORMANCE IN INDIA. NSE INDICES LTD. HAS NO OBLIGATION OR LIABILITY IN ANY MANNER WHATSOEVER IN CONNECTION WITH THE ADMINISTRATION, MARKETING OR TRADING OF THE PRODUCT BASED ON INDEX".

THE DETAIL AND DATA PROVIDED IN THIS DOCUMENT ARE FOR INFORMATION PURPOSES ONLY. IT IS NOT AN OFFER FOR PURCHASE OR SALE OF ANY TYPE OF FINANCIAL INSTRUMENT. PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RETURNS. ALL INFORMATION HAS BEEN CAREFULLY COMPILED TO ENSURE MAXIMUM ACCURACY, HOWEVER, NCDEX DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION/CALCULATION, OR THE COMPLETE ABSENCE OF ERRORS AND OMISSIONS CONCERNING INFORMATION INCLUDED OR CITED HEREIN OR FOR THE RESULTS OBTAINED FROM THE USE OF SUCH INFORMATION. NCDEX IS ALSO NOT RESPONSIBLE FOR ANY ERRORS IN TRANSMISSION

NCDEX MAY, FROM TIME TO TIME, EXERCISE REASONABLE DISCRETION AS IT DEEMS APPROPRIATE IN ORDER TO ENSURE INTEGRITY OF AGRIDEX INDICES. NCDEX MAY ALSO, DUE TO SPECIAL CIRCUMSTANCES, IF DEEMED ESSENTIAL, APPLY DISCRETIONARY ADJUSTMENTS TO ENSURE AND MAINTAIN THE HIGH QUALITY OF THE AGRIDEX INDICES CONSTRUCTION AND CALCULATION.

NCDEX SHALL NOT HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN AND MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY PERSON OR ENTITY FROM THE USE OF AGRIDEX INDICES. NCDEX EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE AGRIDEX INDICES, AND ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL NCDEX OR ITS/ THEIR AFFILIATES, AGENTS OR EMPLOYEES HAVE ANY LIABILITY FOR ANY LOST PROFITS (WHETHER DIRECT OR INDIRECT) ,PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSSES, EVEN IF NOTIFIED OF THE POSSIBILITY THEREOF WHATSOEVER RESULTING FROM RELIANCE ON THE INFORMATION CONTAINED HEREIN. THIS DOCUMENT MAY NOT BE REPRODUCED, DISCLOSED, OR USED IN WHOLE OR PART WITHOUT THE PRIOR WRITTEN CONSENT OF NCDEX.

NCDEX AGRIDEX is not sponsored, endorsed, sold or promoted by NSE Indices Ltd. The index has been exclusively customized for NCDEX and has been developed and is being maintained as per the specifications and requirements of NCDEX. NSE Indices Ltd. does not make any representation or warranty, express or implied regarding the advisability of investing in the Product linked to index and

availing the services generally or particularly or the ability of the index to track general commodities market performance in India. NSE Indices Ltd. has no obligation or liability in any manner whatsoever in connection with the administration, marketing or trading of the Product based on index.

NSE Indices Ltd. does not guarantee the accuracy and/or the completeness of the index or any data included therein and they shall have no liability for any errors, omissions, or interruptions therein. NSE Indices Ltd. does not make any warranty, express or implied, as to the results to be obtained by NCDEX, owners of the Product, or any other persons or entities from the use of index or any data included therein. NSE Indices Ltd. make no express or implied warranties and expressly disclaim all warranties of merchantability or fitness for a particular purpose or use with respect to index or any data included therein. Without limiting any of the foregoing, in no event shall NSE Indices Ltd. have any liability for any special, punitive, indirect or consequential damages (including lost profits), even if it is notified of the possibility of such damages.

NSE Indices Ltd. has taken due care and caution in calculation, development, compilation, maintenance and dissemination of index as per the requirements, specifications and instructions of the NCDEX.

Information has been obtained by NSE Indices Ltd. from NCDEX. However, NSE Indices Ltd. does not guarantee the accuracy, adequacy or completeness of information and is not responsible for any errors or omissions or for the results obtained from the use of such information. NSE Indices Ltd. is also not responsible for any errors in transmission.