



# **PALM OIL FUTURES TRADING MANUAL**



DCE Investor Education Material

## Futures Trading Manual Series

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Dalian Commodity Exchange

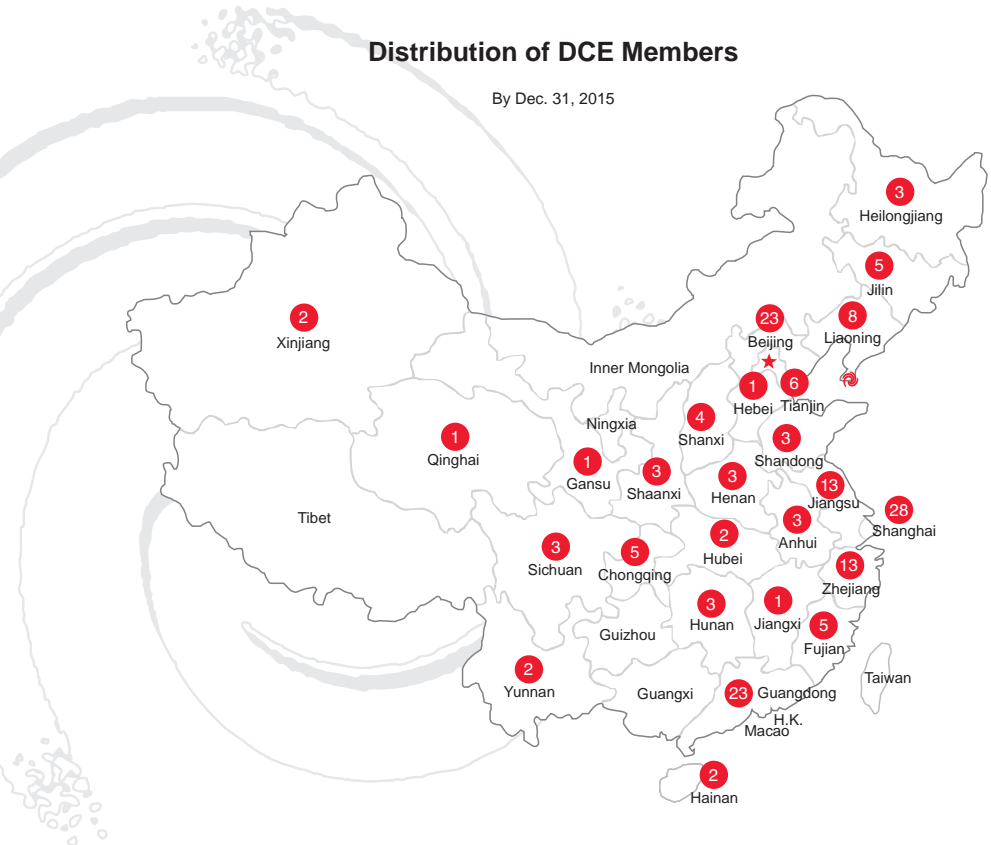


### PALM OIL FUTURES TRADING MANUAL



## Distribution of DCE Members

By Dec. 31, 2015







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## I. Palm Oil Overview

Crude palm oil is derived from palm fruit by boiling, crumbling and extracting. Refined palm oil (RBD PO) and palm kernel oil (RBD PKO) is in turn derived from crude palm oil by removing free fatty acids, natural pigments and smell. Palm oils with melting points of 24, 33 and 44 degrees can be obtained as required through fractionation.

Rich in carotene (0.05%-0.2%), palm oil is reddish in color. Its color cannot be effectively removed by alkali refining, but can be turned into light yellow through oxidation, or gradually decolorized by sunlight and air. Palm oil smells sweet with pleasant violet scent. It is semi-solid in room temperature and its consistency and melting point depend largely on the content of free fatty acids. In the international market, palm oil with low free fatty acids content is known as “soft oil” while that with high free fatty acids content “hard oil”.

Palm oil is one of the saturated fats as it is 50% saturated in fat. Fat is made up of saturated fats, monounsaturated fats and polyunsaturated fats. Over 97% palm oil can be digested and absorbed by human body. Like all vegetable oils, palm oil contains no cholesterol. Palm oil has two major characteristics. Firstly, it is stable and not easily oxidized as it contains high level of saturated fatty acids. Secondly, it is rich in Vitamin A (500-700ppm) and Vitamin E (500-800ppm). Nutritional and anti-oxidative, Palm oil is widely used in food and chemical industries.

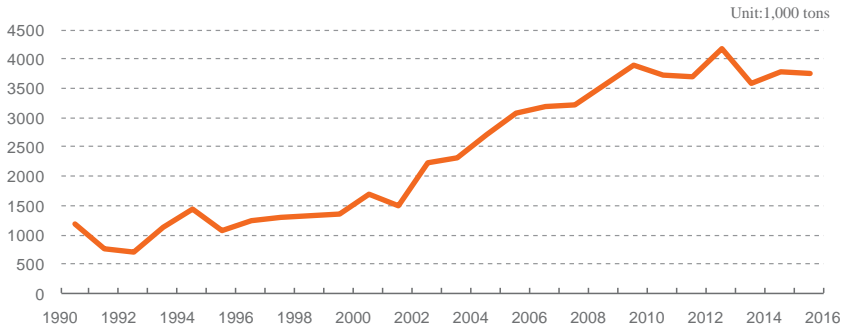
Table 1: Palm Oil's Major Industrial Usages

Type	Usage	Characteristics
Soaps	Making soaps	Economical, lasting scent
Epoxy Palm Oil	Plasticizers and stabilizers	Rather economical
Polyol	Making plastics	Hydrophobic
Polyurethane	Making foamed plastics	No polluting vesicants used during manufacturing
Polyacrylate	Paint	
Fatty acids	Making rubber, candles and cosmetics	Light color, high purity
Fatty acids used in soaps	High-end soaps	Easy to produce, flexible formulation
Fatty acids used in metal soaps	Metal soaps	
Fatty acid esters	Synthetic lubricant for industrial purpose	Lubricant, fluid under low temperature, anti-oxidative
Fatty acid esters used in soaps	High quality white soaps	
Sulfonate esters	Detergents	Easy to produce, strong detergency, eco-friendly, economical
Fatty alcohols	Surfactant	
Glycerin	Medical, industrial, military, daily chemical applications, etc.	

As the most widely used vegetable oil in industrial production, palm oil is so important that it is not to be substituted by other vegetable oils in food industry. Palm oil is the second most consumed vegetable oil in China, next only to soybean oil. It is estimated that in 2015/16, China will import 5.70 million tons.



China's Consumption of Edible Palm Oil, 1990/91-2015/16



Source: U.S. Department of Agriculture

As palm oil is seasonal and used in a lot of industries, its price is highly volatile and companies selling palm oil are large in number. The palm oil futures contract designed and launched by Dalian Commodity Exchange (DCE) is a risk-management and investment tool necessary to these spot companies.

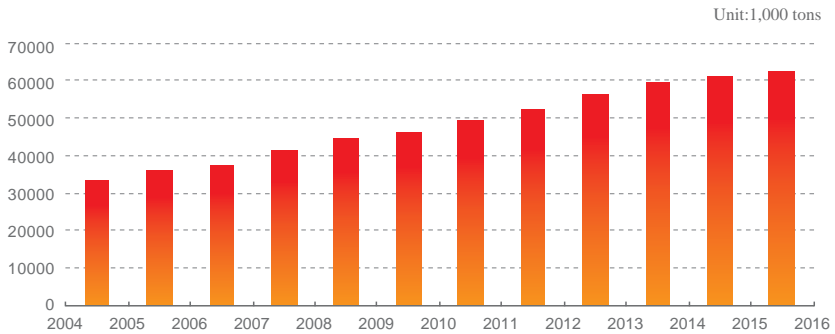
## II. Palm Oil Production, Consumption and Distribution Overview

### (I) Palm Oil Production, Trading and Consumption in the world

#### 1. Global Palm Oil Production

With the increase of arable fields and their output, the production of palm oil grew rapidly in recent years. Before 1989, global palm oil production was less than 10 million tons. From 1989 to 1997, its production increased slowly to 20 million tons. However, the output of palm oil soared as edible palm oil and palm oil were used in more and more industrial areas. Its global production leapt forward as palm oil production increased rapidly in Southeast Asia since 1998. By 2015/16, its global production overtook soybean oil and reached over 62,675,000 tons, which is 12 times of that of the 1950s.

### Annual Global Palm Oil Production (2004/05 - 2015/16)



Source: U.S. Department of Agriculture

The production and exportation is more concentrated than any other vegetable oils. Palm oil is produced in about 20 countries. Malaysia and Indonesia are the major producers and exporters, whose total production and exportation account for over 85% and 91% of those of the world respectively.

Indonesia is the world's largest palm oil producer. It produced 53% global palm oil in 2015 and overtook Malaysia in 2006. As climate changes, the unit palm oil production reduced in Malaysia while that of Indonesia increased. In addition, plantations further expanded in Indonesia. Therefore, Indonesia's potential output growth is generally larger than that of Malaysia.

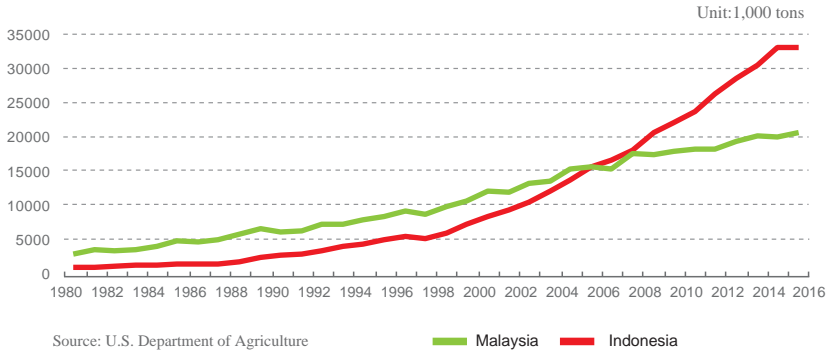
Malaysia, whose palm oil output accounted for 33% of the world's total, used to be the largest palm oil producer in the world. Malaysia's palm oil plantation covers 2.5 million hectares, which is 1/3 of its national arable fields. With harvesting area increased remarkably, Malaysia's palm oil output hit a record high of 20.16 million tons in 2013, or 3 times of that two decades ago. In 2015, Malaysia's palm oil production remained around 20.5 million tons.

#### 2. Global Palm Oil Trading

Palm oil is predominant in the global oil export market. In 2015/16, the trading volume of palm oil accounted for 61% of the world's total oil trading volume.

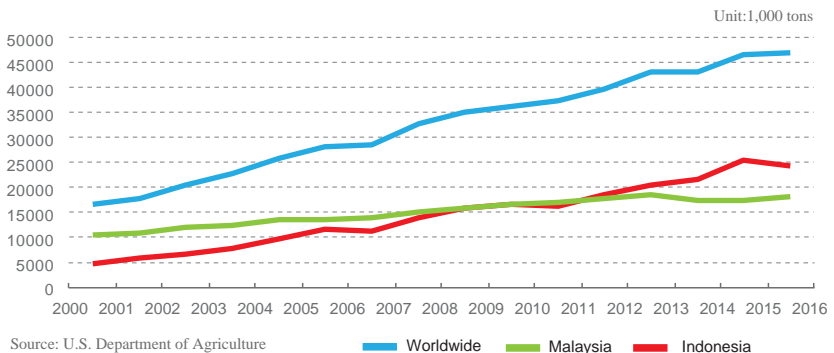


## Malaysia v.s. Indonesia Palm Oil Production, 1980-2015



Indonesia is currently the world's biggest palm oil producer and exporter, exporting 90% of its palm oil output. Only a small portion of palm oil exported by Indonesia and Malaysia is unrefined and crude. In 2015/16, the world's total palm oil exportation was over 46.96 million tons, of which Malaysia accounted for 39%, or 18.15 million tons, and Indonesia 52%, or 24.5 million tons. That means the exportation of the two countries added up to 91% of the world's total. Palm oil is also produced in and exported by Nigeria, Ivory Coast, Papua New Guinea, Singapore, Colombia as well as other countries and regions.

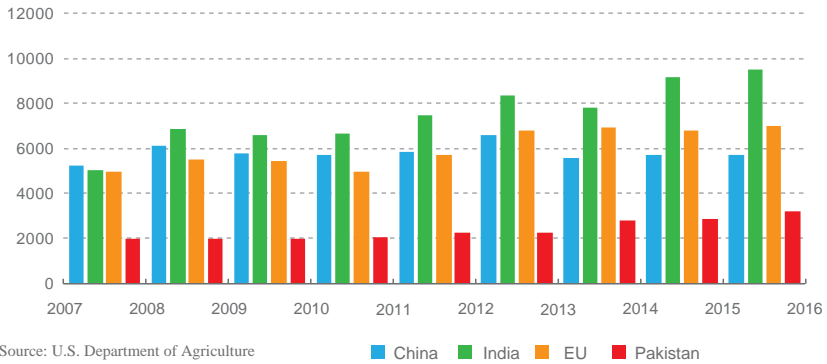
## Palm Oil Exportation of the Two Major Exporters and Worldwide, 2000-2015



India, China and EU are the three biggest palm oil importers. The three countries imported 9.53, 5.7 and 6.95 million tons respectively in 2015/16. It is expected that the volume will increase steadily in 2016/17.

Palm Oil Importation Volume by Country, 2007-2015

Unit: 1,000 tons

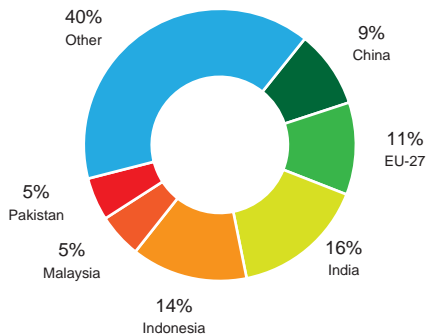


### 3. Global Palm Oil Consumption

The consumption of palm oil rocketed ever since 1995, in 2001 it was 24 million tons and in 2005 was 33 million tons, an increase of 38% in 4 years. In 2006, the global consumption was increased to over 35 million tons and in 2015 approximately 62.40 million tons.

Asian countries are major palm oil consumers, but EU also imports more palm oil as rapeseed oil alone cannot satisfy the biofuel industry’s increasing need. Currently, over 60% palm oils are consumed by India, 27 EU members, China, Indonesia, Malaysia and Pakistan.

Global Palm Oil Consumption by Country, 2015/16

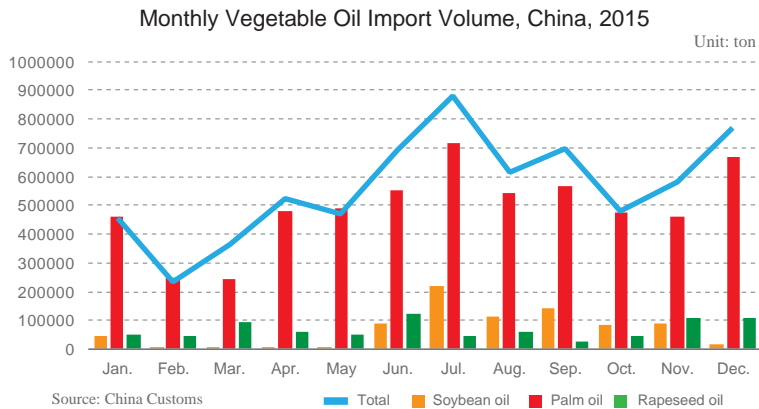


Source: U.S. Department of Agriculture

## (II) Palm Oil Importation, Distribution and Consumption in China

### 1. Palm Oil Importation in China

Palm oil consumed by China is mostly imported. In early 2006, China switched from quantitative restriction on the import of palm oil, a practice came into effect in 2002, to automatic import licensing, allowing companies to import according to their business needs. In 1996, China imported merely 1.01 million tons of palm oil. The number soared to 1.52 million tons in 2001 and 3.86 million tons in 2004, an increase of 154%. In 2015, 6 million tons of palm oil was imported to China.



According to statistics of the year of 2013, China imported more palm oil than soybean oil and rapeseed oil combined.

The imports were from Malaysia and Indonesia, which accounted for over 98%, as well as other countries such as Singapore, and Vietnam.

### 2. Palm Oil Processing and Distribution in China

In China, palm oil trading companies are plenty and the circulation channels well developed. North China (Tianjin and its neighboring cities as well as Shandong Province), East China (Shanghai and its neighboring cities such as Zhangjiagang, Taixing and Ningbo) and South China (Guangzhou and its neighboring cities such as Huangpu, Shenzhen and Xiamen) are the three major regions where palm oil is imported, processed and sold. The three regions import 24%, 34% and 34% respectively, adding up to 92% of the country's total importation.



## Palm Oil Trade Flow in China



There are thousands of palm oil processing factories in China, located in the neighborhood of major ports of entry. According to customs statistics, there were 50 plus large oil companies importing palm oil in 2009, whose import volume accounted for approximately 60% of China's total.

There are currently near 10,000 palm oil trading companies in China. Palm oil imported by the large ones is then distributed by a large number of distributors. In 2009, there were 80 plus trading companies importing approximately 34% palm oil for the country. Without dedicated warehouses of their own, these companies usually rent tanks from oil or warehousing companies.

### 3. Palm Oil Consumption in China

Palm oil is used both in food and industrial consumption. According to statistics provided by traders, most of China's palm oil consumption is food related, with 24 degree refined palm oil taking up over 60% market share. China's consumption of edible palm oil increased steadily from 1996 to 2001, and then picked speed from 2001 to 2003. Although the pace slowed down since 2003, the consumption amount kept setting new records. In 2013, 2014 and 2015, the amount was 3.57 million tons, 3.78 million tons and 3.75 million tons respectively.

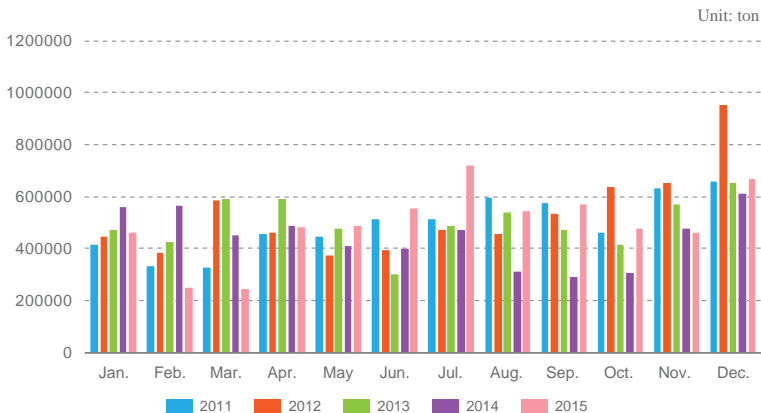


Palm oil is also widely used in a variety of industries. In recent years, the country's consumption and application of industrial palm oil increased in a stable manner. China consumed 350,000 tons of industrial palm oil in 2002, and 2 million tons in 2015, an increase of 470%. In 2013, China consumed recording-setting 2.10 million tons of industrial palm oil.

Around 80% imported palm oil is circulated as commodity, while the remaining 20% is used in end-using, raw material processing and commerce, as well as intermediary trading in bonded areas. There are more than one thousand significant palm-oil-consuming companies, alongside some four thousand small ones. These companies are mainly from catering, food processing and chemical industry, most prominent among them being instant noodle makers Uni-President and Ting Hsin International Group, and daily chemicals manufacturers P&G and Nice Group. Most palm-oil-consuming companies do not import by themselves, but buy from intermediaries. In 2009, there were only around 30 consumer-importers, importing 4% of the total amount.

Palm oil consumption is seasonal because of its relatively high melting point, which means more palm oil is consumed in summer than in winter. As a result, its importation is seasonal, too. According to statistics from 2011 to 2013, the amount is relatively low in January and February, around 300,000 to 500,000 tons, and relatively high at the end of the year. December is respectively the month with the highest importation amount of the year of 2011, 2012 and 2013. In general, the monthly importation volume of palm oil is relatively stable, without strong fluctuation.

China's Monthly Importation Volume of Palm Oil, 2011-2015



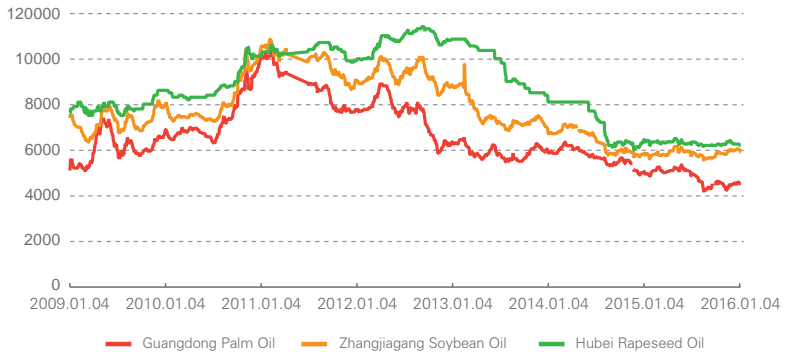
### III. Major Factors Influencing Palm Oil Price

Palm oil is an integral part to the world’s oil market. With the development of global economy, palm oil is a favorite of various sectors, especially food and chemical industry, for its unique nutritional components and relatively low price. Palm oil is extracted from palm fruits. Native to West Africa, palm trees were brought to Malaysia in the end of the 18th Century, and then were widely planted in Southeast Asia. Palm trees are planted in many Southeast Asian, South American and African countries, and most palm oil is produced in Malaysia and Indonesia.

Spot Price Movement of Palm Oil, 2009–2015



Spot Price Movement of Three Major Oils, 2009–2015





Among vegetable oils, the price movement of soybean oil and rapeseed oil is highly correlated, while the price correlation between palm oil and soybean oil, as well as that between palm oil and rapeseed oil, is much lower. According to statistics from 2009 to 2015, the correlation coefficient between palm oil and soybean oil is 0.93, that between palm oil and rapeseed oil 0.74, and that between soybean oil and rapeseed oil 0.91.

## IV. Measures of Risk Management of RBD Palm Olein Futures Trading

### (I) Margin Requirements

The minimum trading margin of RBD palm olein futures contract is 5% of the contract value. The trading margin for a newly opened position shall be charged as per the trading margin upon settlement on the previous trading day. When the open interest of a RBD palm olein contract changes, the Exchange may increase the levels of margins subject to the increase of open interest of the contract, and release them to the market.

#### Margins of RBD Palm Olein Futures Contract Approaching Delivery Day

Trading Date	Margins (RMB/Contract)
The 15th trading day of the month immediately preceding the spot-month	10% of contract value
The first trading day of the spot-month	20% of contract value

### (II) Price Limits

The price limit of RBD palm olein futures contract in the months before the spot-month is 4% of the settlement price of the previous trading day, while that in the spot-month is 6% of the settlement price of the previous trading day.

### (III) Position Limits

The position limit refers to the Exchange-stipulated maximum amount of speculative positions of a certain contract that a member or client can hold. In case the same client has more than one trading code at the different broker members, the total of all the open positions of any and all the trading codes shall not exceed the amount of the position limit for one client.

#### Non-spot-month position limits

Unit: Contract

Open interests	Non-Brokerage Members	Clients
≤50,000	10,000	5,000
>50,000	Unilateral open interests×20%	Unilateral open interests×10%

Position limits from the month immediately preceding the spot-month to the spot-month

Trading Date	Non-Brokerage members	Clients
From the 10th trading day of the month immediately preceding the spot-month	2000	1000
The spot-month	1000	500

Note: Positions established for the purpose of hedging, which should go through the approval procedures, are exempted from position limit.

## V. Rules and Procedures for Delivery of RBD Palm Olein Futures

### (I) General Delivery Rules

1. The RBD palm olein futures contracts shall take the form of physical delivery.
2. Physical delivery must be conducted by the members on behalf of the clients, and in the name of the members within the Exchange.
3. No position shall be liquidated by delivery if its holder is a natural person client.
4. At the close of the last trading day, all contracts that remain open shall be performed by delivery. The portions of positions corresponding to the buying and selling positions under the same client number shall be deemed to be automatically liquidated, no delivery shall be handled therefore and the liquidation price shall be calculated as per the delivery settlement price. The Exchange will match the contracts matured in the spot-month in computerized systems on the principle of “Least Matched Pairs”.
5. The circulation of the VAT invoice: the selling client issues a VAT invoice to the buying client; the invoice is transferred, collected, and verified by both the selling and buying members under the supervision of the Exchange.

### (II) Management of Warehouse Receipts on Par

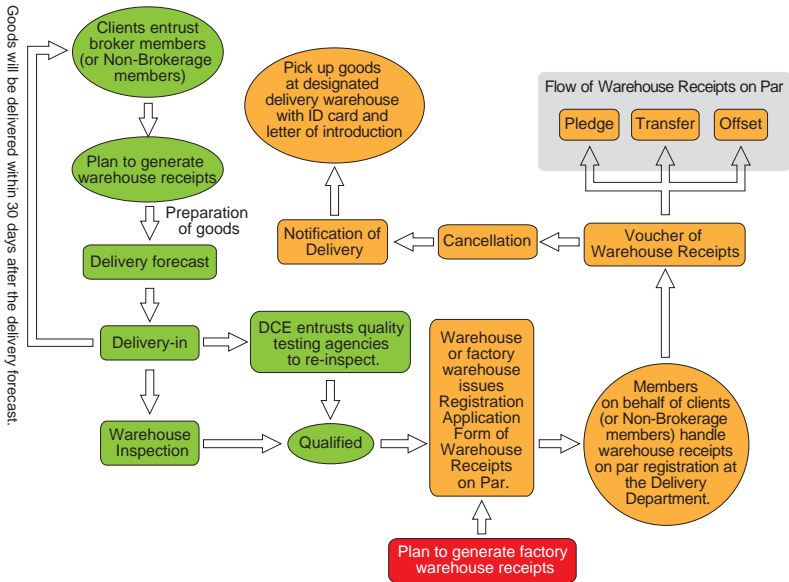
1. To generate a warehouse receipt on par requires such processes as report of delivery intention, delivery of goods into the warehouse, goods testing, document issuance by designated delivery warehouse, and registration at the Exchange.
2. The vendor shall report the intention for delivery to the Exchange and pay a deposit of 30 CNY/MT to the Exchange, before delivering goods to the designated delivery warehouse.
3. The sending and receiving weights of the goods are subject to the weighting carried out by the designated delivery warehouse. Besides, the designated delivery warehouse shall also carry out the quality testing of the goods to be delivered into the warehouse.
4. The designated delivery warehouse shall report to the Exchange once the quality of the goods is tested as qualified.





5. After the Exchange receives all the filing materials, the designated delivery warehouse shall issue the Application Form of Warehouse Receipts on Par to the member or the client.
6. The member or the client shall handle the warehouse receipt on par registration procedures at the Exchange with the Application Form of Warehouse Receipts on Par.
7. The warehouse receipts once generated may be used for delivery, transfer, pickup and pledge, as well as for offsetting futures trading margin.
8. The registration of warehouse receipts on par of RBD palm olein shall be cancelled within three working days after the last delivery day of each spot-month.

Flow of RBD Palm Olein Receipts on Par of Warehouse and Factory Warehouse



Note: The registration of warehouse receipts on par of RBD palm olein shall be cancelled within three working days after the last delivery day of each spot-month.

### (III) Delivery Forms and Workflows

The delivery of RBD palm olein futures can be conducted in the forms of exchange of futures for physicals (EFP) before the spot-month, and one-off delivery in the spot-month.

#### 1. EFP

The exchange of futures for physicals (EFP) shall refer to that the trading parties which hold the contracts of the same spot-month enter into a physicals sale and purchase agreement through negotiations, and close their respective futures positions at the price described therein and exchange the payments and physicals of the corresponding quantities. The EFP is divided into the warehouse receipt on par EFP and the non-standard warehouse receipt EFP. The EFP term is as of the contract listing date through the last but three trading day (inclusive) of the month preceding the spot-month.

Flow Chart of EFP

Time	Flow	Notes
Before 11:30 of the application day	The seller and the buyer apply for EFP by submitting <i>Application Form of Exchange of Futures for Physicals</i> .	1. Applications for EFP by warehouse receipts on par should be submitted with the right amount of payment by the buyer and receipts by the seller before settlement. 2. Delivery fees of EFP by warehouse receipts on par will be examined and approved on the very same day upon receiving of the application; Trading fees of EFP by other warehouse receipts are examined and approved within three days upon receiving of the application.
Settlement in the approval day	The positions of eligible buying and selling applicants in the opposite directions should be closed out at the negotiated price, and any profit or loss shall be included in the liquidation profit or loss of that very day.	After ending of each trading day, the Exchange will publish the EFP information of that very day. Positions of EFP shall be deducted from the open interests of that very day, and the trading result shall not be counted into the settlement price and trading volume of that very day.
After the settlement of the approval day	1. The Exchange shall be responsible for handling the handover of the warehouse receipts on par and the payment of the payments with respect to the warehouse receipts on par EFP. The Exchange shall issue to the buying Member the Warehouse Receipt on Par Holding Certificate, and pay 80% of the payments to the selling Member, and the remaining payments shall be fully settled after the selling Member submits the VAT special invoice. 2. The handover of the goods and the payment of the payments with respect to the non-standard warehouse receipts EFP shall be negotiated and determined by the parties to the trading, and no guarantee liability shall be borne by the Exchange.	1. With respect to the warehouse receipts on par EFP, the VAT special invoice shall be issued by the selling client to the buying client on the approval day. Any Member's delay or failure in submission of the VAT special invoice shall be handled subject to the applicable provisions of the <i>Detailed Settlement Rules of Dalian Commodity Exchange</i> . 2. An EFP with respect to any non-standard warehouse receipt will obligate the parties to the trading to submit, after the completion of the physicals trading, the certifications of the handover of the goods and the payment of the payments. The Exchange shall have the right to supervise and check the conducts of the parties to the trading with respect to the physicals.

Note: For detailed procedures, see *Detailed Delivery Rules of Dalian Commodity Exchange*.

#### 2. One-off Delivery

##### (1) Definition

After the last trading day of the contract, all non-liquidated contract holders must perform the contracts through delivery; and the portions of positions corresponding to the buying and selling positions under the same client number shall be deemed to be automatically liquidated, no delivery shall be handled therefor and the liquidation price shall be calculated as per the delivery settlement price.

##### (2) Delivery Workflows

## Flow Chart of One-off Delivery

Date	Time	Buyer		Seller	The Exchange
Last trading day	After market closing				Transform the trading margins of the buying positions of the spot-month to be the delivery advances
The 1st trading day after the last trading day (The day for submitting the warehouse receipts on par)	Before market closing			Submit to the Exchange all the warehouse receipts on par corresponding to its spot-month contract positions	
	After market closing				Publish such information as the products delivered at each delivery warehouse and the quantities of the warehouse receipts on par
The 2nd trading day after the last trading day (The matching day)	Before market closing	Declare the delivery intent to the Exchange according to the information published by the Exchange			
	After market closing	After the determination of the matching result, the buyer shall, within one trading day after the matching day, notify the seller of the items related to issuance of the VAT special invoice, including the name, address, taxpayer's registration number, amount and other information, in accordance with the provisions of the tax authorities.		Submit the VAT special invoice within seven days after matching	Carry out delivery matching, and the matching result and other information will be sent to the buying member and the selling member through the member service system.
The 3rd trading day after the last trading day (The handover day)	Before market closing		Additionally pay the balance payments corresponding to its spot-month contract positions		
	After market closing				Issue to the buying member the Voucher of Warehouse Receipts on Par

Note: For details, see *Detailed Delivery Rules of Dalian Commodity Exchange*.

## (3) Notes

- ① All the products listed on the Exchange may adopt one-off delivery.
- ② The delivery settlement price shall be the weighted average price of all transaction prices of the futures contract during the period as of the first trading day of the spot-month through the last trading day.
- ③ The VAT special (ordinary) invoice shall be issued by the delivery selling client to the appropriate buying client; and the VAT special (ordinary) invoice issued by the client shall be forwarded, obtained, and confirmed with assistance from, the members of both parties.
- ④ Any Member's delay or failure in submission of the VAT special (ordinary) invoice shall be handled subject to the applicable provisions of the *Detailed Settlement Rules of Dalian Commodity Exchange*.

## 3. Delivery Comparison

	EFP	One-off Delivery
Handling time	As of the contract listing date through the last but three trading day (inclusive) of the month preceding the spot-month.	Last trading day
Matching time	Negotiated by the buyer and the seller and within the handling period	After market closure of last trading day
Matching principle	Negotiated by the buyer and the seller	"Least Matched Pairs"
Settlement price	Negotiated by the buyer and the seller	Delivery settlement price
Main features	Negotiated by the buyer and the seller; with either warehouse receipt on par EFP or non-standard warehouse receipt EFP	Match after market closure of last trading day; centralized handling of delivery by the Exchange

#### (IV) Delivery Locations

The delivery warehouses designated for the RBD palm olein are divided into the delivery warehouses on par and other delivery warehouses in Guangdong Province, Shanghai, Zhejiang Province, Jiangsu Province and Tianjin and other places, and may be adjusted by the Exchange as the case may be. The list of the designated delivery warehouses will be separately published by the Exchange.

#### (V) Delivery Expenses

1. The delivery fee for RBD palm olein is 1 CNY/MT. The inspections fee is 3 CNY/MT.
2. A price ceiling is implemented for the delivery-in and delivery-out fees.
3. The costs for the miscellaneous operation services of the designated delivery warehouse shall be subject to a maximum price. The maximum charging standards shall be formulated and published by the Exchange.
4. Any items not covered in the provisions by the Exchange may be charged by the designated delivery warehouse by reference to the charging standards applicable to the relevant industry.
5. The charging standards for the warehousing and dissipation costs (including the warehousing costs and custody dissipation) shall be CNY 0.90 per day per ton.

## Annex 1: DCE RBD Palm Olein Futures Contract



## DCE RBD Palm Olein Futures Contract

Product	RBD Palm Olein
Trading Unit	10 MT/Contract
Price Quote	CNY/MT
Tick Size	2 CNY/MT
Daily Price Limit	4% of last settlement price
Contract Months	Monthly contracts (12 contracts per year)
Trading Hours	9:00 – 11:30 am, 1:30 – 3:00 pm Beijing Time, Monday – Friday, and other hours noticed by DCE
Last Trading Day	10th trading day of the spot-month
Last Delivery Day	3rd business day after the last trading day of the spot-month
Deliverable Grades	DCE RBD Palm Olein Delivery Quality Standard
Delivery Location	The warehouses designated by DCE
Trading Margin	5% of the contract value
Trading Fee	No more than 6 CNY/Contract
Delivery Method	Physical delivery
Ticker Symbol	P
Exchange	DCE

## Annex 2: DCE RBD Palm Olein Delivery Quality Standard

### DCE RBD Palm Olein Futures Delivery Quality Standard

(F/DCE P002-2011)

#### 1. Content and Scope

1.1 The Standard herein dictates the quality guidelines for RBD palm olein futures contracts delivered at the DCE.

1.2 The standard herein applies to RBD Palm Olein contracts on par delivered at the DCE.

#### 2. Cited Rules

The provisions of the following rules are incorporated herein by reference. For those rules noted with dates, their amendments (excluding corrections) and revised versions may not be applied to this standard; for those without noted dates, their latest versions shall be applied to this standard.

GB 15680-2009 Palm Oil

GB 3102.3-93 Quantities and Units of Mechanics

Chemical Industry Standard Terminology

#### 3. Terms and Definitions

3.1 In accordance with GB/T 15680-1995 Edible Palm Oil

3.2 In accordance with GB 3102.3-93 Quantities and Units of Mechanics

3.3 In accordance with Chemical Industry Standard Terminology

#### 4. Quality Requirements

##### 4.1 Characteristic guidelines

Item	Refractive index (40℃)	Relative density (specific gravity) (40℃/20℃ water)		Iodine value (g/100g)≥	Saponification value (by KOH) (mg/g)	Unsaponifiable material [g/kg(%)]≤	
Characteristic guidelines	1.458-1.460	0.899-0.920		56	194-202	13(1.3)	
Item	Fatty acid composition						
	Decanoic acid C10:0(%)	Lauric acid C12:0(%)	Myristic acid C14:0(%)	Palmitic acid C16:0(%)	Palmitoleic acid C16:1(%)	Heptadecanoic acid C17:0(%)	Heptadecenoic acid C17:1(%)
Characteristic guidelines	ND	0.1-0.5	0.5-1.5	38.0-43.5	ND-0.6	ND-0.2	ND-0.1
Item	Fatty acid composition						
	Stearic acid C18:0(%)	Oleic acid C18:1(%)	Linoleic acid C18:2(%)	Linolenic acid C18:3(%)	Arachidic acid C20:0(%)	Eicosenoic acid C20:1(%)	Docosanoic acid C22:0(%)
Characteristic guidelines	3.5-5.0	39.8-46.0	10.0-13.5	ND-0.6	ND-0.6	ND-0.4	ND-0.2

Note: ND means "not detected", defined as less than or equal to 0.05%.

## 4.2 Quality guidelines

Item	Melting point (°C) ≤	Acid value (by KOH) (mg/g) ≤		Peroxide value [mmol/kg(meq/kg)] ≤		Color (133.4mm Lovibond Cell) ≤		Odor and flavor	Transparency	Moisture and volatiles (%) ≤	Insoluble impurities (%) ≤
		Warehouse entry	Warehouse exit	Warehouse entry	Warehouse exit	Warehouse entry	Warehouse exit				
Quality Guidelines	24							Inherent odor and flavor of RBD palm olein, with no peculiar smell	40°C Clear and transparent	0.05	0.05
		0.20	0.23	2.5(5)	5(10)	Yellow 30 Red 3.0	Yellow 35 Red 3.5				

### 4.3 Sanitation guidelines: subject to the rules of GB/T 15680-1995

After inspection, palm oil whose acid value is more than 0.20 (mg/g) but less than or equal to 0.23 (mg/g) for warehouse entry, or that whose acid value is more than 0.23 (mg/g) but less than or equal to 0.25 (mg/g) for warehouse exit, with other guidelines in accordance with the quality requirements for delivery on par, can be used as substitutes for delivery, with the discount of CNY15 per ton.

If the acid value is more than 0.20 (mg/g) for warehouse entry or exit, the palm oil will be marked as crude oil.

### 4.4 Sanitation guidelines: subject to the rules of GB15680-2009

### 4.5 Authenticity requirements: subject to the rules of GB 15680-2009

### 5. Inspection methods, inspection rules and labels: subject to rules of GB/T 15680-2009

## 6. Storage and Transportation

### 6.1 Storage

The warehouse should be kept cold, dry, clean and dark. RBD palm olein should not be mixed with harmful and toxic substances.

### 6.2 Transportation

Transportation service should pay attention to safety, as well as prevention of exposure to sunlight, rain and seepage, pollution and peeling labels. Transportation service should maintain specialized vehicles for bulk delivery of RBD palm olein and keep the vehicles clean and sanitary.

## 7. Additional Notes

The DCE is responsible for the interpretation of the standard herein.



## Annex 3: List of Designated Delivery Warehouses for DCE RBD Palm Olein

### List of Designated Delivery Warehouses for DCE RBD Palm Olein (Warehouses)

No.	Name	Address	Postcode	Contact	Tel.	Delivery Area	Delivery Warehouse on Par (Yes/No)	Premium and Discount (CNY/MT) Compared with Delivery Warehouse on Par	Contractual Capacity (MT)
1	Taizhou Guochuan Port Co., Ltd.	45 West Tongjiang Rd., Taixing Economic Development Zone, Jiangsu Province	225404	Li Long	0523-87671657 0523-8767129(F) 13812490696	Tank Field	No	50	10000
2	Wilmar (Shanghai) Biotechnology Research and Development Center Co., Ltd.	118 Gaodong Rd., Pudong New Area, Shanghai	200137	Ren Zhe	021-31197013 021-68467908(F) 18621681299	Tank Field	No	50	10000
3	Jinguang Food (Ningbo) Co., Ltd.	1 North Huanghe Rd., Beilun District, Ningbo, Zhejiang Province	315800	Zhang Yun	0574-86886932 0574-86886931(F) 13906693639	Tank Field	No	50	10000
4	COFCO Xinsha Grains & Oils industries (Dongguan) Co., Ltd.	Xinsha Port Industrial Zone, Mayong Town, Dongguan, Guangdong Province	523147	Chen Sulan	0769-81257476 13928922223 0769-88236050(F)	Tank Field	Yes	0	30000
5	Sinograin Oils Industry (Dongguan) Co., Ltd.	Xinsha Port Industrial Zone, Mayong Town, Dongguan, Guangdong Province	523147	Jiang Baodong	0769-88236688-1193 0769-88230288(F) 13829192702	Tank Field	Yes	0	40000
6	Yihai (Guangzhou) Grains & Oils Industries Co., Ltd.	2 Dongjiang Avenue, Guangzhou Economic and Technological Development Zone	510730	Yu Ping	020-82208122 020-82089791(p) 13826117915	Tank Field	Yes	0	30000
7	Sinograin Zhenjiang Grains & Oils Co., Ltd.	Liangshan Village, Jianbi Town, Zhenjiang, Jiangsu Province	212006	Guo Hongfeng Zhang Jie	0511-81996632/44 0511-81996630(F) 15051116866 13861350613	Tank Field	No	50	20000
8	COFCO Eastsea Oils & Grains Industries (Zhangjiagang) Co., Ltd.	1 Donghai Rd., Jin'gang Town, Zhangjiagang, Jiangsu Province	215634	Wang Yinfang	0512-58389121 0512-58388235(F) 13115110095	Warehouse Area	No	50	10000
9	Kerry Grains & Oils (Tianjin) Co., Ltd.	95 Jinbin Avenue, Tianjin Port Bonded Zone	300461	Liu Fuchun	022-66271665 022-66271187(F) 13752718639	Tank Field	No	100	10000
10	Dongguan Cargill Grains & Oils Co., Ltd.	Xinsha Port Industrial Zone, Mayong Town, Dongguan, Guangdong Province	523147	Bao Yijie	0769-82661731 0769-88239556 (F) 15622280377	Warehouse Area	Yes	0	20000
11	Jiangsu River & Ocean Cereals and Oils Group Co., Ltd.	1 Baodao Rd., Jin'gang Town, Zhangjiagang, Jiangsu Province	215634	Xu Wen	025-84798199 02584799258 (F) 13906249916	Warehouse Area	No	50	20000
12	Cargill Grains & Oils (Nantong) Co., Ltd.	1 Tongxing Rd., Nantong Economic and Technological Development Zone, Jiangsu Province	226009	Zhou Bin	0513-85966703(O) 0513-85966703(F) 13811170634	Warehouse Area	No	50	20000
13	Chinatex Edible Oil (Tianjin) Co., Ltd.	68 Dongfang Avenue, Tanggu Bonded Zone, Tianjin	300461	Chen Jiguo He Jianpeng	022-66272182/276(O) 022-66272285(F) 13602186480 13752714481	Warehouse Area	No	100	40000
14	COFCO Excel Joy (Tianjin) Co., Ltd.	510 Bohai No.40 Rd., Lin'gang Economic Zone, Binhai New Area, Tianjin	300452	Xu Li	022-25618208 022-25618209 (F) 13602031376	Warehouse Area	No	100	30000
15	Sinograin Oils (Tianjin) Co., Ltd.	29 Haibin No.6 Rd., Tianjin Port Free Trade Zone, Tianjin	300461	Li Ling	022-66275096(O) 022-66271975(F) 13820205822	Warehouse Area	No	100	20000

Note: The contractual capacity refers to the minimum guaranteed warehouse capacity in the agreement signed by the delivery warehouses with the Exchange. The actual storage of goods by a delivery warehouse may exceed the contractual capacity.



## List of Designated Delivery Warehouses for DCE RBD Palm Olein (Factory Warehouses)

No.	Name	Address	Postcode	Contact	Tel.	Maximum of Warehouse Receipts on Par	Daily Delivery Speed (MT/Day)	Delivery Warehouse on Par (Yes/No)	Premium and Discount (CNY/MT) Compared with Delivery Warehouse on Par
1	Tianjin Longwit Grains & Oils Industries Co., Ltd.	136 Haibin No.5 Rd., Tianjin Port Bonded Zone	300461	Yang Yuwei	022-25764808 022-25764725 13820819160	30000	2000	No	100
2	East China Oils Industry (Taixing) Co., Ltd.	12 Yanjiang Rd., Taixing Economic and Technological Development Zone, Jiangsu Province	225404	Zhou Tao	0523-87679332 13852885897 0523-87679353	9000	600	No	50
3	Yizheng Fangshun Grains & Oils Industries Co., Ltd.	3 Yougang Rd., Yizheng, Jiangsu Province	211900	Wen Ruiheng	0514-83299628 0514-83299605(F) 13773360371	12000	800	No	50
4	Jingjiang Longwit Grains & Oils Industries Co., Ltd.	68 Yue Huaidai, Anning Village, Xin'gang Industrial Park, Jingjiang Economic Development Zone, Jiangsu Province	214500	Yang Yuwei	0523-84228416(O) 0523-84228422(F) 13641570858	18000	1200	No	50
5	Guangzhou Zhizhiyuan Grease Industry Co., Ltd.	Xin'an Industrial Park, West Wanhuan Rd., Wangqingsha Town, Nansha District, Guangzhou	511462	Ma Yixiang	020-87520888 020-85506263 (F) 15922116937	15000	1000	Yes	0

Annex 4: DCE RBD Palm Olein Price Daily Chart

DCE RBD Palm Olein Price Daily Chart 2012.1-2015.12





**PALM OIL FUTURES  
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