



# Castor Industry in China

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HENGSHUI JINGHUA CHEMICAL CO.,LTD. CHINA

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Hengshui Jinghua Chem in 2017



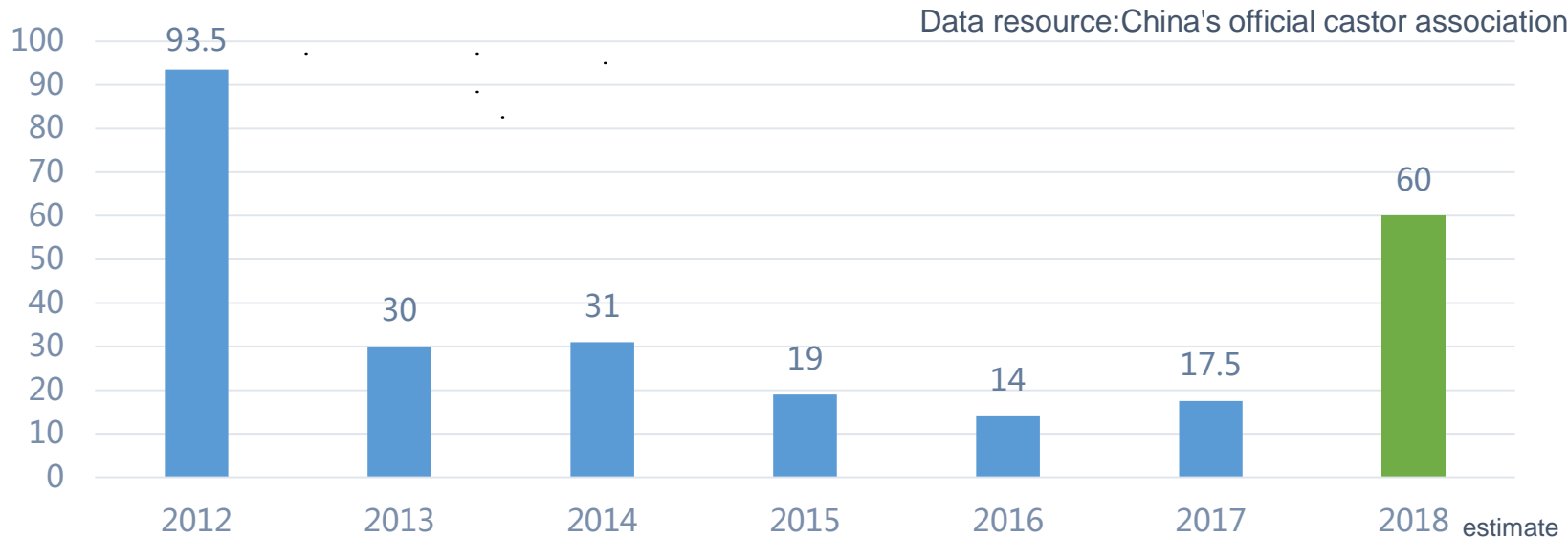
- **Jinghua·Rizhao steel(holding)Group** was set up in 2004, including Rizhao Steel Group, Jinghua Innovation Group and Yingkou Steel, which has 26000 employees. Its main business is steel、 investment、 real estate、 chemicals etc. It's turnover is \$23 billion in 2017.
- **Hengshui Jinghua Chemical Co., ltd.** is subordinate to Jinghua· Rizhao (holding)Group. It's the biggest manufacturer of sebacic acid and has two automated production lines and produced more than 42 KT sebacic acid in 2017, which accounts for 49% of global market, castor oil consumption is about 85KT .



# **1、 The situation of castor planting in China**



## 1)、2012–2017 Chinese castor seed sowing area (KHA)

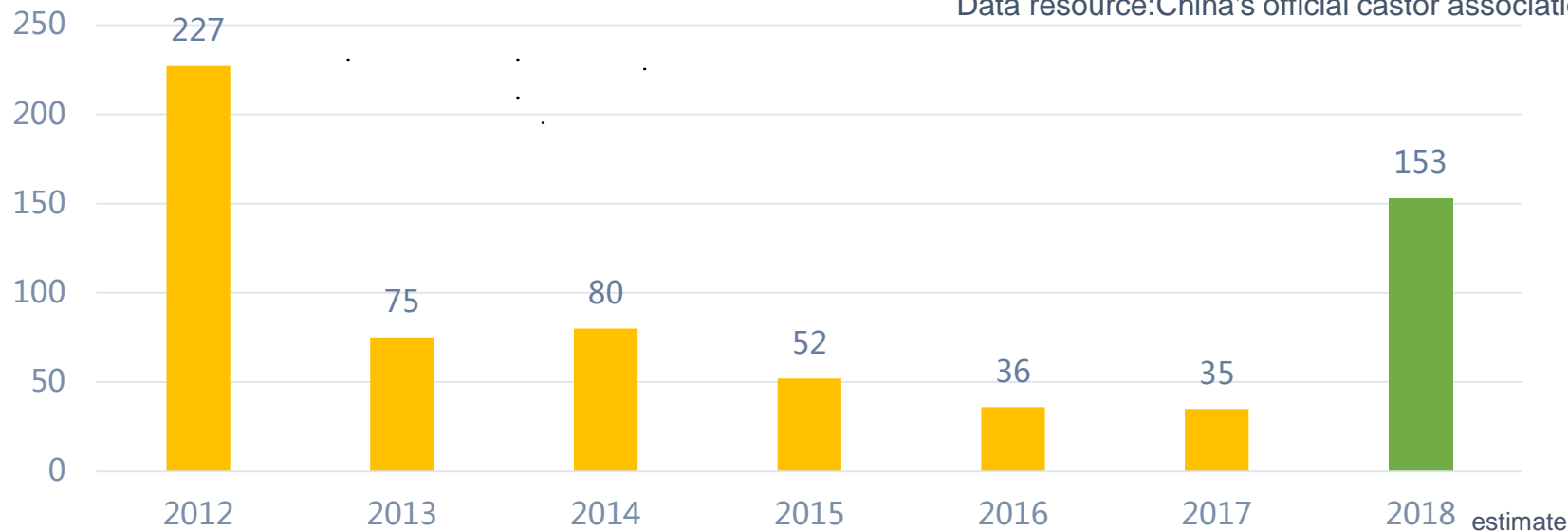


- In 2017, the cropping of castor plant in China continued to remain low, with an area of 17.5KHA, which was slightly higher than in 2016.
- In 2018, China was committed to the development of the castor industry. It is expected that the castor seed sowing area will increase in 2018 to reach around 60KHA.



## 2)、2012–2017 Chinese castor seed production (KT)

Data resource: China's official castor association

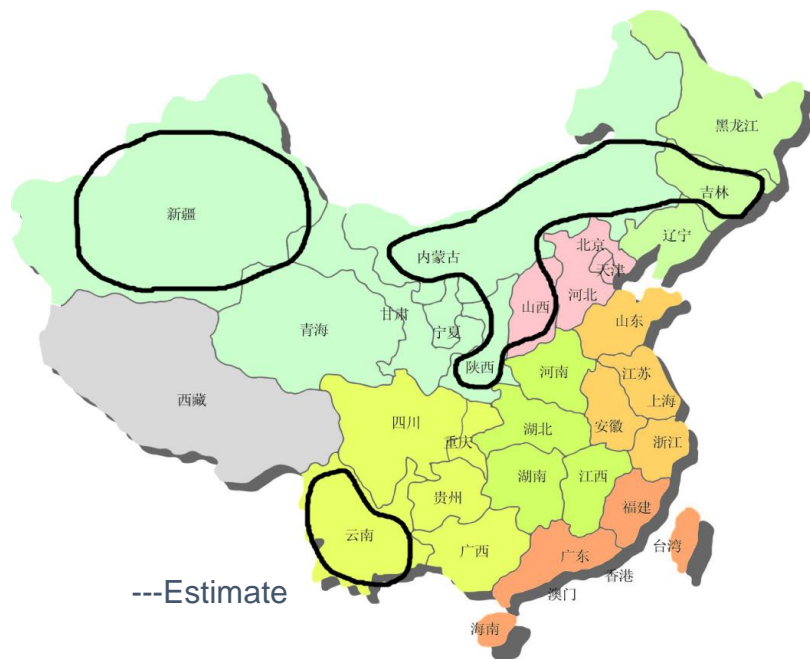


- In 2017, Chinese castor seed production is only 35KT, which is the lowest among recent years.
- in 2018, It is estimate that the castor seed sowing area will be 60KHA, and seed production will be 153KT.



### 3)、Castor seed sowing area in China

In China, the main planting area of castor is in Northeast of China, Xinjiang and Yunnan. In 2017, castor seed sowing area is 17.5KHA, seed production is about 35KT.



#### ABOUT 2018 CASTOR ASSOCIATION CHINA SAYS:

➤ castor seed sowing area will be higher than in 2017 reach to 60KHA in 2018 . REASON:

1).Some incompatible with the bottleneck of industrial development are overcome, such as planting patterns, mechanized harvest are processing .

2).China is committed to improving the environment and encourage the planting on abandoned land, farmers grow on such land castor has many incentives.

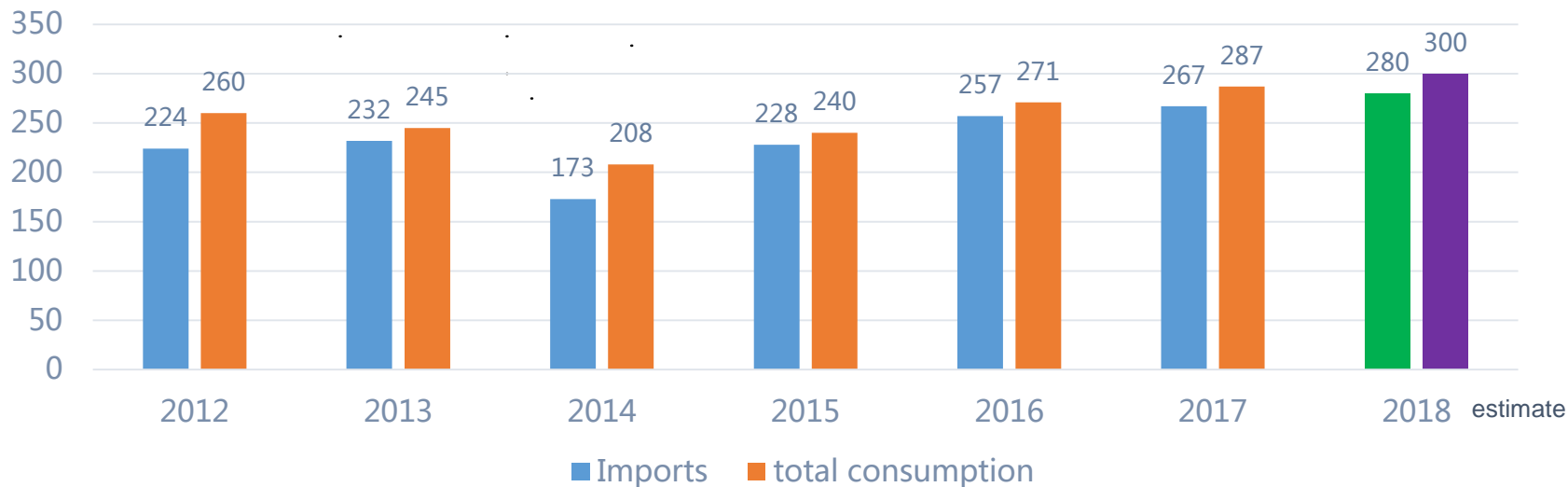
3).The downstream processing enterprises give good support to the castor industry.



## 2、 The situation of China imports castor oil



## 1)、2012-2017 Castor oil imports by China (KT)



- In 2017, China imported castor oil 267KT, it increased 4% compared with the year 2016. Castor oil total consumption was 287KT, it increased 6% than 2016. Two reasons for import increase: 1) Natural growth of China's economy, the total consumption of castor oil is growing gradually. 2) Castor seed planting had been declining since 2012.
- With the gradual expansion of the usage of castor oil downstream products, CHINA demand for castor oil will be increase in 2018. It is expected the total consumption will be about 300KT, of which the volume of imports will be expected to be about 280KT.



## 2)、China's leading Castor oil importers (MT)

No.	Company Name	2014	2015	2016	2017
1	Hengshui Jinghua	43748	62892	64569	79639
2	Casda Biomaterials	37737	48359	33588	32545
3	Tianxing Biotechnology	21357	27708	39449	26667
4	China Sinopharm	20865	28583	36663	24433
5	Wilmar	0	0	6060	16343
6	Sinochem Plastics	15139	20866	28947	15349
7	Jiangsu Zhongzheng	4011	615	4965	12065
8	Shandong Chiyue	0	0	7113	11127
9	China SDIC	1990	327	5481	4078
10	Others	28188	38458	30287	44447
T O T A L		173035	227808	257122	266693
comparation with last year		-25.4%	+31.7%	+12.9%	+4%

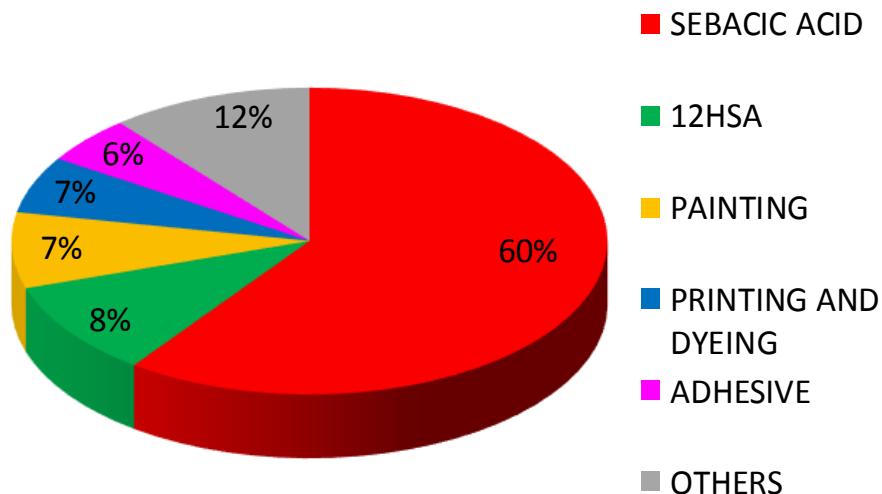
- In 2017, China totally imported castor oil 266693 tons, main importers are sebacic acid factories、12HSA factories、traders。
- In 2017, 149539 tons castor oil was imported by sebacic acid factories, accounting for 56% of the China's total imports.



### **3、 The application of castor oil in China**



## 1)、China's castor oil usage distribution in 2017 (KT)



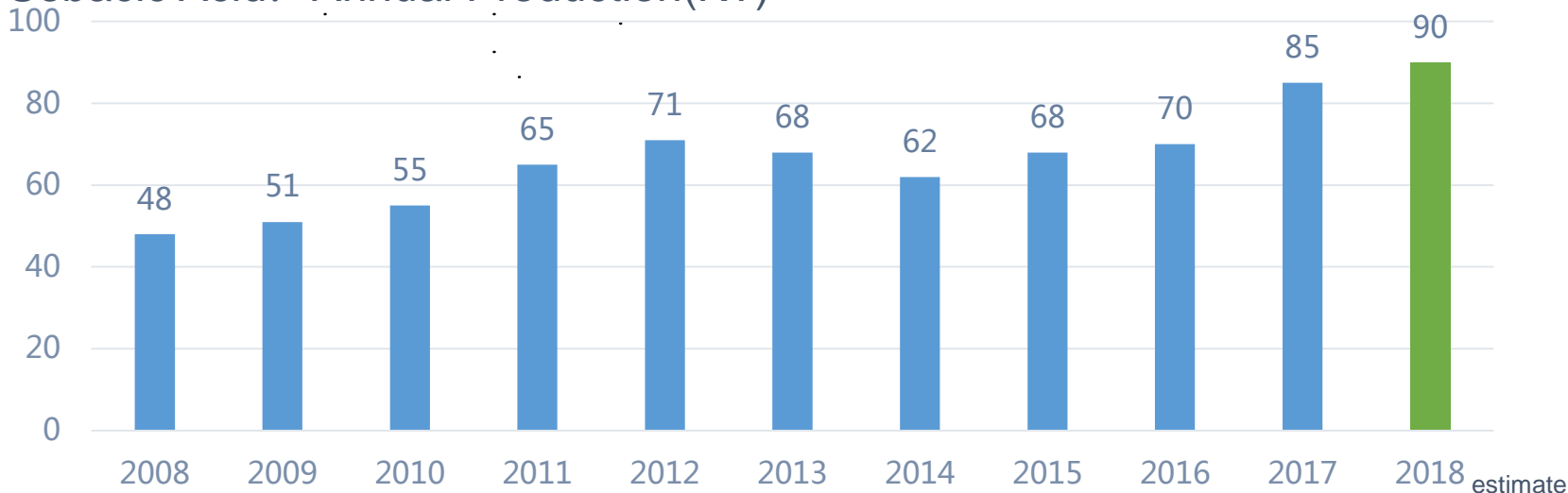
USAGE	KT
SEBACIC ACID	170
12HSA	23
PAINTING	21.5
PRINTING AND DYEING	20.5
ADHESIVE	18
OTHERS	34

- In China, sebacic acid and 12HSA are still the two major applications of castor oil and covered 60% and 8% separately of the total castor oil consumption in 2017.



## Castor oil processing industry in China

### ➤ Sebacic Acid: Annual Production(KT)



Sebacic acid market demand gradually increased in the past years. In 2017,sebacic acid total production was 85KT,castor oil consumption was 170KT,which accounted for 60% of the total castor oil consumption in China.With the usage of increasing, sebacic acid, as China's characteristic industry, its market demand is gradually increasing. In 2018,the market demand will maybe more than 90KT, castor oil consumption will maybe more than 180KT. However, according to our analysis, sebacic acid market demand will go down in the following years, because coolant, as the sebacic acid downstream products, market demand will decrease with the development of electric vehicles.



## 2)、Castor oil processing industry in China

### ➤ Sebacic Acid: Application

#### Esters

Mainly are DMS,DBS,DOS, among which DMS quantity is the biggest, mainly used in the produciton of light stabilizer.

#### Polymer

- Mainly is PA610/1010/410/1012.
- New types of semi aromatic polyamide material with high temperature resistance are develop rapidly in recent years. For example PA10T, PA1010T, PA10T11, PA10T10I, PA10T1010.
- Application fields: Auto parts, Instrument board, Control console, Transducer, Engine structure, Wheel gear, LED holder, Radiator, LED connector, etc.



#### Antifreeze/Coolant

It is the coolant used in automobile engines. At present, coolant is one of the major applications of sebacic acid and covers 30% of the consumption.

#### Other Application

Biodegradable material, electronic components, etc.



## 2)、Castor oil processing industry in China

### ➤ Sebacic Acid: Industry Situation

Sebacic acid is a chemical intermediate with castor oil as the main raw material, and the main production capacity is in China.

.Especially in recent years, Because of the production technology, industrial chain extension and other factors, sebacic acid are rarely produced in other countries .

With the rapid development of sebacic acid production technology, a few manufacturers mastered the core technology to greatly improving the quality stability and production efficiency,and improving production automation and green environment etc.

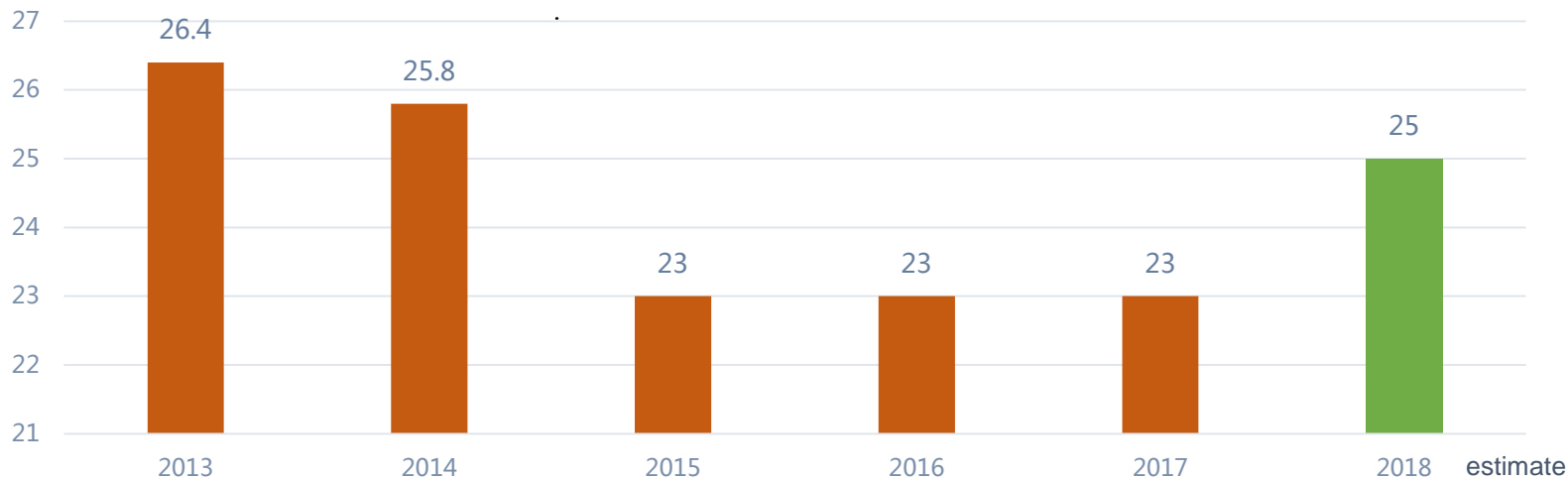
The sebacic acid industry has become a set of technology, capital-intensive, economies of scale, the industry chain concentrated industries.

It is expected that sebacic acid will be a very important link application field in the castor industry in recent years.



## 2)、Castor oil processing industry in China

### ➤ 12HSA: Annual Production (KT)



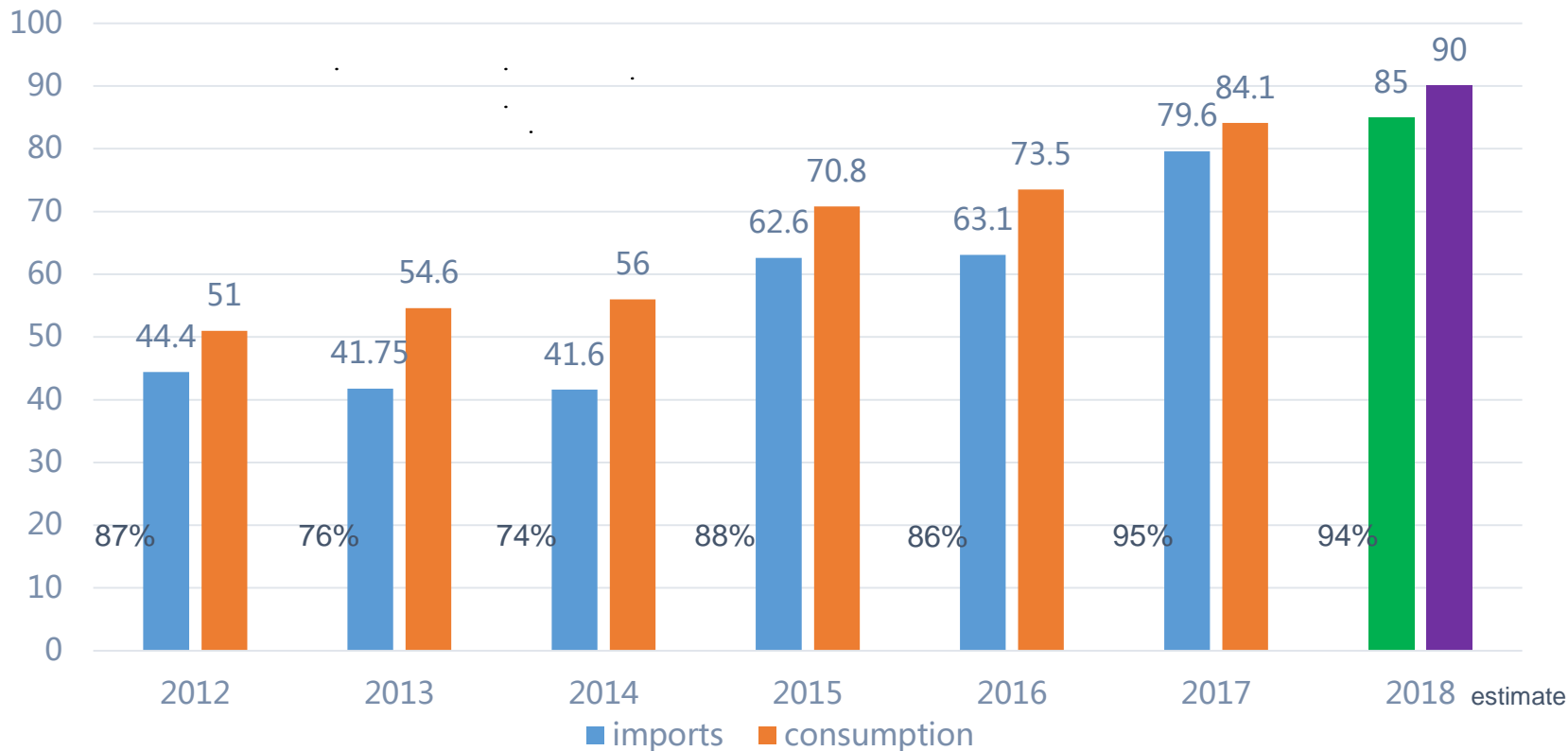
12HSA is a traditional product in China, which mainly meet the domestic market demand. In recent years, it has been restricted by raw materials and technology, 12HSA did not increase with the development of China's economy, but the output decreased slightly. It is expected that a stable market demand will be appeared in the future.



# 4、 Hengshui Jinghua Chem in 2017

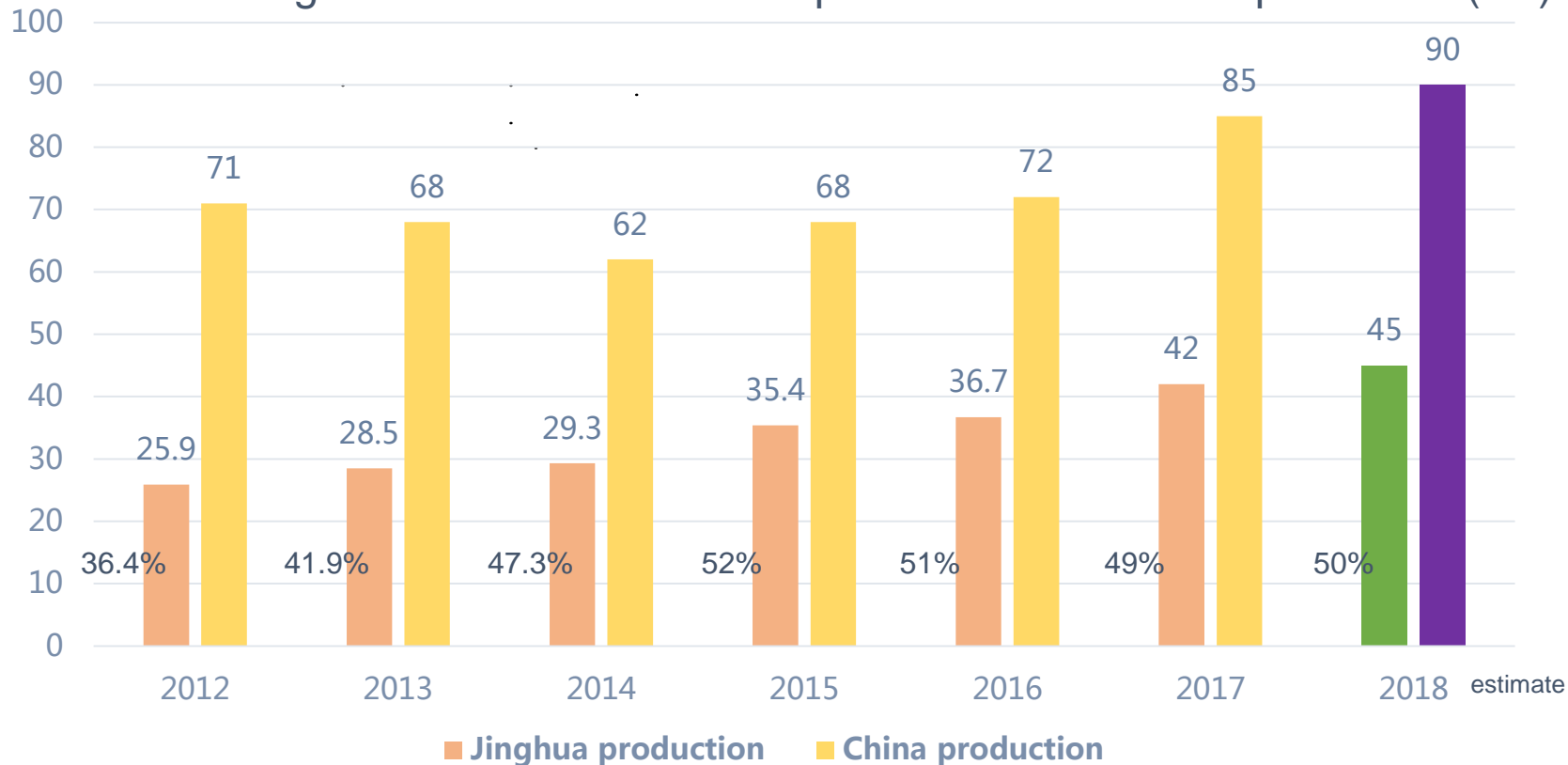


## 1)、2012-2017 Hengshui Jinghua castor oil imports and consumption (KT)





## 2、2012-2017 Jinghua sebacic acid annual production and China production(KT)





# THANK YOU

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Hengshui Jinghua Chemical Co.,Ltd. China

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