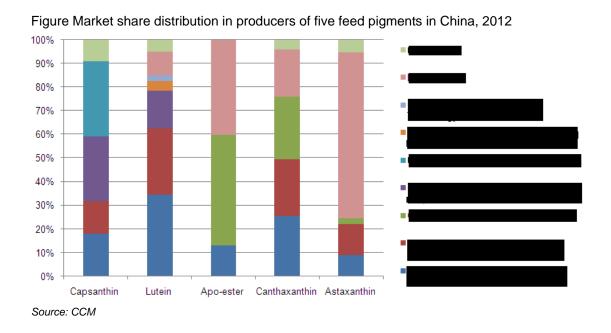


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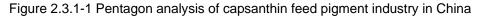


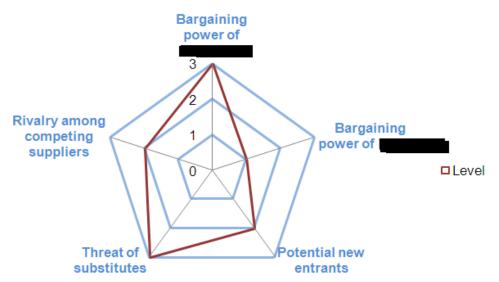
Note: Key data/information in this sample page is hidden, while in the report it is not.

2 Capsanthin

2.3 Porter's Five Forces Analysis

2.3.1 Pentagon analysis of capsanthin





Note: In this figure, level 1 means there is low impact on the industry; level 2 means medium impact; level 3 means strong impact. Source: CCM



2.3.5 Threat of substitutes

The threat from substitutes in the capsanthin industry is big. With a competitive price and stable quality, XXXX has become the biggest threat of capsanthin in the market of red feed pigments. At present, XXXX products account for more than 85% of the domestic red feed pigment market, while capsanthin feed pigment has nearly vanished in XXXX China, with only a small market in XXXX China.

3.5 Supply chain of marigold

3.5.1 Planting area of marigold

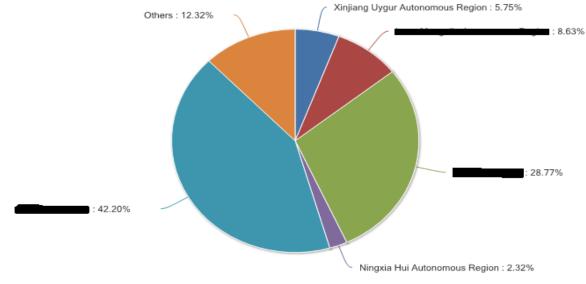


Figure 3.5.1-2 Distribution of planting area of marigold in China, 2012

Source: CCM

3.5.3 Production of marigold oleoresin

Table 3.5.3.1-1 Output of	mojor producor	o of morigold algoragia	in China	2010 2012 toppo
Table 5.5.5. 1-1 Outbut 01		s or manuolo oleoresin	in China	. 2010-2012. 1011118

Producer	2010	2011	2012
XXXX Biotech Co., Ltd.	XXXX	XXXX	XXXX
XXXX Co., Ltd.	XXXX	XXXX	XXXX
XXXX Biotech Co., Ltd.	XXXX	XXXX	XXXX
XXXX Biotech Group Co., Ltd.	XXXX	XXXX	XXXX
XXXX Natural Pigment Purification Co., Ltd.	XXXX	XXXX	XXXX
Shandong XXXX Co., Ltd.	XXXX	XXXX	XXXX
Handan XXXX Bio-Technical Co., Ltd.	XXXX	XXXX	XXXX
XXXX Biotech Co., Ltd.	XXXX	XXXX	XXXX
0 001/			

Source: CCM

4 Apo-ester

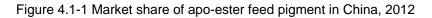
4.1 Overview of production

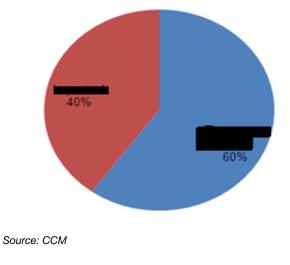
Table 4.1-1 Producers of apo-ester feed pigment in China, 2012, tonne

Producer	Domestic sales volume	Export volume	Total output
XXXX Co., Ltd.	XXXX	XXXX	XXXX
XXXX Bio-Technology Co., Ltd.	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

Source: CCM

In 2012, the output of apo-ester feed pigment in China reached XXXX tonnes from zero in 2009. Meanwhile, about 25% of the output was exported. There are only two producers in domestic apo-ester feed pigment market and they are both located in XXXX Province: one is XXXX which launched its apo-ester feed pigment in 2010; the other is XXXX which launched its apo-ester feed pigment in 2012. With the launch of home-made apo-ester feed pigment, XXXX was forced to withdraw from Chinese market, and XXXX's market share of the product in China has been shrinking, with XXXX in 2012.





5.2 PEST analysis

5.2.2 Economic

Economic analysis

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Loose monetary policy

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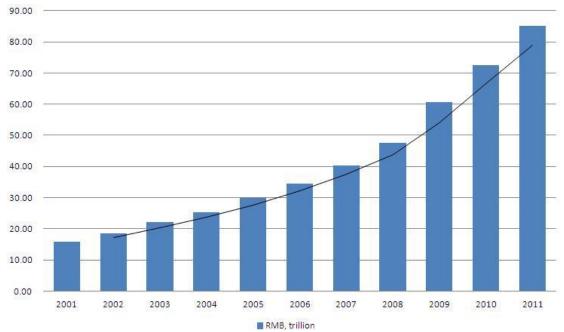


Figure 5.2.2-2 Currency supply in China, 2001-2011

Note: The currency refers to M2.

Source: The National Bureau of Statistics of the People's Republic of China & CCM

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Table 5.2.2-1 Lending interest rate set by	central banks of different countries, 2012
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Country/region	Lending interest rate
China	6.0%
Brazil	36.6%
India	10.6%
Russia	9.1%
Australia	7.0%
Switzerland	0.5%
The US	3.3%
The UK	0.5%
Canada	3%
Japan	1.4%
Europe	0.5%

Note: The terms and conditions attached to these rates differ by countries, however, limiting their comparability.

Source: The World Bank & CCM



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5.4 SWOT analysis of major producers

5.4.1 XXXX Co., Ltd.

5.4.1.1 Strengths

Cost advantage

Generally, XXXX has an obvious cost advantage in the market because of its strict cost-control management. It conducts cost leadership strategy, focusing on two synthetic feed pigments including canthaxanthin and apo-ester. This kind of product simplification helps the company establish economies of scale and lower the unit cost more effectively.

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Moreover, according to insiders, XXXX mainly focuses on the research on chemical intermediates for the final synthetic feed pigment. The technology improvement from chemical intermediates to the final feed pigments also grants XXXX a cost advantage in the competition of canthaxanthin feed pigment.

Table 5.4.1.1-1 Market price comparison of canthaxanthin feed pigment in China, May 2013, USD/kg

Company	Product	Specification	Price
XXXX	XXXX	10%	54.84
DSM	Carophyll Red	10%	66.13

Note: The price from BASF is similar to that from DSM Source: CCM

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