

 **Chapters (Price update, market dynamics) of
Sweetener Newsletter 202201**

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Contents

Market Dynamics.....	1
Angel Yeast proposes two deep-processing project of 150,000 t/a hydrolytic sugar.....	1
Huakang Pharma to buy private shares of Ningbo Herb.....	2
Anhui Jinhe's financial forecast for 2021 and DMF project.....	3
Sanyuan Biology's application of IPO registration on ChiNext approved	4
Price Update	6
Ex-works prices of sweeteners in China, Jan. 2022	6
Starch sugar sees general falls in Jan. 2022 and HFCS stays high throughout 2021	7

Market Dynamics

Angel Yeast proposes two deep-processing project of 150,000 t/a hydrolytic sugar

Summary: On 25 Jan., 2022, Angel Yeast announced two of its subsidiaries planned to implement deep-processing project of 150,000 t/a hydrolytic sugar.

In the project proposal released by Angel Yeast Co., Ltd. (Angel Yeast) on 25 Jan., 2022, two of Angel Yeast's subsidiaries, Angel Yeast (Chongzuo) Co., Ltd. (Chongzuo Angel Yeast) and Angel Yeast (Liuzhou) Co., Ltd. (Liuzhou Angel Yeast) schedule to implement a deep-processing project of 150,000 t/a hydrolytic sugar respectively.

Angel Yeast's project objectives are presented as follows:

- Many yeast and yeast derivatives projects of Angel Yeast are set for operation in 2021–2025, which continuously pushed up its demand for molasses.
- These two projects cater for Angel Yeast's certain demand for molasses, help diversify major raw material mix of its yeast products, as well as ease molasses shortage at the moment and in the future.
- Cut cost in purchasing molasses and hence lower production cost of yeast.

Overview of Chongzuo Angel Yeast's deep-processing project of 150,000 t/a hydrolytic sugar

- Location: Chongzuo Urban Industrial District, Chongzuo City, Guangxi Zhuang Autonomous Region
- Floor area: 1,365 m²
- Total investment: USD4.78 million (RMB30.50 million) financed by Chongzuo Angel Yeast
- Construction content: To build workshops for hydrolytic sugar, which consist of storage zone of raw materials, hydrolysis zone, drying zone for protein and packaging and storage zone for crude protein
- Main raw material: Broken rice (65,000 t/a)
- Scheduled capacity:
 - 150,000 t/a of 30% hydrolytic sugar
 - 6,500 t/a of crude protein powder
- Construction period: 3 months
- Project time arrangement:
 - Complete bidding purchase by the end of March 2022
 - Start construction work in April 2022
 - Complete commissioning and start production in June 2022

Overview of Liuzhou Angel Yeast's deep-processing project of 150,000 t/a hydrolytic sugar

- Location: Liucheng County, Liuzhou City, Guangxi Zhuang Autonomous Region
- Total investment: USD5.53 million (RMB35.33 million) financed by Liuzhou Angel Yeast
- Construction content: To build workshops for hydrolytic sugar, which consist of storage zone for raw materials, hydrolysis zone, drying zone for protein and packaging and storage zone for crude protein
- Main raw material: Broken rice (65,000 t/a)
- Scheduled capacity:
 - 150,000 t/a of 30% hydrolytic sugar
 - 6,500 t/a of crude protein powder
- Construction period: 3 months
- Project time arrangement:
 - Complete overall design and bidding purchase by March 2022
 - Start construction work in April 2022
 - Complete commissioning and start production in June 2022

TABLE 2: Financial data of Chongzuo Angel Yeast and Liuzhou Angel Yeast (unaudited), million USD

Item	30 Sept., 2021	
	Chongzuo Angel Yeast	Liuzhou Angel Yeast
Total asset	162.15	169.03
Net asset	79.75	86.30
Item	1 Jan., 2021–30 Sept., 2021	

	Chongzuo Angel Yeast	Liuzhou Angel Yeast
Revenue	99.78	110.72
Net profit	1.75	12.30

Source: Angel Yeast

Chongzuo Angel Yeast was established in 2006 with a registered capital of USD26.65 million (RMB170 million) and Liuzhou Angel Yeast was founded in 2011 with a registered capital of USD26.81 million (RMB171 million). Both are wholly-owned by Angel Yeast,

Huakang Pharma to buy private shares of Ningbo Herb

Summary: On 8 Jan., 2022, Huakang Pharma announced to buy private shares of Ningbo Herb, and soon afterwards on 11 Jan., 2022, it released a capital injection plan for its subsidiary Gaomi Tongli.

On 8 Jan., 2022, Zhejiang Huakang Pharmaceutical Co., Ltd. (Huakang Pharma) announced that it plans to buy 25% private shares of Ningbo Traditional Chinese Pharmaceutical Corp. (Ningbo Herb) with USD3.45 million (RMB22 million).

Fang Ming, the controlling shareholder of Ningbo Herb, holds 86.72% of the company while persons acting in concert of 8.28%. Fang Ming has made the following promises in this transaction:

- The board of directors of Ningbo Herb shall be composed of five directors with the absence of independent director, and the board of supervisors consists of three supervisors among which one sits as a staff representative supervisor. Upon the completion of the private placement, Fang Ming should vote in favour of the director and the supervisor nominated by Huakang Pharma when it comes to the shareholders' meeting.
- Ningbo Herb is subject to achieve the promised financial targets for 2022 and 2023. If Ningbo Herb misses the targets, Huakang Pharma is entitled to demand Fang Ming to transfer 1%–2% of his equity for free or with nominal consideration, a minimum price permitted by law.

TABLE 3: Promised financial targets of Ningbo Herb for 2022 and 2023, million USD

Item	2022	2023
Operating revenue	28.22	39.19
Net profit	1.57	2.35

Source: Huakang Pharma

Located in Beilun District, Ningbo City, Zhejiang Province, Ningbo Herb was founded in 1965 with a registered capital of USD5.33 million (RMB34 million). Its main products include natural pigment (mainly curcuminoids); natural nutrients and medicinal extracts (curcumin, ginkgo biloba extract in low acidity, ginseng extract (no pesticide residue), grape seed extract, quercetin, berberine, huperzine-A, levodopa (L-dopa), resveratrol, apple cider vinegar, etc.); high-intensity sweeteners (dihydrochalcone, fructus monordicae extract, etc.); powders (turmeric, konjac flour, ginger powder, cinnamon powder, etc.). It processes more than 5,000 t/a of raw materials of Chinese herbal medicines.

TABLE 4: Major financial data of Ningbo Herb, 2020–2021, million USD

Item	30 Sept., 2021 (unaudited)	31 Dec., 2020 (audited)
Total asset	23.90	18.55
Total liability	17.98	12.53
Total owner's equity	5.92	6.03

Item	Jan.–Sept., 2021 (unaudited)	2020 (audited)
Operating revenue	10.03	13.58
Operation cost	9.99	9.45
Total profit	-0.24	0.25
Net profit	-0.11	0.22

Source: Huakang Pharma

On 11 Jan., 2022, Huakang Pharma unveiled a capital injection plan for its subsidiary Gaomi Tongli Sugar Co., Ltd. (Gaomi Tongli).

Huakang Pharma had purchased 100% equity of Gaomi Tongli with USD15.68 million (RMB100 million), and had changed business registration in Dec., 2021. In order to enhance capital strength, and to improve operational efficiency and profitability of Gaomi Tongli, Huakang Pharma intends to inject USD3.14 million (RMB20 million) of cash in its subsidiary's registered capital which will be up to USD3.26 million (RMB20.80 million) from USD125,404 (RMB800,000), once the deal is settled.

Anhui Jinhe's financial forecast for 2021 and DMF project

Summary: On 1 Jan., 2022, Anhui Jinhe released its financial projection for 2021. Besides, early on 24 Dec., 2021, the EIA report of 30,000 t/a DMF and installment of methylamine production equipment project was publicised before approval.

TABLE 5: Anhui Jinhe's financial data, 2020 vs. 2021, million USD

Item	2021 (estimated)	YoY growth (estimated)	2020
Net profit attributable to shareholders of the listed company	145.78-180.27	29.43%-60.05%	112.63
Net profit excl. extraordinary gains/losses	125.09-163.34	39.99%-82.80%	89.34

Source: Anhui Jinhe's Financial Forecast for 2021

On 1 Jan., 2022, Anhui Jinhe Industrial Co., Ltd. (Anhui Jinhe) released its financial projection for 2021.

Drivers for the bullish performance projection:

- New capacity: The new project of 50 million t/a sucralose was put into production and has progressed to full operation this year.
- Increased sales price: Due to price hike in bulk chemical raw materials, the company has raised its sales prices of its food additives (sweeteners, spices, etc.) to various degrees according to the market conditions.
- Rising demand: China's effective control on COVID-19 pandemic has pushed up the demand for bulk chemicals, along with its sales prices of some bulk chemicals on average in 2021 as comparing to the 2020 averages.

Anhui Jinhe is expected to benefit from the increasingly booming sucralose market.

- Supply side: the pandemic has accelerated the elimination of outdated capacity, so currently just several enterprises such as Anhui Jinhe, Shandong Kanbo Biochemical Technology Co., Ltd. (Kanbo Biochemical), etc. can ensure stable production.
- Demand side: since sugar-free beverages are becoming more and more popular with continuous launches of new sweeteners products over the most recent years, sucralose, as a high-quality sweetener, has seen demand growing strong.
- Policy support: According to the updated paper released by Ministry of Ecology and Environment (MEE), sucralose manufacturing is high in energy consumption and emissions. But with the implementation of the "Dual Control System" (controls on energy consumption and energy intensity) and other environmental protection policies, the whole industry will see an orderly production and market

supply in the future.

China's has seen a substantial price increase of raw materials and chemicals since the beginning of 2020 resulting from the economic fallout from the COVID-19 in the rest of the world. Starting in the H2 2020, many countries had been implementing positive monetary policy to boost their economies, which triggered a worldwide price increase in bulk basic raw materials.

To support its current 8,000 t/a capacity of sucralose, Anhui Jinhe launched construction plan for DMF production, an essential raw material of sucralose but at a relatively high price and difficult to purchase from the market due to multiply factors. On 24 Dec., 2021, the Environmental impact assessment (EIA) report of Anhui Jinhe's 30,000 t/a of dimethylformamide (DMF) and methylamine (supporting material) project was publicised before being granted with approval.

Project overview:

- Construction nature: New construction
- Location: The original factory of Anhui Jinhe, Lai'an County, Chuzhou City, Anhui Province
- Floor area: 12,326 m² (without taking in additional lands)
- Total investment: USD25.49 million (RMB162.59 million)
- Labour quota: Adding new 40 employees
- Working system: Four crews in three shifts (24 hours per day for 300 working days annually)

TABLE 6: Product scheme of 30,000 t/a of dimethylformamide (DMF) and methylamine (supporting material) project

Product	Scheduled capacity, t/a	Work time, h/a	Capacity for sales, t/a	Capacity for private use, t/a
DMF	30,000	8,000	0	30,000 (raw material of sucralose)
99.5% Monomethylamine anhydrous (MMA)	10,000	8,000	10,000	0
99.5% Dimethylamine anhydrous (DMA)	20,000	8,000	1,360	18,640 (raw material of DMF)

Source: Anhui Jinhe

Sanyuan Biology's application of IPO registration on ChiNext approved

Summary: On 14 Jan., 2022, China Securities Regulatory Commission (CSRC) approved the application of Sanyuan Biology's IPO registration on ChiNext.

On 14 Jan., 2022, Shandong Sanyuan Biotechnology Co., Ltd. (Sanyuan Biology) announced that its application for IPO on ChinNext of Shenzhen Stock Exchange (SZSE) is approved by ChiNext Board Listing Committee, and its IPO registration on ChiNext was also approved by China Securities Regulatory Commission (CSRC). According to the company's prospectus, Sanyuan Biology intends to issue 33.72 million shares, accounting for 25% of its total equity shares.

TABLE 7: Utilisation of IPO proceeds

Item	Investment amount (estimated), million USD
50,000 t/a erythritol and technology centre project	121
Working capital replenishment	20
Total	141

Source: Sanyuan Biology

TABLE 8: Major financial indicators of Sanyuan Biology, million USD

Item	30 Sept., 2021	31 Dec., 2020	Increment	Incremental rate
Total asset	248.16	122.49	125.67	103%
Owners' equity	149.01	79.93	69.08	86%
Item	Jan.–Sept. 2021	Jan.–Sept. 2020	Increment	Incremental rate
Revenue	204.62	88.09	116.53	132%
Operating profit	79.97	31.44	48.53	154%
Total profit	79.97	31.25	48.72	156%
Net profit	69.08	26.99	42.09	156%

Source: Sanyuan Biology

TABLE 9: Sanyuan Biology performance projection for 2021, million USD

Item	2021 (estimated)	2020	YoY change
Revenue	246.72-261.58	122.77	100.96%–113.07%
Net profit attributable to shareholders of the parent company	77.28-84.81	36.46	111.96%–132.63%

Source: Sanyuan Biology

Here are main drivers for Sanyuan Biology's strong performance in 2021:

- There is a rapid development of sugar-free beverage industry in domestic market, which is being pushed by consumers' growing awareness of reducing and quitting sugar, sugar-free beverages, such as the ones launched by Genki Forest (Yuan Qi Sen Lin in Mandarin pinyin) who have won great popularity as well as a large cut of market share. This has spurred many new or long-standing brands like Coca-Cola, Nongfu Spring, Uni-President, Heytea, Master Kong and Wong Lo Kat or Wanglaoji in Mandarin pinyin, to launch their versions of sugar-free beverages. Erythritol has become the most-chosen sweetener for many sugar-free beverage brands because of its advantages in its nature characterising "natural (sugar alcohol)" and "zero-calorie", etc. Domestic demand for erythritol is increasing significantly. Product demand surpasses supply and prices have been rising rapidly by large.
- In 2021, to meet the growing demand for erythritol, Sanyuan Biology continues to scale up its production capabilities, especially for erythritol, aiming at higher capacity utilisation rate and sales-output ratio—in Jan.–June 2021, the former figure hit 104% and the latter at 101%. Notably, In 2021, Genki Forest has become the largest customer of Sanyuan Biology, followed by other well-known enterprises like Nongfu Spring, Coca-Cola, Heytea, Jinmailang, Dali Foods, Uni-president, etc.

Here are major reasons why Sanyuan biology's growth of net profit in 2021 was higher than the same period a year ago and its consolidated gross margin continues to be at a relatively high level, reaching more than 40%.

- Although the rapid increase of corn price in the early stage pushed the price of raw material, glucose, to grow substantially, Sanyuan Biology has made a timely negotiation with its downstream customers and price adjustment of erythritol products after delivering the previous orders, which offsets the negative impact of price rise of raw materials for a certain period of time. Sanyuan Biology's erythritol in Jan.–June 2021 averaged at USD2,925/t, rising by 25.25% YoY.
- Strong market demand for erythritol eases the sales pressure. Market expenses and management costs remain relatively low.

Founded in 2007 with a registered capital of USD15.83 million (RMB101 million), Sanyuan Biology mainly engages in the R&D, production and sale of erythritol.

Price Update

Correction

1 Published date: 31 Dec., 2021 (Sweeteners China News 202112); Page: Page 18 Original data: 7,065.14 (Acesulfame-K Price in Dec. 2021, USD/t); 7,477.57 (Acesulfame-K Price in Nov. 2021, USD/t); -5.52% (Acesulfame-K MoM change of price in Dec. 2021) "7,065.14" should be 14,915. "7,477.57" should be 14,799. "-5.52%" should be 0.78%.

2 Published date: 30 Nov., 2021 (Sweeteners China News 202111); Page: Page 18 Original data: 7,478 (Acesulfame-K Price in Nov. 2021, USD/t); 7,430 (Acesulfame-K Price in Oct. 2021, USD/t); 0.64% (Acesulfame-K MoM change of price in Nov. 2021) "7,478" should be 14,799. "7,430" should be 14,705. "0.64%" should be 0.64%.

3 Published date: 29 Oct., 2021 (Sweeteners China News 202110); Page: Page 19 Original data: 7,430 (Acesulfame-K Price in Oct. 2021, USD/t); 6,957 (Acesulfame-K Price in Sept. 2021, USD/t); 6.79% (Acesulfame-K MoM change of price in Oct. 2021) "7,430" should be 14,705. "6,957" should be 12,369. "6.79%" should be 18.89%.

4 Published date: 30 Sept., 2021 (Sweeteners China News 202109); Page: Page 21 Original data: 6,957 (Acesulfame-K Price in Sept. 2021, USD/t); 7,269 (Acesulfame-K Price in Aug. 2021, USD/t); -4.28% (Acesulfame-K MoM change of price in Sept. 2021) "6,957" should be 12,369. "7,269" should be 10,826. "-4.28%" should be 14.25%.

5 Published date: 31 Aug., 2021 (Sweeteners China News 202108); Page: Page 20 Original data: 7,269 (Acesulfame-K Price in Aug. 2021, USD/t); 4.52% (Acesulfame-K MoM change of price in Aug. 2021) "7269" should be 10,826. "4.52%" should be 55.68%.

Ex-works prices of sweeteners in China, Jan. 2022

TABLE 15: Ex-works prices of sweeteners in China, Jan. 2022

No.	Product	Price in Jan. 2022, USD/t	Price in Dec. 2021, USD/t	Sweetness compared with sucrose	Price of unit sweetness in Jan. 2022, USD/t	MoM change of price in Jan. 2022
1	Saccharin	8,151.24	8,164.16	300	27	-0.16%
2	Steviol glycosides (RA95)	79,944.82	83,211.66	450	178	-3.93%
3	Sucralose	75,242.19	72,221.43	600	67	4.18%
4	Acesulfame-K	14,892	14,915	200	35	-0.15%
5	Aspartame	16,459.23	16,485.33	200	82	-0.16%
6	Cyclamate (NF13)	2,664.83	2,355.05	30	89	13.15%
7	Glycyrrhizin (tripotassium glycyrrhizinate)	13,951.16	14,601.29	150	93	-4.45%
8	Neotame (98%)	48,593.91	51,811.03	8000	6	-6.21%
9	Sugar	881.90	894.92	1	882	-1.45%
10	Erythritol	2,586.45	2,826.06	0.65	4,341	-8.48%
11	Mannitol (food grade)	3,840.49	3,611.07	0.7	5,486	6.35%
12	FOS (fructo oligosaccharide, 95%, powder)	5,486.41	5,495.11	0.3	18,288	-0.16%
13	XOS (xylo oligosaccharide, 95%, powder)	30,096.87	30,929.62	0.4	75,242	-2.69%
14	Crystalline maltitol	2,508.07	2,512.05	0.35	7,166	-0.16%
15	Crystalline sorbitol	1,238.36	1,318.83	0.5	2,477	-6.10%

16	Maltose syrup (75%, liquid)	501.61	502.41	0.9	557	-0.16%
17	Sorbitol (70%, liquid)	517.29	616.24	0.7	739	-16.06%
18	HFCS (fructose: 55%, liquid)	556.48	533.81	1	556	4.25%
19	HFCS (fructose: 42%, liquid)	532.97	506.34	1.1	485	5.26%
20	Maltitol (75%, liquid)	674.04	706.51	0.9	749	-4.60%
21	Glucose monohydrate	611.34	659.41	0.74	826	-7.29%
22	Crystalline xylitol	4,075.62	4,082.08	1.2	3,396	-0.16%

Source: CCM

Starch sugar sees general falls in Jan. 2022 and HFCS stays high throughout 2021

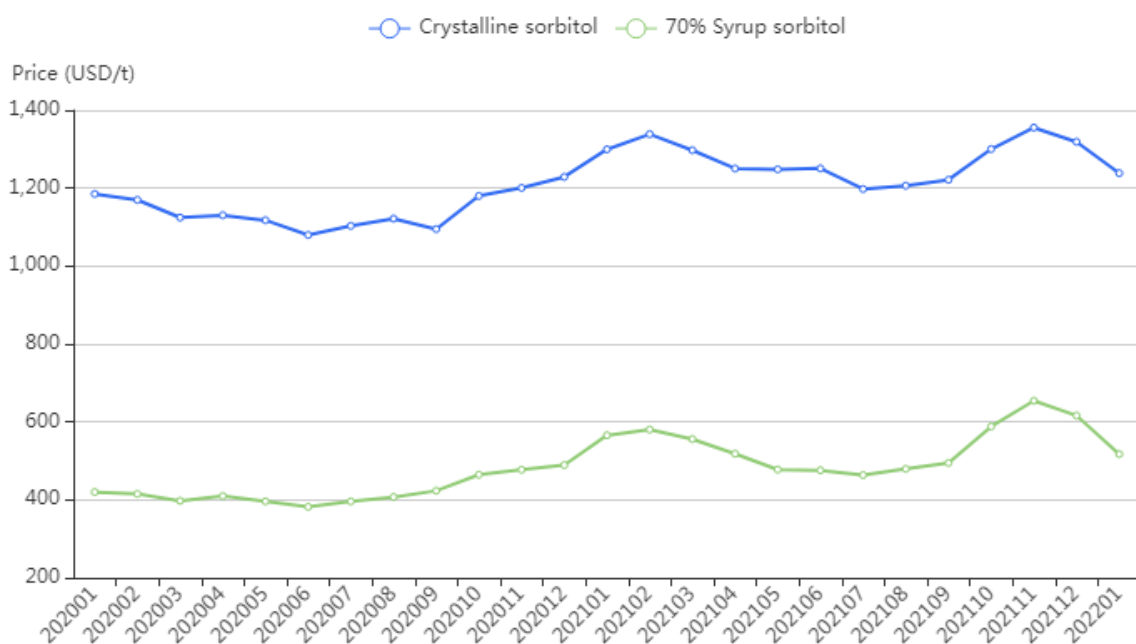
Summary: In Jan. 2022, starch sugar saw general falls and sorbitol presented MoM decline. Overall HFCS prices in 2021 were higher than that of 2020.

In Jan. 2022, both starch sugar including sorbitol, saw general falls—crystalline sorbitol arrived at USD1,238/t in Jan., down 6.1% MoM and 70% syrup sorbitol was USD517/t, declining 16% MoM.

Major reasons for price drop of starch sugar

- As approaching Chinese Spring Festival, selling and purchasing of starch sugar turned stagnant: downstream manufacturers of food, beverage, etc., started to suspend production. Particularly, market demand showed a general decline before Spring Festival compared with that of last year and stocking before Spring Festival started late but ended early.
- Many downstream manufacturers moved their production suspension plans forward because of the holding of Beijing 2022 Olympic Winter Games, which led to a further decline in demand.
- In 2020, coronavirus mainly affected Heilongjiang and Henan provinces in China. But in 2021, sporadic cases over provinces, of which Shaanxi, Henan and Zhejiang were in relatively severe conditions. made a negative impact on regional starch sugar consumption.

FIGURE 1: Ex-works price of sorbitol, Jan. 2020-Jan. 2022



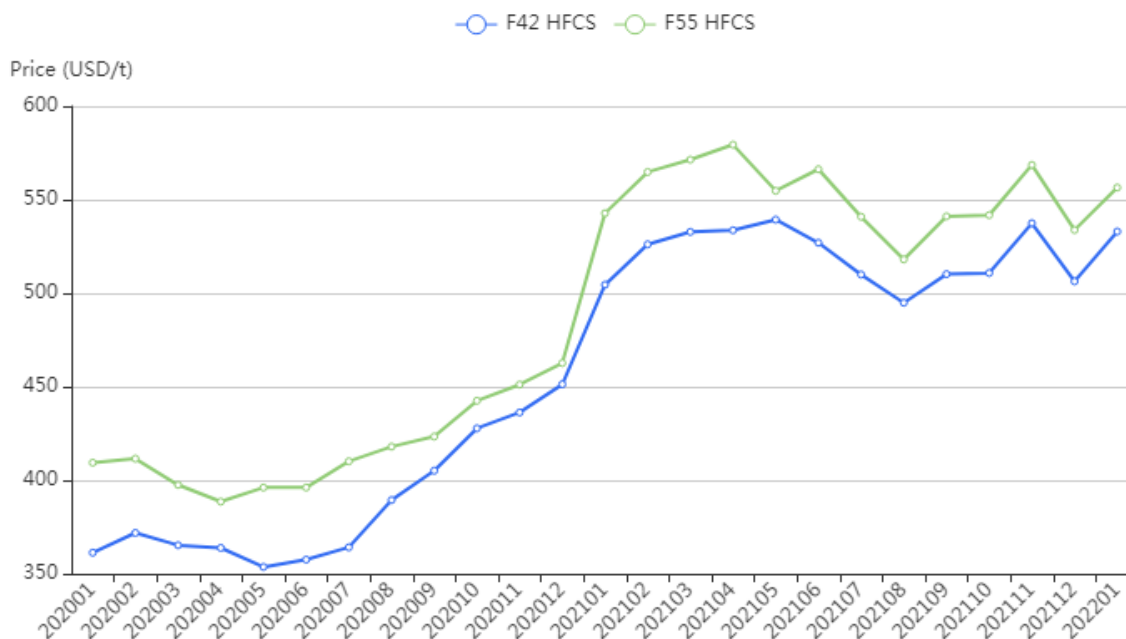
Source:CCM

HFCS (high fructose corn syrup) price in Jan. 2021 went up.

- HFCS (fructose: 42%): USD532/t, rising 5% MoM
- HFCS (fructose: 55%): USD556/t, up 4% MoM

The increase in HFCS prices was because of the declining supply. HFCS is commonly stored in tanks, which places a pressure on manufacturers as they have limited amount of tanks and HFCS quality will degrade over time. So, in order to deliver quality products to market, enterprise decided to suspending or limiting production to avoid excess inventory during Spring Festival.

FIGURE 2: Ex-works price of HFCS, Jan. 2020–Jan. 2022



Source:CCM

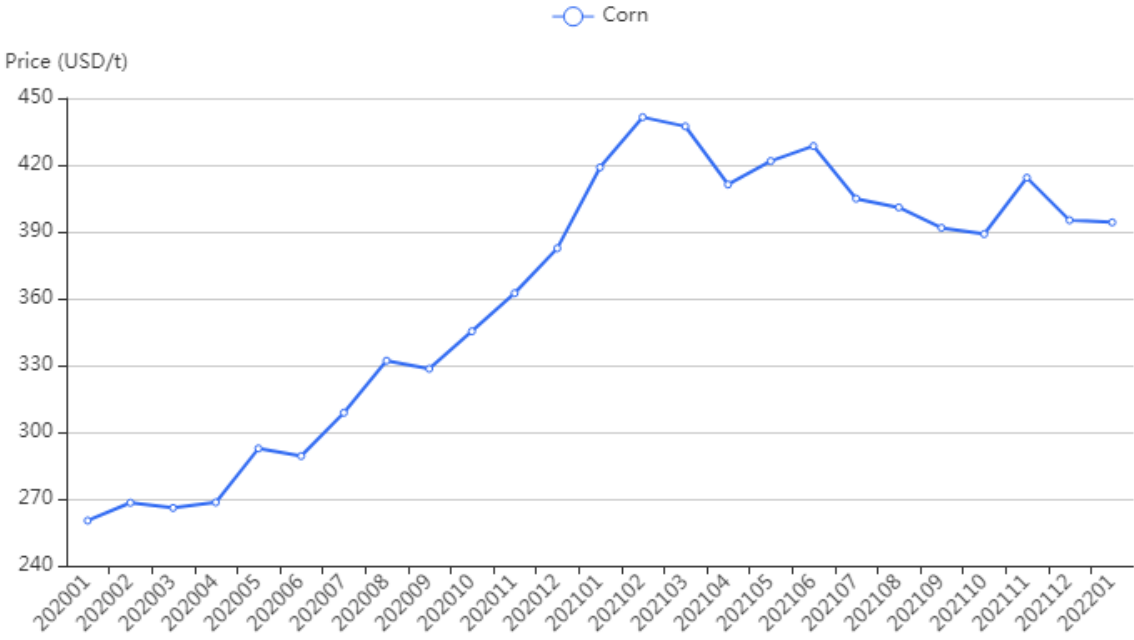
Overall, HFCS price in 2021 was higher than 2020.

- The highest point of HFCS (fructose: 55%) was at USD579/t in April 2021
- The lowest point of HFCS (fructose: 55%) was at USD518/t in Aug. 2021
- However on 2020 record, the highest price of HFCS (fructose: 55%) was at USD463/t in Dec.

This was mainly pushed by the increase in corn price.

- In Feb. 2021, corn price recorded at USD441/t, the highest point of the year, while in Oct., the price went down to the lowest point of the year at USD389/t.
- The price figure has been rising from USD260/t to USD442/t in Jan. 2020–Feb. 2021 and stayed above the level of USD390/t in Jan. 2021–Feb. 2022. Since corn price had been high in Jan. 2020–Feb. 2022, price of HFCS has stood high consequently.

FIGURE 3: Market prices of corn, Jan. 2020–Jan. 2022



Source:CCM

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