U.S. Non-GMO Study & Specialty U.S. Soy Database Update

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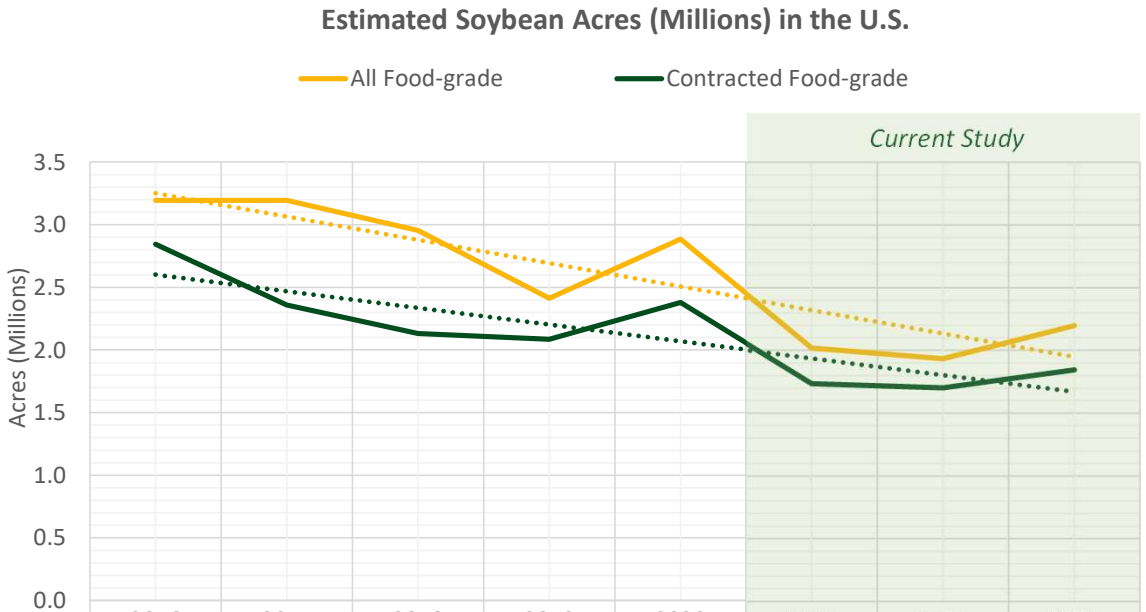
Non-GMO Acreage Study

Estimate of Contracted Non-GMO Food-grade Soybean Acres in the U.S.

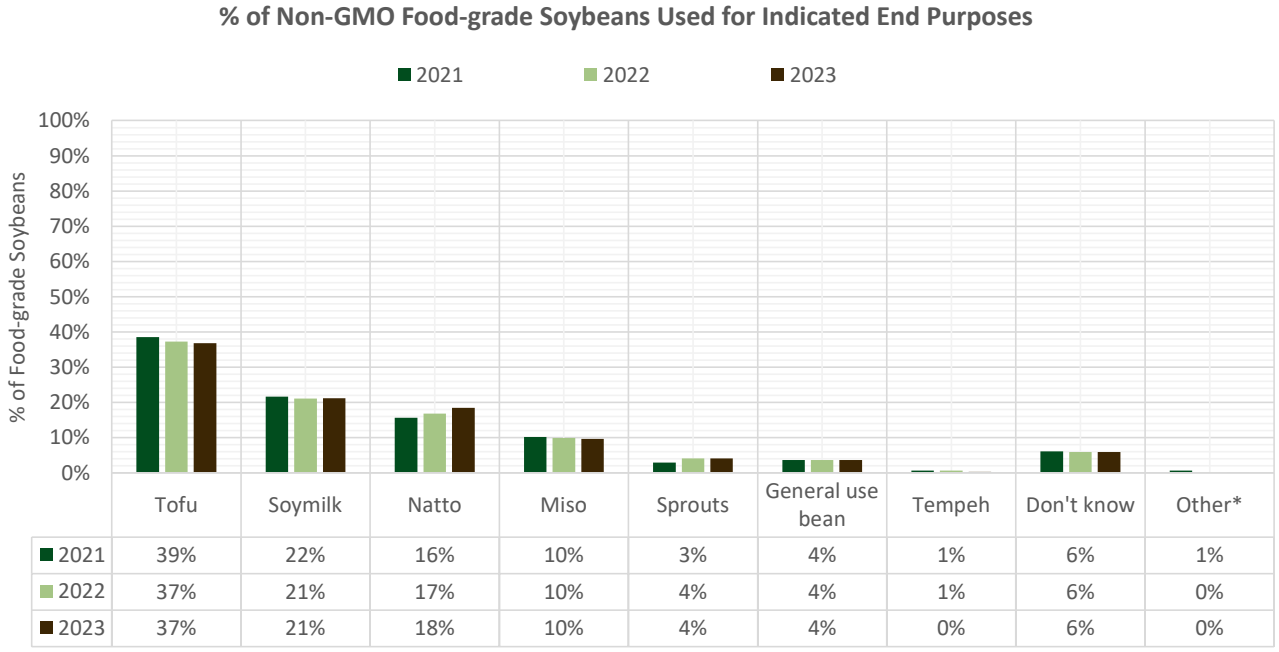
- Roughly 80% to 85% of growers' **non-GMO food-grade soybeans are produced under contract** each year. For 2022, growers reported 88% of the non-GMO food-grade acres were produced under contract. This translates to about **1.7 million acres in 2022**.



	2016	2017	2018	2019	2020	2021	2022	2023
All Food-grade	3.2	3.2	3.0	2.4	2.9	2.0	1.9	2.2
Contracted Food-grade	2.8	2.4	2.1	2.1	2.4	1.7	1.7	1.8

End-Purpose for Non-GMO Food-grade Soybeans (Unweighted)

- Most U.S. produced non-GMO food-grade soybeans are destined to be used for tofu (37%) and soymilk (21%). Results, although directional, show an upward trend for natto.



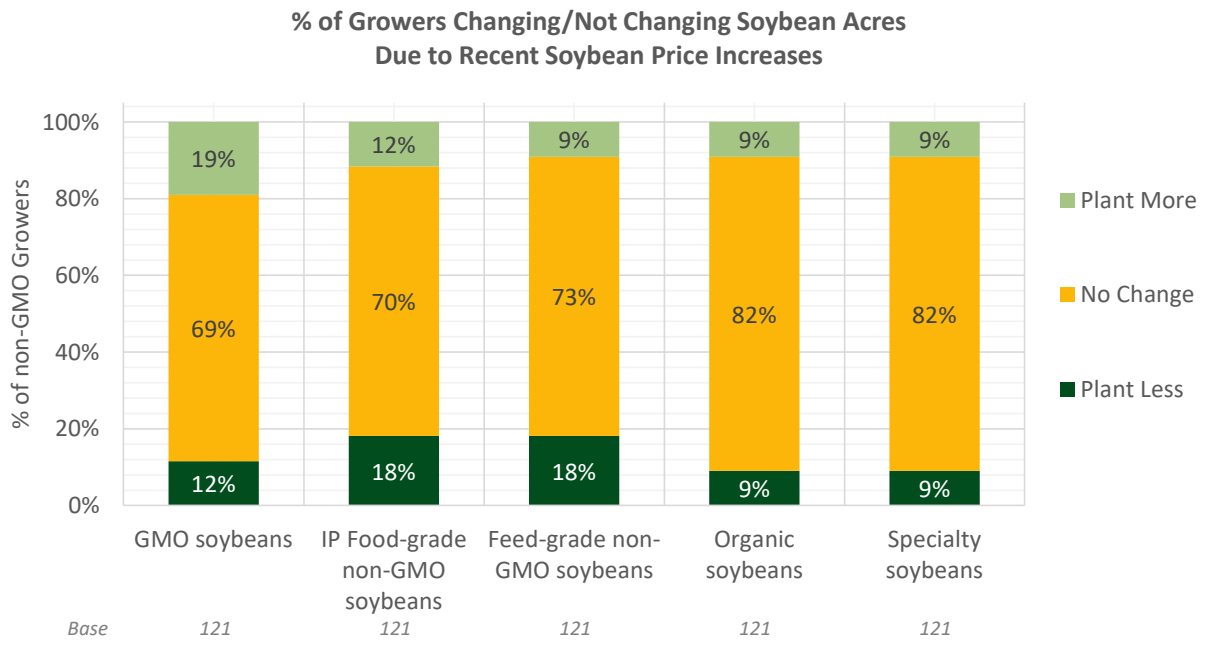
	Tofu	Soymilk	Natto	Miso	Sprouts	General use bean	Tempeh	Don't know	Other*
2021	39%	22%	16%	10%	3%	4%	1%	6%	1%
2022	37%	21%	17%	10%	4%	4%	1%	6%	0%
2023	37%	21%	18%	10%	4%	4%	0%	6%	0%

Bases=17.

Source (2022 study): What percent (%) of the FOOD-GRADE IP NON-GMO soybeans purchased by your company are used for the following end-purposes?

Impact of Soybean Prices on Growers' Planting Intentions

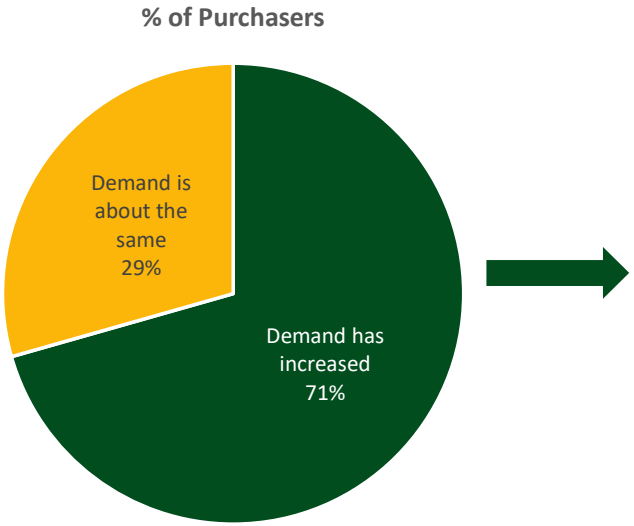
- Results in the chart below suggest current commodity prices will negatively impact IP non-GMO soybean acres. While most growers will not change their current IP non-GMO acreage, more growers who are changing are likely to decrease rather than increase IP non-GMO acreage. Results suggest the reduction in IP non-GMO acres will be offset by more GMO soybean production. Given the precipitous increase in soybean commodity prices, many non-GMO growers have already begun to plant fewer food-grade acres.



Source (2022 study): What, if any, impact has the recent increase in soybean prices had on your decision to plant the following types of soybeans?

Demand and Supply for Non-GMO Food-grade Soybeans

- Purchasers agree that demand for non-GMO food-grade soybeans has increased (71% of purchasers) and is outpacing supply, as one exporter explains, *"All markets are showing growth due to increased demand for retail products and poor supply."* Another retailer concurs, *"We've seen an increase in demand, but I think it's due to displacement from other companies also having trouble sourcing."*



Base =17

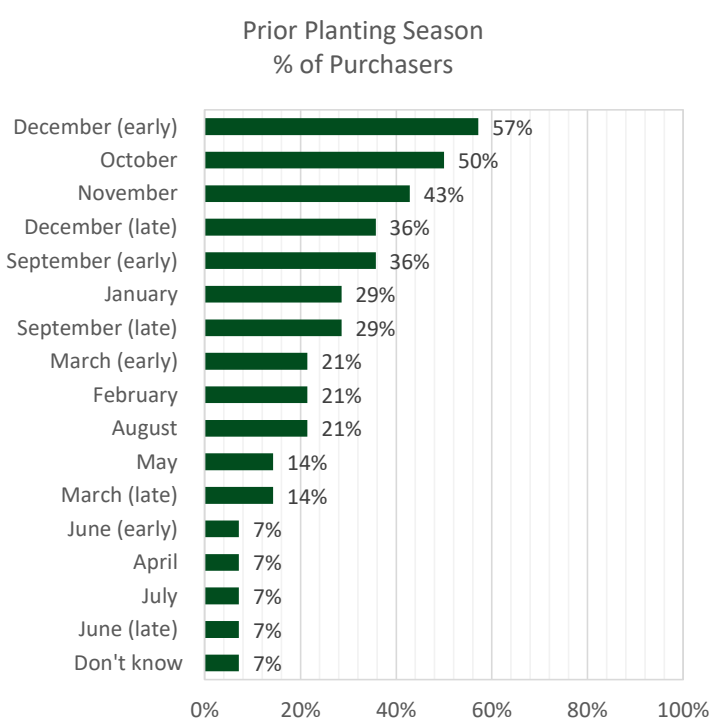
88% It is very difficult to meet demand in the current market. We do not have enough supply to meet demand.

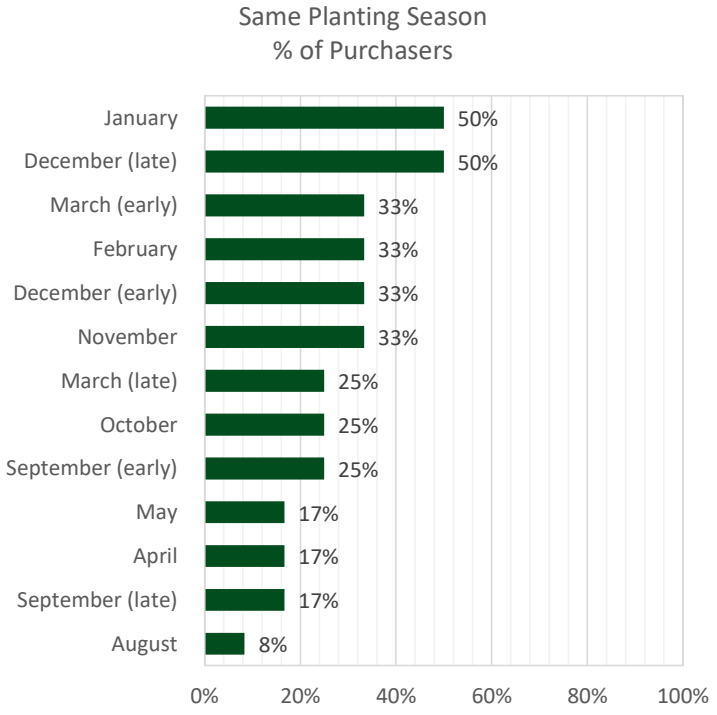
12% We can meet demand, but it takes some effort given the current market and supply

Source (2022 study): So we may better understand trends in the food-grade soybean market, how would you describe upstream demand for IP NON-GMO FOOD-GRADE soybeans in the past few years? You mentioned demand for NON-GMO FOOD-GRADE SOYBEANS has increased. What markets are showing growth?

When Non-GMO Food-grade Soybean Purchase Decisions Are Made

- Most purchasers report making decisions about contracting for food-grade soybeans in in October to December, following harvest in the prior season and prior to planting for the same season. By late December, most decisions about contracting non-GMO food-grade soybeans have been made.

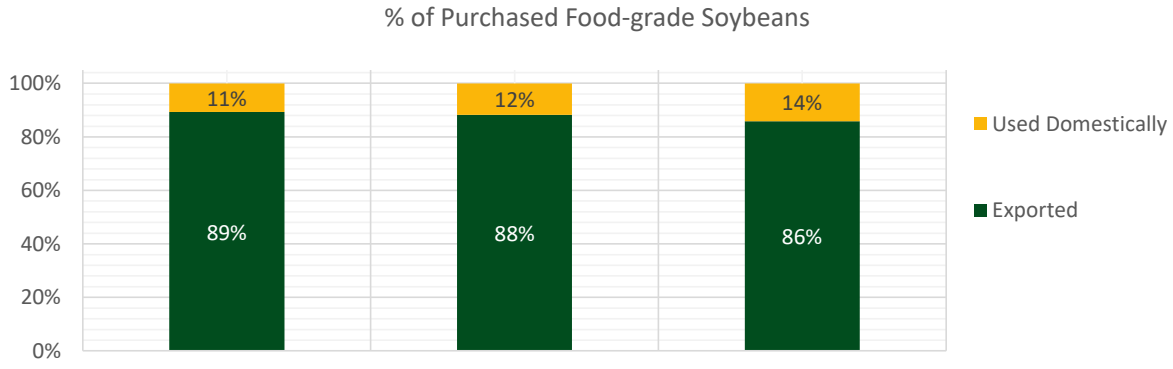




Source (2022 study): When do you typically make decisions about the quantity of NON-GMO IP FOOD-GRADE soybeans your company will contract?

International Markets for Food-grade Soybeans

- Nearly all food-grade soybeans are expected to be sold to international buyers (88% of non-GMO food-grade soybeans in 2022), The top international market is Japan, to where 65% of U.S. non-GMO food-grade soybeans will be exported in 2022. Taiwan and South Korea are the second largest markets receiving roughly 10% each of U.S. produced food-grade soybeans.

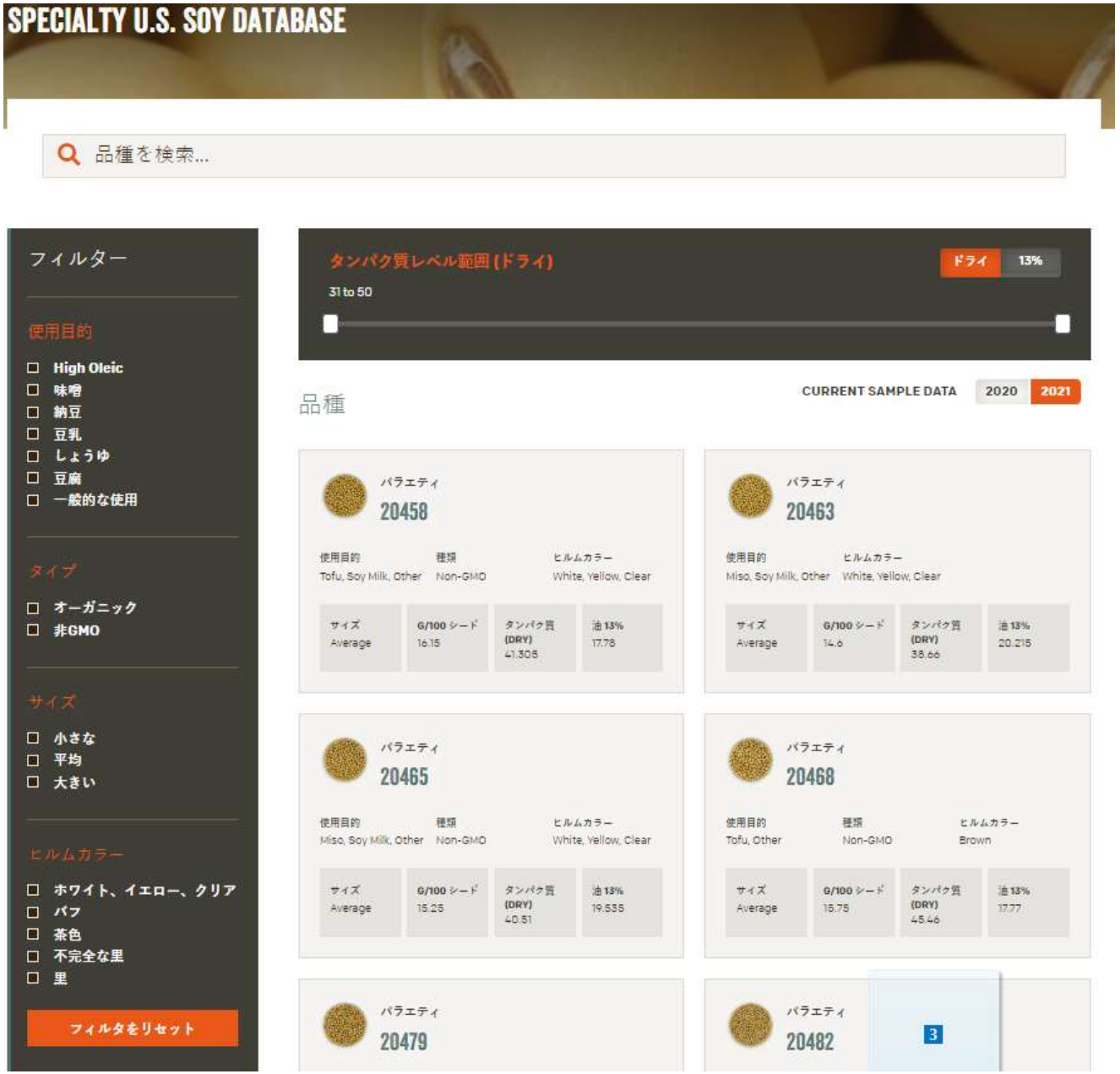


Export Markets	2021	2022	2023
Japan	62%	65%	64%
Taiwan	10%	10%	11%
South Korea	10%	9%	8%
Thailand	5%	4%	5%
China	4%	2%	1%
Vietnam	2%	2%	2%
Don't know	6%	6%	6%
Other	1%	2%	2%

Base=17.

Source (2022 study): What percent (%) of the IP NON-GMO FOOD-GRADE soybeans purchased in the U.S. by your company will be used domestically and what percent (%) will be sold for export to countries outside of the U.S.? And to which countries will the exported IP NON-GMO FOOD-GRADE soybeans go. Please enter the portion that will go to each country.

- Updates to Soyfood Database


SPECIALTY U.S. SOY DATABASE
品種を検索...
フィルター
使用目的
High Oleic
味噌
納豆
豆乳
しょうゆ
豆腐
一般的な使用
タイプ
オーガニック
非GMO
サイズ
小さな
平均
大きい
ヒルムカラー
ホワイト、イエロー、クリア
バフ
茶色
不完全な里
里
フィルタをリセット
タンパク質レベル範囲 (ドライ)
ドライ
13%
31 to 50
品種
CURRENT SAMPLE DATA
2020
2021
バラエティ
20458
使用目的
Tofu, Soy Milk, Other
種類
Non-GMO
ヒルムカラー
White, Yellow, Clear
サイズ
Average
G/100 シード
16.15
タンパク質 (DRY)
41.305
油 13%
17.78
バラエティ
20463
使用目的
Miso, Soy Milk, Other
ヒルムカラー
White, Yellow, Clear
サイズ
Average
G/100 シード
14.6
タンパク質 (DRY)
38.66
油 13%
20.215
バラエティ
20465
使用目的
Miso, Soy Milk, Other
種類
Non-GMO
ヒルムカラー
White, Yellow, Clear
サイズ
Average
G/100 シード
15.25
タンパク質 (DRY)
40.51
油 13%
19.535
バラエティ
20468
使用目的
Tofu, Other
種類
Non-GMO
ヒルムカラー
Brown
サイズ
Average
G/100 シード
15.75
タンパク質 (DRY)
45.46
油 13%
17.77
バラエティ
20479
バラエティ
20482
3

バラエティ

2180 (2021)

CURRENT SAMPLE YEAR 2020 2021

シードプロバイダーを探す　スペックシートの印刷

成熟度グループ

2.1

品質属性

使用目的	種類	ヒルムカラー	サイズ	G/100 シード
Tofu, Soy Milk	Non-GMO	White, Yellow, Clear	Large	23.85

構成

タンパク質 13%	油 13%	SUCROSE DB	RAFFINOSE DB	STACHYOSE DB
36.83	18.31	5.6	1	3.35

LYSINE	必須アミノ酸
3.4	14.4

ISOFLAVONE DATA

DAIDZIN	GENISTIN	TOTAL ISOFLAVONES
0.73	1.39	2.13

豆腐 & 豆乳

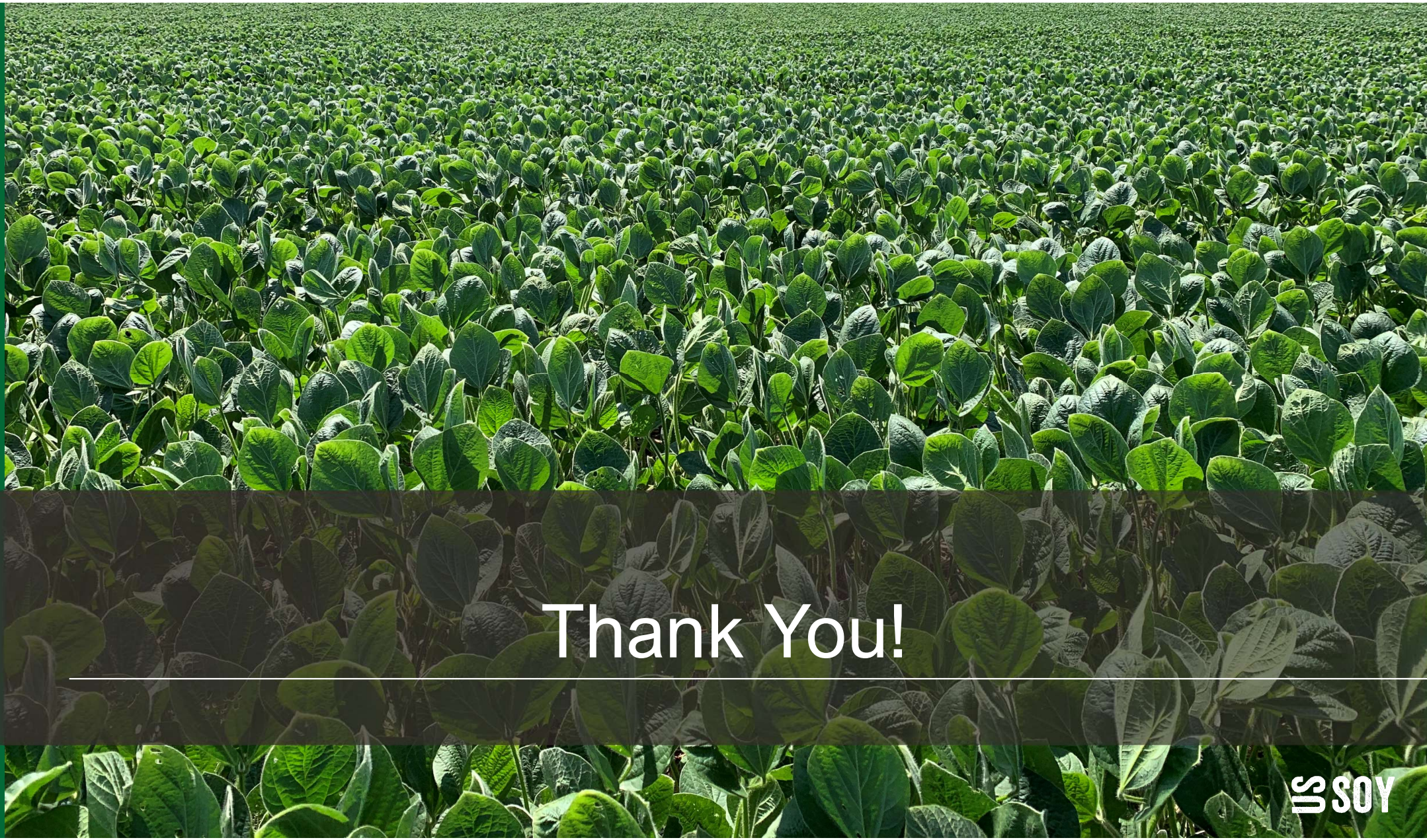
E%	吸水能力	豆乳の収量	BRIX INDEX	ミルクカラー L
7.74	1.55	7.88	8.6	92 ± 0

ミルクカラー A	ミルクカラー B	豆腐の収量	豆腐カラー L	豆腐カラー A
-2.1 ± 0	17.3 ± 0.0	3.47	89.6 ± 0	-2.6 ± 0.0

豆腐カラー B	豆腐の固さ	豆腐の弾力性	豆腐の凝集性
22.9 ± 0.0	2453 ± 190	0.97 ± 0.00	0.60 ± 0.02

Updates to the Database:

- New data (22 crop) to be uploaded in early 2023
- New varieties (soon to be released)
- Ultra high protein soybeans for SPC purposes
- 11s 7s ratio
- Low lipo beans
- Updated map



Thank You!