



- > **GLOBAL BLUEBERRY TRENDS**
- > **BerriesZA | TECHNICAL SYMPOSIUM**
- > **31 MAY 2024**

> CONTENTS | GLOBAL TRENDS



- > Macro Trends
- > Producer Trends
- > Consumer Trends

> ORIGINS OF WHAT WE DO?

WHAT DO THESE THREE INDUSTRIES HAVE IN COMMON, IF ANYTHING?

PRECISION AGRICULTURE INDUSTRY | 19th CENTURY

1840 to 1930 - The Industrial Revolution laid the foundation with inventions like the seed drill (precise planting) and the Haber-Bosch process (synthetic fertilizer production).

AUTOMOTIVE INDUSTRY | 1885

- First patented gasoline powered vehicle. Benz Motorwagen.

SPACE & ROCKET INDUSTRY | 1957

- USSR launched Sputnik 1.

> ORIGINS OF WHAT WE DO?

WHAT DO THESE THREE INDUSTRIES HAVE IN COMMON, IF ANYTHING?

1. QUALITY:

- is a function of innovation in the sector.
- is built at the time of manufacture in the factory (or production in the orchard).

2. EFFICIENCY:

- they have maintained competitiveness and success through efficiencies.

3. TECHNOLOGY:

- technological advancements, innovation and disruption has led to revolutionary changes in these sectors.

4. AND,

- two of them share one more thing in common.



TESLA

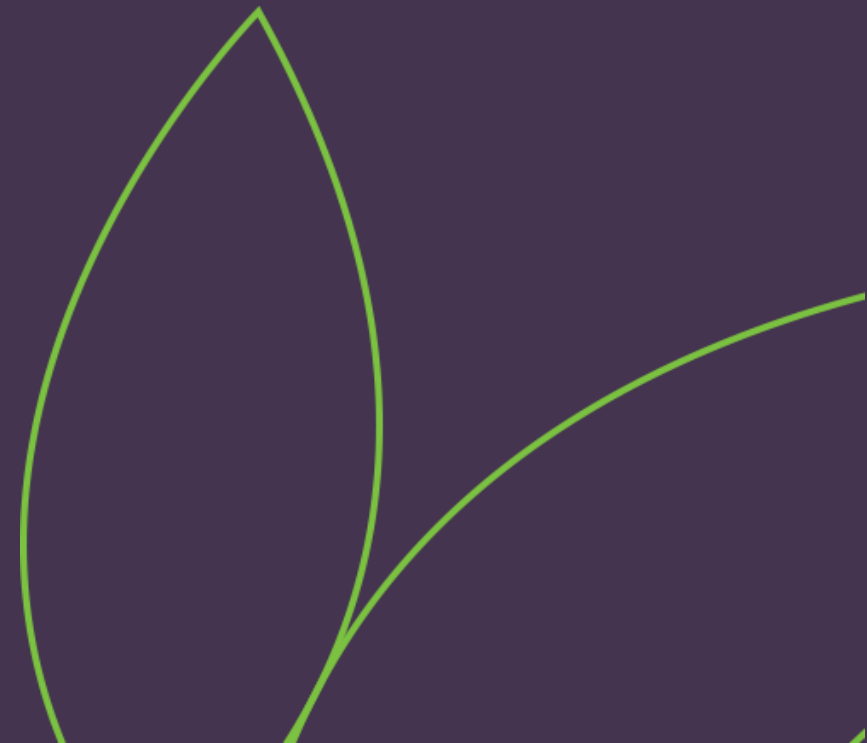
SPACEX

You may learn something new in terms of trends today, but if you want to succeed in the fast-growing blueberry category, you need to ensure quality in (at) production and you need to do so efficiently, no matter where you producing.

> CATEGORY MACRO TRENDS

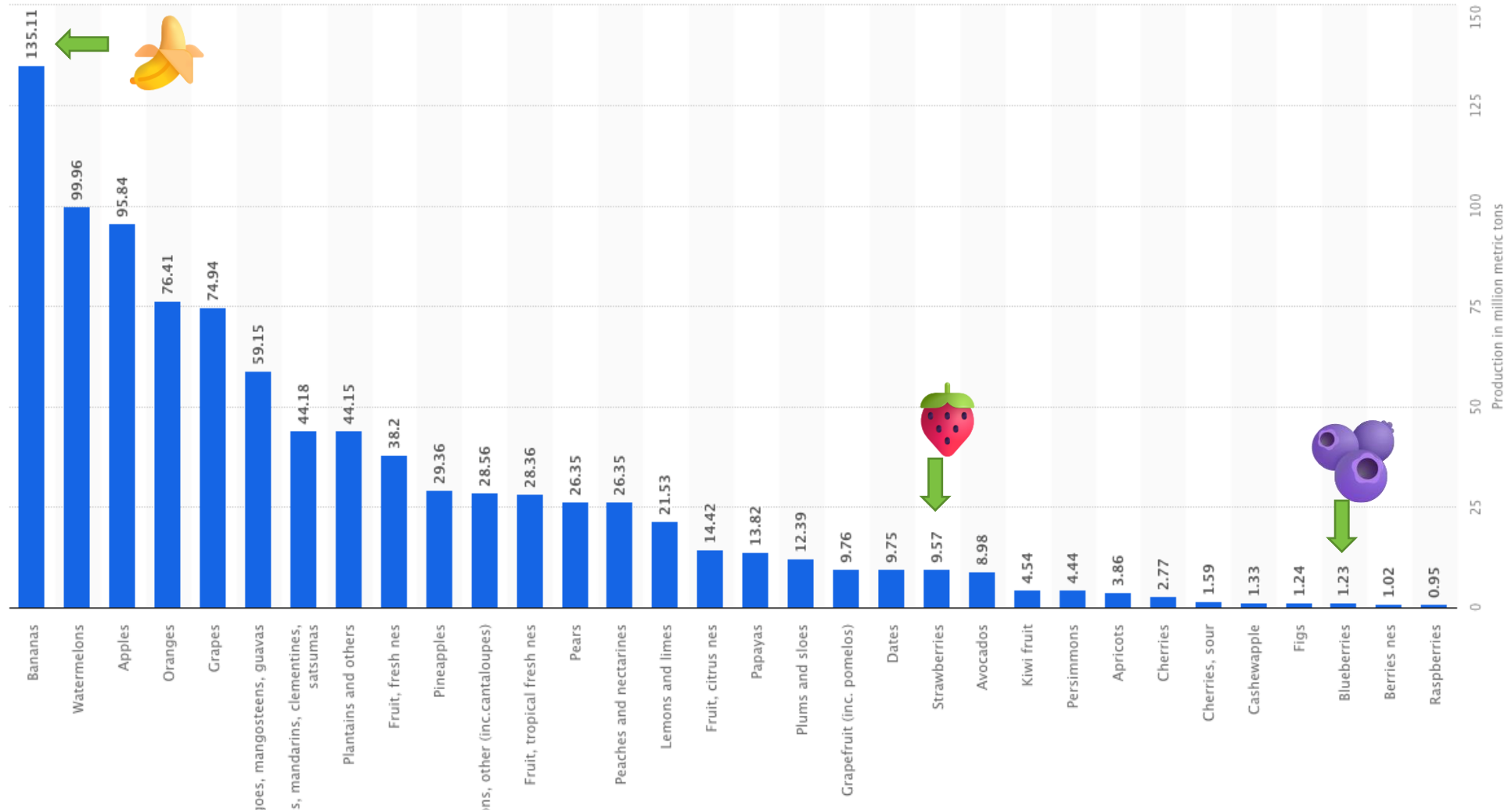


GROWTH BRINGS OPPORTUNITY...



GLOBAL FRUIT PRODUCTION

GLOBAL FRUIT PRODUCTION BY VARIETY IN MILLION METRIC TONNES (2022)

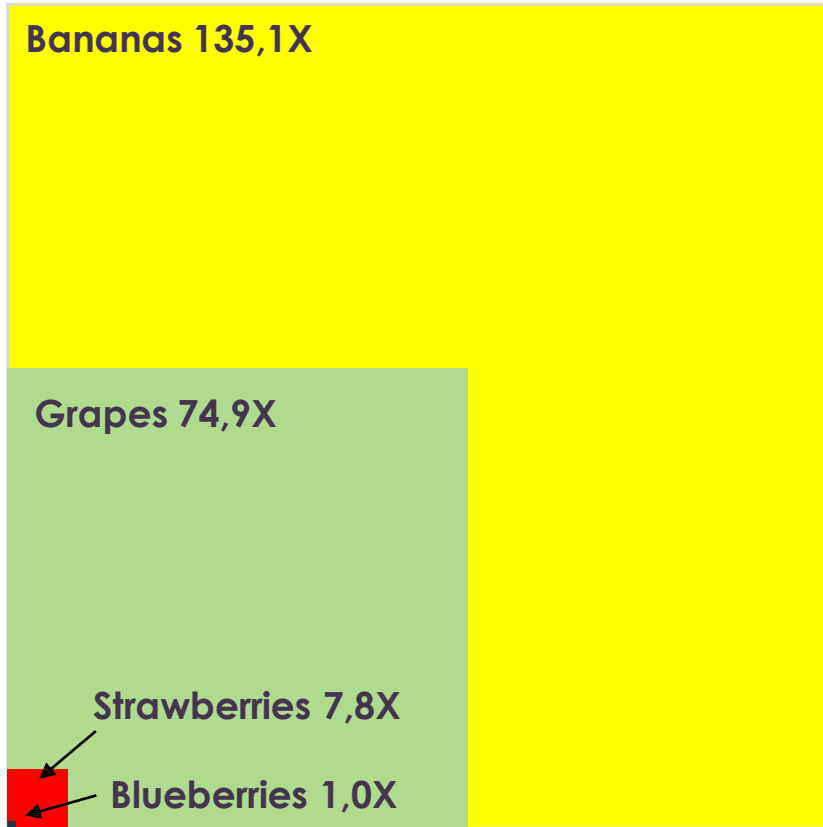


SOURCE: Statista, 2024

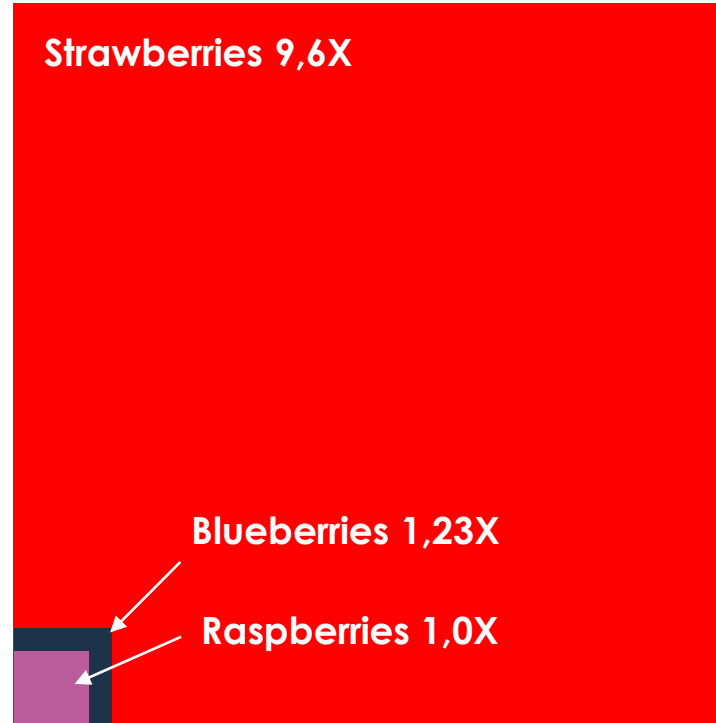
> TOTAL ADDRESSABLE MARKET FOR BLUEBERRIES

GLOBAL FRUIT PRODUCTION BY VARIETY IN MILLION METRIC TONNES (2022)

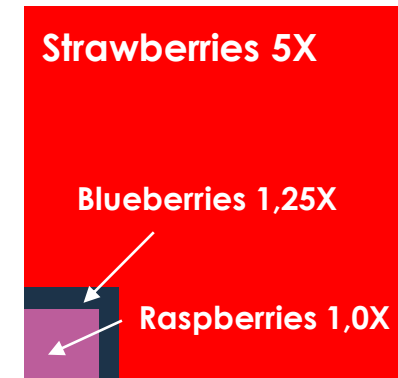
Global Tonnage indexed to Blueberries



Global Tonnage for soft fruit indexed to Raspberries



EU sales indexed to Raspberries by Value

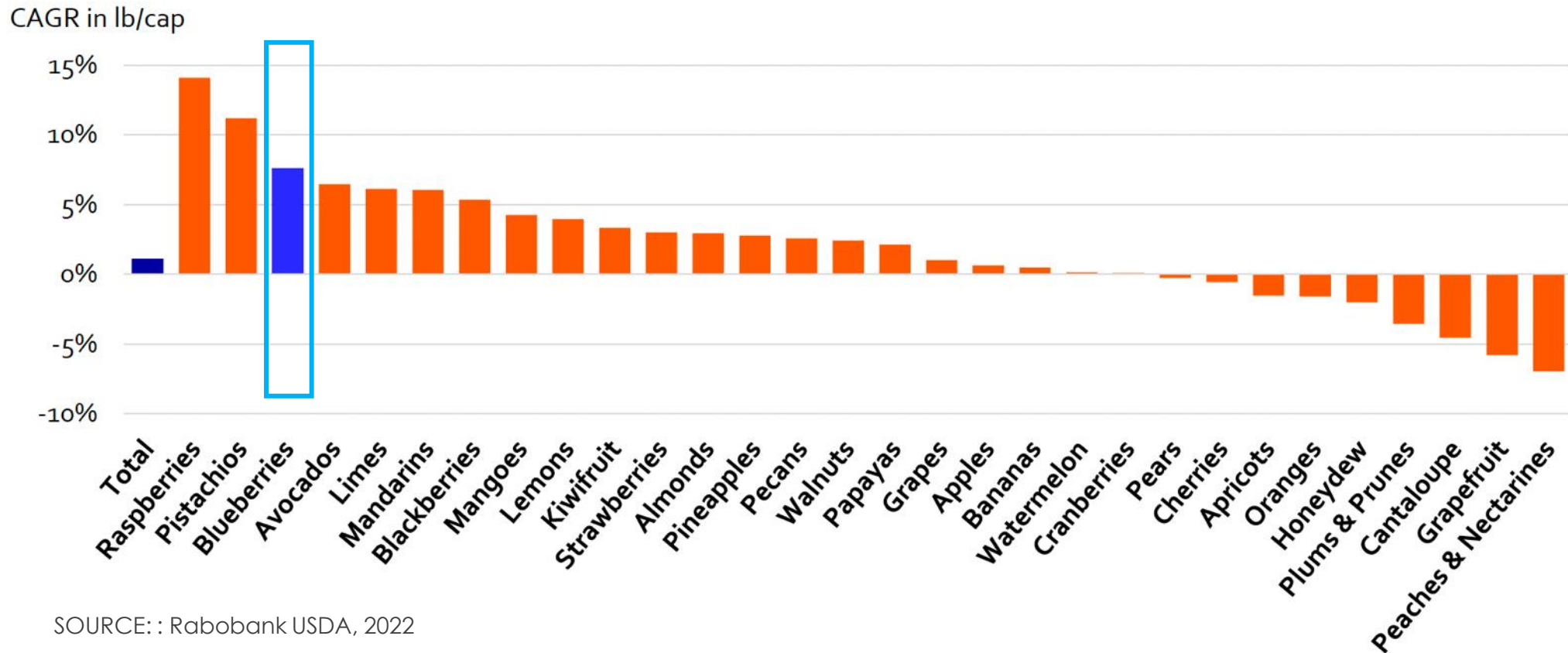


> FRUIT & NUT PREFERENCE TRENDS

HEALTHFULNESS, CONVENIENCE, AND TASTE AS DEMAND DRIVERS



Fresh Fruit & Nut "Use", US CAGR 2010-12 VS 2019-21 AVG



SOURCE: : Rabobank USDA, 2022

> BLUEBERRIES TICK NEARLY ALL THE BOXES

PRICE AND CONSISTENCY REMAIN THE KEY THINGS TO SOLVE



Select European markets: main factors when consumers buy food and drinks, 2022



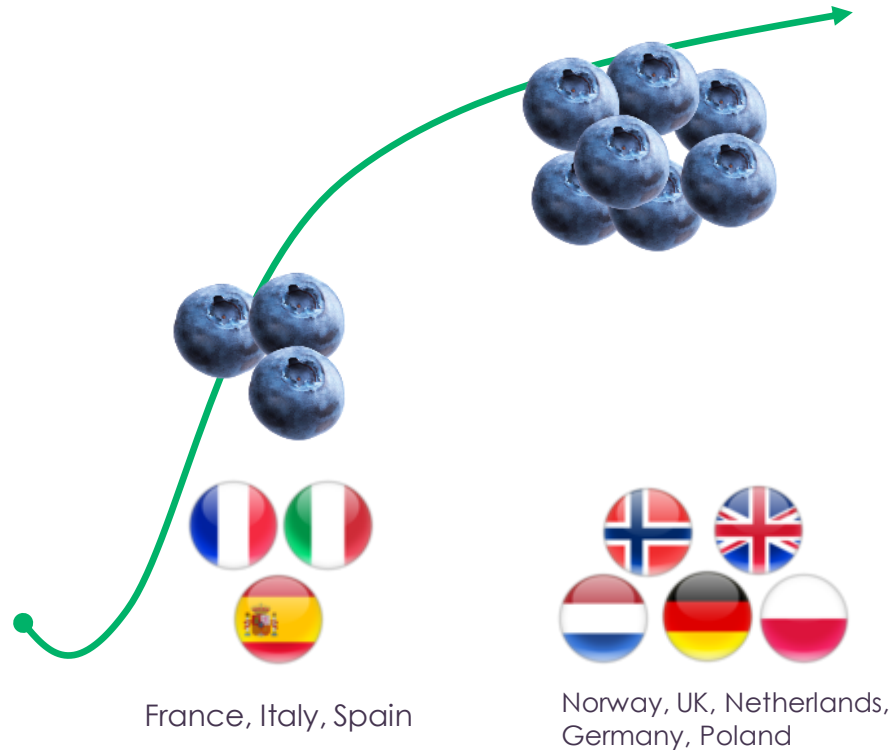
SOURCES: Kantar Profiles, Mintel, Oct 2022

> SIGNIFICANT OPPORTUNITIES FOR FURTHER GROWTH OF BLUEBERRY CONSUMPTION

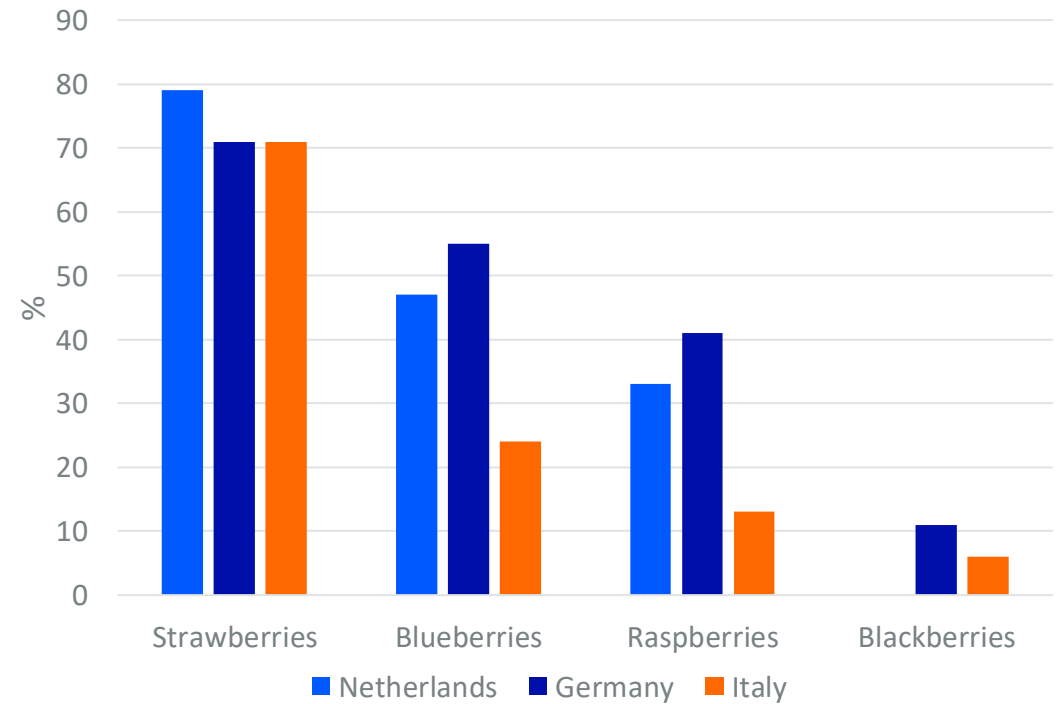


WESTERN EUROPE IS A TWO-TIERED MARKETS

Different levels of consumption (growth)



Market penetration of blueberries compared to other berries by key markets



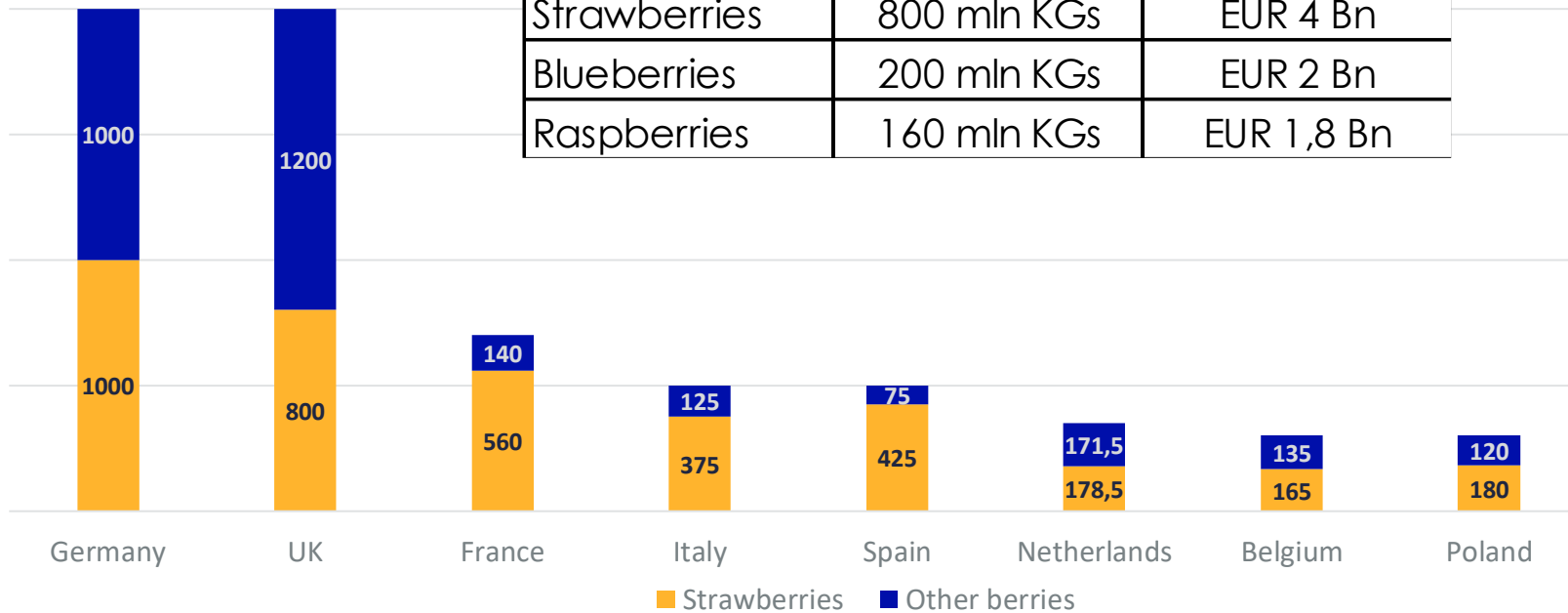
> STRAWBERRIES STILL DOMINANT IN EU FRESH BERRY MARKET, BUT THAT WILL CHANGE



Relative fresh berry market sizes and other berry share in selected European countries

European Market by Volume & Value

Berry Type	Volume	Value
Strawberries	800 mln KGs	EUR 4 Bn
Blueberries	200 mln KGs	EUR 2 Bn
Raspberries	160 mln KGs	EUR 1,8 Bn



Blueberry markets will outpace growth of strawberry and other berry markets because of:

1. Convenience
2. Versatility *Production Related*
3. Better opportunities to decrease price level relative to other berries (**Efficiency**)
4. Relative ease of production
5. Blueberries are less seasonal
6. Quality improving because of genetic innovation.

> GLOBAL BLUEBERRY MARKETS & MARKET ACCESS

WORLD' FOUR LARGEST CONSUMPTION MARKETS CONTINUE TO GROW
ACCOUNT FOR 90% OF FRESH CONSUMED AND CAGR 9,3% SINCE 2019

GLOBAL STATISTICS PER IBO				
#	COUNTRY	CONSUMPTION FRESH 2019	CONSUMPTION FRESH 2022	% Share of Total
1	United States / Canada	386,500 T	493,250 T	37,6%
2	European Union (W&C)	225,219 T	311,560 T	23,8%
3	China	157,817 T	301,380 T	23,0%
4	United Kingdom	56,524 T	72,000 T	5,5%
TOTAL		826,060 T	1,178,190 T	89,9%
GLOBAL FRESH (LOCAL AND IMPORTED)			1,310,870 T	

SOURCE MARKET – MARKET ACCESS		
PERU	CHILE	SOUTHERN AFRICA
✓	✓	✓
✓	✓	✓
✓	✓	✓*
✓	✓	✓

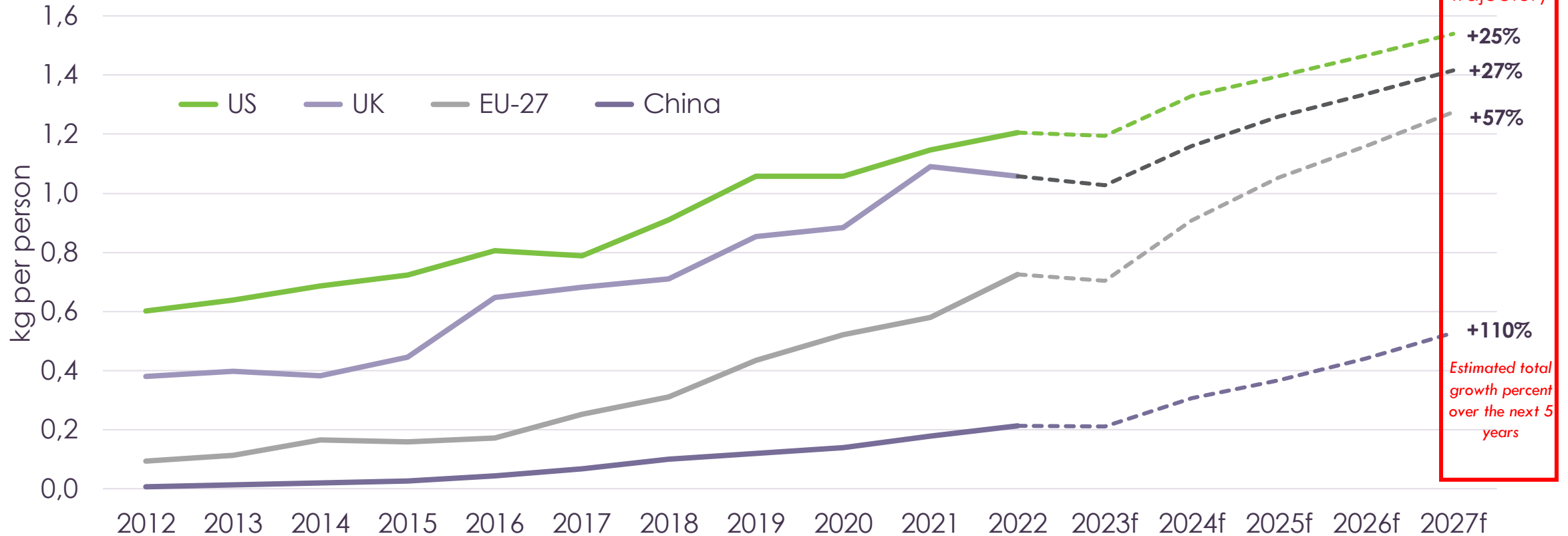


NOTE: Peru and Chile currently have access to all four of the world's largest markets. While Chile's relevance as a producer of blueberries is fading, market access from Southern African countries is important. South Africa currently only has access to three of the markets. The application for China is WIP. Zambia has market access to the EU, UK and China. Zimbabwe has market access to the EU and the UK, and access to China is expected before South Africa.

> BLUEBERRY GROWTH TRENDS IN FOUR KEY MARKETS

'*FOR THE LONGER TERM WE EXPECT CONTINUING GROWTH¹ IN GLOBAL BLUEBERRY USE'

Per capita availability of fresh blueberries in selected markets, 2012-2027f



SOURCE: : *Rabobank, 2024

¹ NOTE: WITH CURRENT PER CAPITA CONSUMPTION GROWTH, WITH THE MIGRATION TO NEW GENETICS, THE UNDERLYING PRODUCTION GROWTH WILL LEAD TO INCREASED AVAILABILITY

> MACRO TRENDS IN THE BLUEBERRY THE CATEGORY

IN SUMMARY...

- The addressable market potential is significant.
- Consumer preference for healthier fruit and nuts ranks blueberries in the top three.
- Blueberries tick almost all the boxes when it comes to preference – price and brand?
- In developed markets, share of blueberry consumption is approaching strawberries.
- Blueberry consumption is expected to exceed that of strawberries in time (grow by 8X).
- The worlds four largest blueberry markets account for 89,9% of fresh consumption.
- Growth in these four largest markets continues to be very strong.

The metrics clearly indicate a significant growth market with significant opportunity. So, where is the catch?

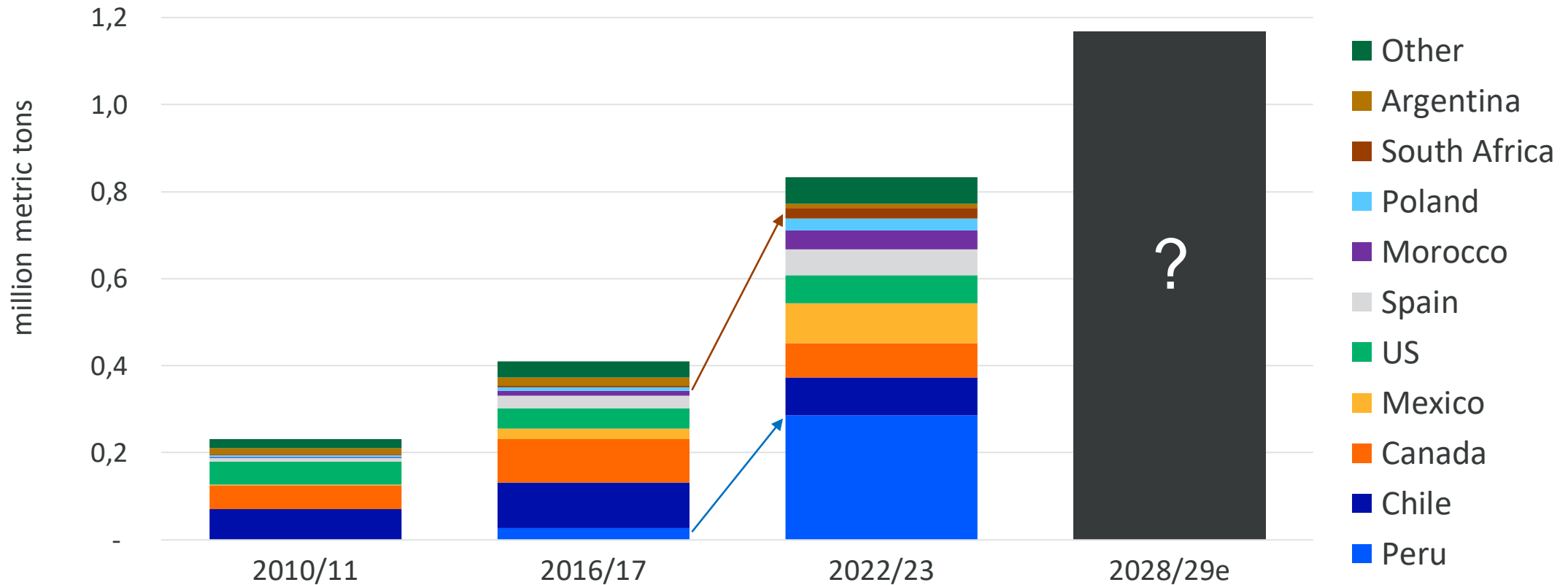
> PRODUCER

GLOBAL TRENDS IMPACTING THE PRODUCER...



> CHANGES IN THE GLOBAL PRODUCTION SUPPLY MATRIX

FRESH BLUEBERRIES: WORLD EXPORTS, 2010/11, 2016/17, 2022/23 y 2028/29e AVE



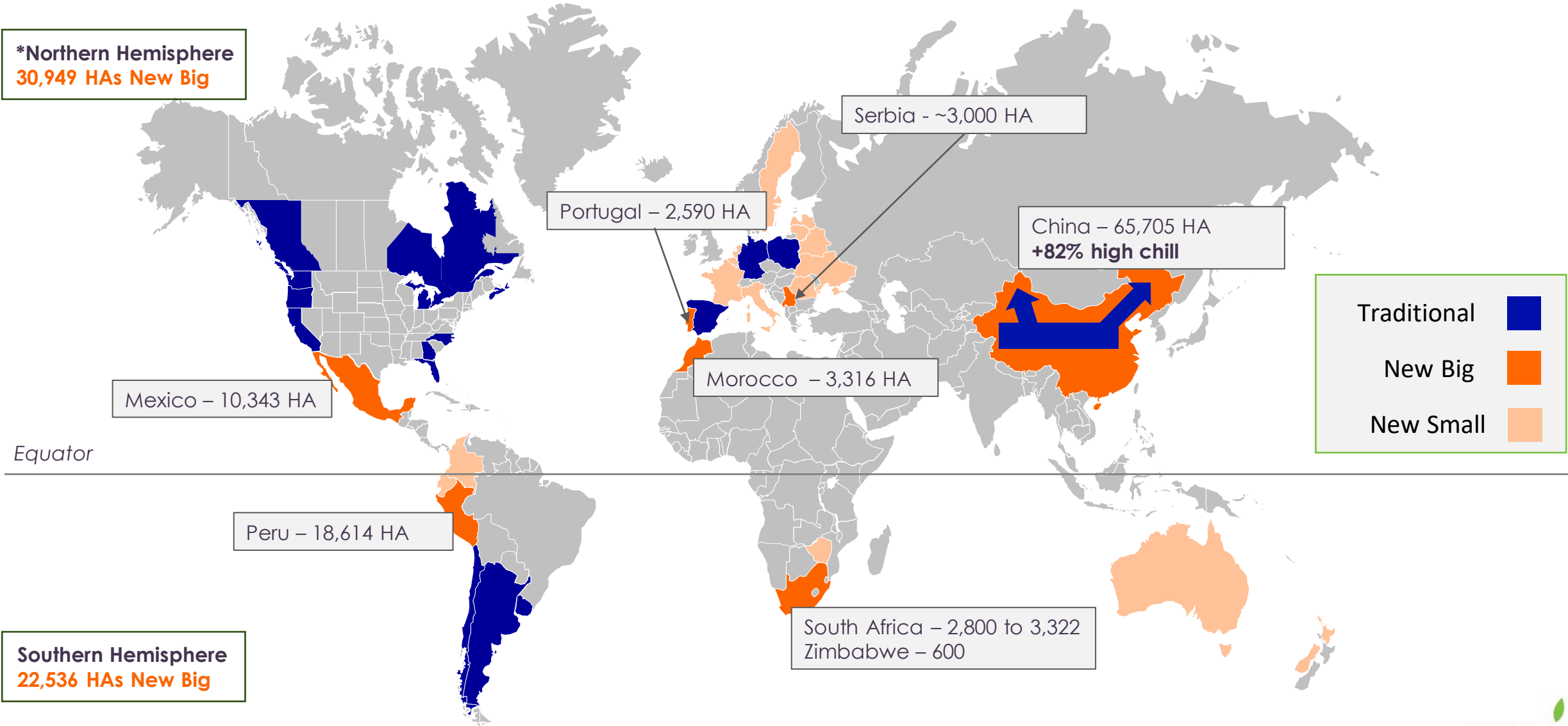
Worlds four largest markets, the US (67,6%), UK (83,8%) and W. Europe (91,2%) are net importers of blueberries.

SOURCE: Trade Map, Odepa, Senasa, Aduanas, USDA, Rabobank 2023, IBO 2023

© UNITED EXPORTS GROUP, 2024

> NEW PRODUCTION ZONES

HECTARES IN PRODUCTION OF "NEW BIG"



***Northern Hemisphere**
30,949 HAs New Big

Southern Hemisphere
22,536 HAs New Big

SOURCE: Rabobank, RaboFinance, 2024; IBO, 2023

> BLUEBERRY EFFICIENCY TOP 5

EFFICIENCY OF FRESH KEY TO SUCCESS

PERU SETS THE BENCHMARK IN TERMS OF YIELD EFFICIENCY AND PERCENT FRESH OF TOTAL YIELD

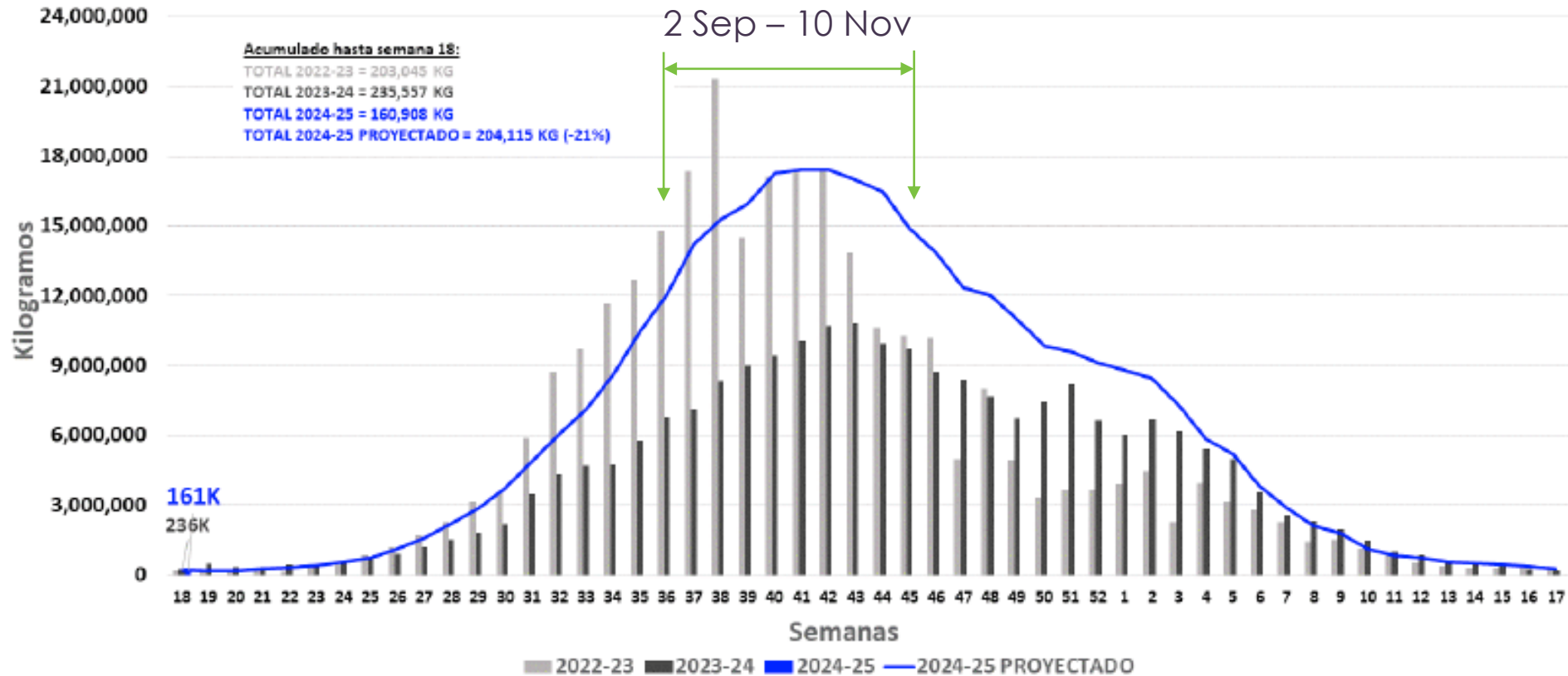
No	PRODUCTION COUNTRY	2022		TOTAL YIELD FOR 2022			YIELD PER HA IN 2022		
		Planted	Productive	Total	Fresh	Processed	Total	Fresh	Fresh Rank
		Unit>>	HAs	HAs	(000) MT	(000) MT	(000) MT	KG/HA	KG/HA
1	China	77 641	65 705	525,31	258,53	266,78	7 994	3 935	5
2	United States	42 084	38 831	277,63	159,17	118,46	7 148	4 099	4
3	Peru	21 491	18 614	299,67	285,58	14,09	16 099	15 342	1
4	Chile	18 375	15 000	166,35	101,35	65,00	11 090	6 757	3
5	Canada	12 034	11 030	76,15	32,61	43,54	6 904	2 956	6
10	South Africa	3 800	3 322	30,50	28,00	2,50	9 181	8 429	2
TOTAL HAs		209 048	180 005	1 376	865	510			

In 2023/24 in Peru the best performing grower produced 36,434 KGs per HA and the worst was 2,867 KGs per HA. The average was 12,575 KGs per HA.

Proprietary varieties are quickly gaining market share due to better quality and grower economics.

> PERU IS FLATTENING THE CURVE?

EL NIÑO OR FLATTENING THE CURVE OR SHIFTING THE PEAK?

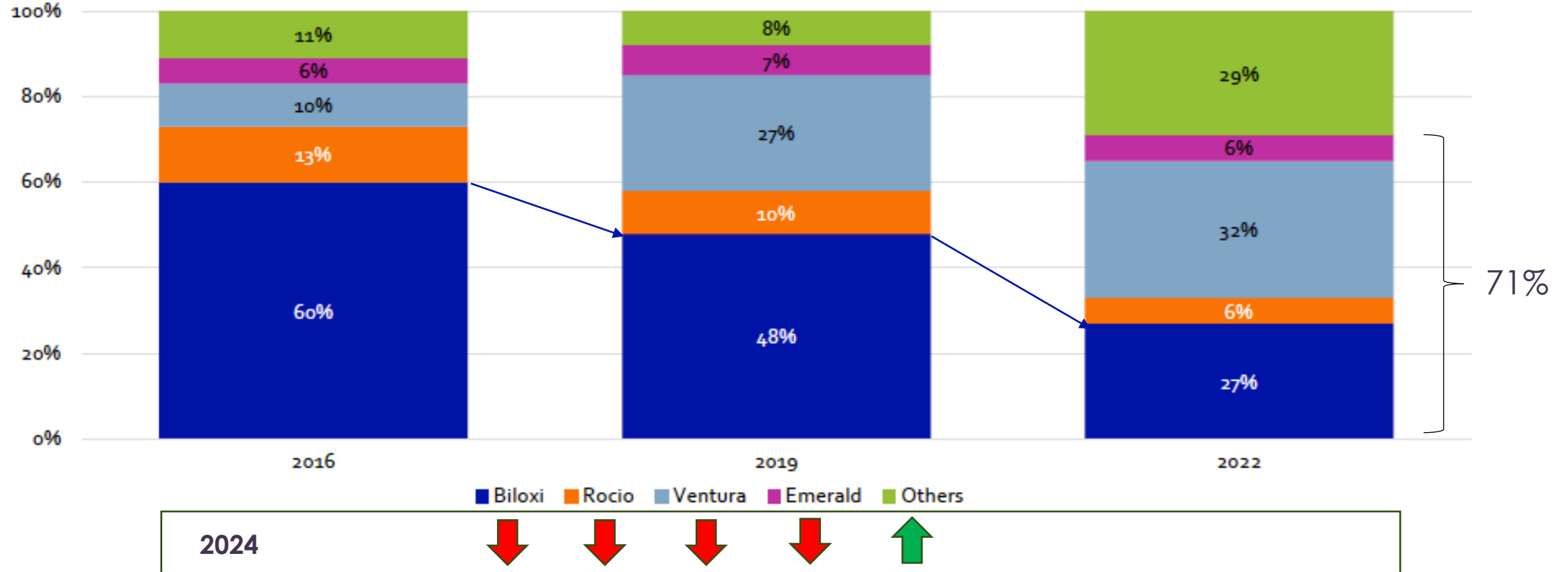


SOURCE: SENASA, PROARANANOS, 2024

© UNITED EXPORTS GROUP, 2024

> EXPORT FOCUSED PRODUCERS ARE REPLANTING

SHARE OF BLUEBERRY VARIETIES IN PERU, 2016 - 2022



> PERU'S BLUEBERRY VARIETIES ARE PIVOTING

CIRCA 70% OF PERU'S PLANTINGS ARE OPEN / LEGACY VARIETIES.

Top 5 most planted varieties account for 71% of HAs and 4 of them are being replaced.

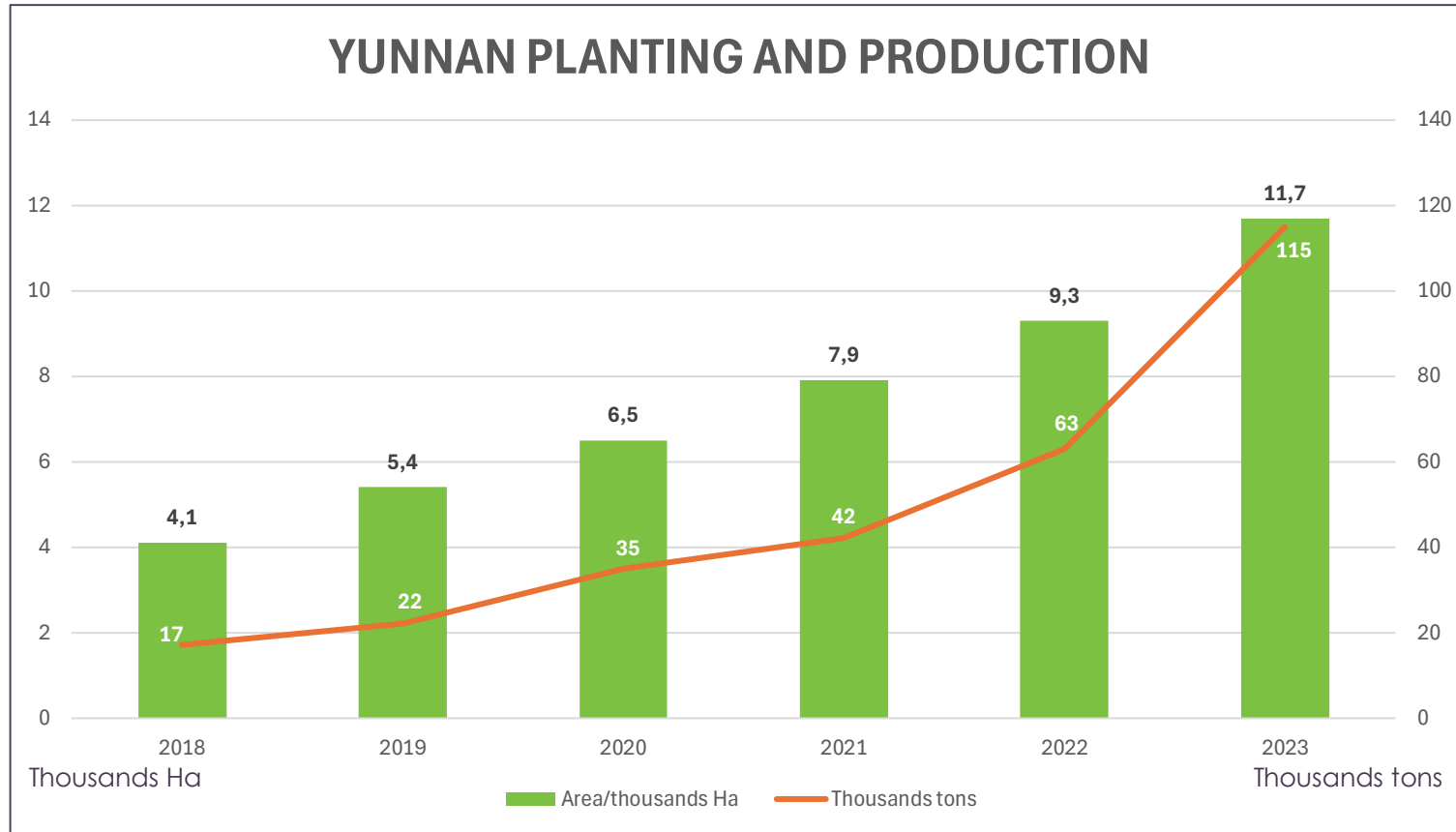
#	VARIEDAD	PROGRAM	HECTÁREAS (Ha)				PORCENTAJE (%)		% of Total HA's	
			CAMPAÑA 2020-2021	CAMPAÑA 2021-2022	CAMPAÑA 2022-2023	CAMPAÑA 2023-2024	VARIACIÓN 21/22vs22/23	VARIACIÓN 22/23vs23/24	% of Total HA's	Cumm% of Total HA's
1	VENTURA	Fall Creek	4 779	5 725	5 668	5 085	→ -1,0%	↓ -10,3%	28,2%	28,2%
2	BILOXI	Public	5 276	5 160	5 032	3 701	→ -2,5%	↓ -26,5%	20,6%	48,8%
3	FCM14-052 (SEKOYAPOP)	Fall Creek	55	425	915	1 879	↑ 115,5%	↑ 105,4%	10,4%	59,2%
4	ROCIO	Hortifrut	1 017	1 082	1 290	1 264	↑ 19,2%	→ -2,0%	7,0%	66,2%
5	EMERALD	Florida FSD	876	1 042	1 092	922	→ 4,8%	↓ -15,6%	5,1%	71,4%
6	FCM12-045 (ATLASBLUE)	Fall Creek	245	426	703	882	↑ 65,2%	↑ 25,5%	4,9%	76,3%
7	EB 9-2 (OZblu MAGICA)	OZ Varieties/ OZblu	168	216	364	651	↑ 68,8%	↑ 79,0%	3,6%	79,9%
8	FCM12-097 (SEKOYABEAUTY)	Fall Creek	45	366	491	466	↑ 34,2%	→ -5,0%	2,6%	82,5%
9	RIDLEY 1602 (EUREKA SUNRISE)	MBO	32	82	183	278	↑ 122,6%	↑ 51,7%	1,5%	84,0%
10	KESTREL	Florida FSD (Horitfrut)	68	258	420	232	↑ 62,6%	↓ -44,9%	1,3%	85,3%
11	C99-42 (KIRRA)	Driscoll's	103	231	256	210	↑ 10,5%	↓ -17,8%	1,2%	86,5%
12	DRISBLUETWENTYSIX (RAYMI)	Driscoll's			3	182		↑ 5231,0%	1,0%	87,5%
13	RIDLEY 1403 (EUREKA)	MBO	225	260	175	179	↓ -32,8%	→ 2,3%	1,0%	88,5%
14	ARANA	Driscoll's	29	44	147	174	↑ 235,4%	↑ 18,3%	1,0%	89,4%
15	PLABLUE 15.02 (MADEIRA)	Planasa	8	11	85	170	↑ 670,0%	↑ 100,0%	0,9%	90,4%
16	FCM12-087 (BIANCABLUE)	Fall Creek	25	78	362	158	↑ 365,6%	↓ -56,4%	0,9%	91,3%
17	DRISBLUETWENTYTHREE (ROSITA)	Driscoll's		1	67	151	↑ 5219,8%	↑ 124,7%	0,8%	92,1%
18	DRISBLUESEVEN (STELLABLUE)	Driscoll's	142	344	220	150	↓ -36,1%	↓ -31,9%	0,8%	100,0%
	Total general		13 936	16 793	18 660	18 007	↑ 11,1%	→ -3,5%	100,0%	

SOURCE: SENASA, 2024

© UNITED EXPORTS GROUP, 2024

> CHINA PRODUCTION PROFILE – GROWTH IN THE SOUTH

TALE OF TWO: WHILE CHINA IS “NEW BIG” THEY HAVE A LOT OF OLD/HIGH CHILL.



In 2022 China has 65,705 HA in production, of these in excess of 80% are high chill varieties.

In 2022, 50% of China's production went for processing.

Fresh to Processing profile similar to the USA.

North China: (Shandong; Zhejiang; Jiangsu; Anhui; Liaoning and Jilin province) **Varieties:** Bluecrop; Duke; Legacy; Draper; O'Neal; Liberty.

South China: (Yunnan/ Sichuan/ Guizhou) **Varieties:**, Jewel; Ventura; MBO Eureka; Planasa; Arana and Sekoya (recent).

> STRUCTURAL CHALLENGES TO THE SUPPLY SIDE

CHALLENGES FACING PRODUCERS

Availability and costs of resources



Water



Labour



Land

Climate



Logistics



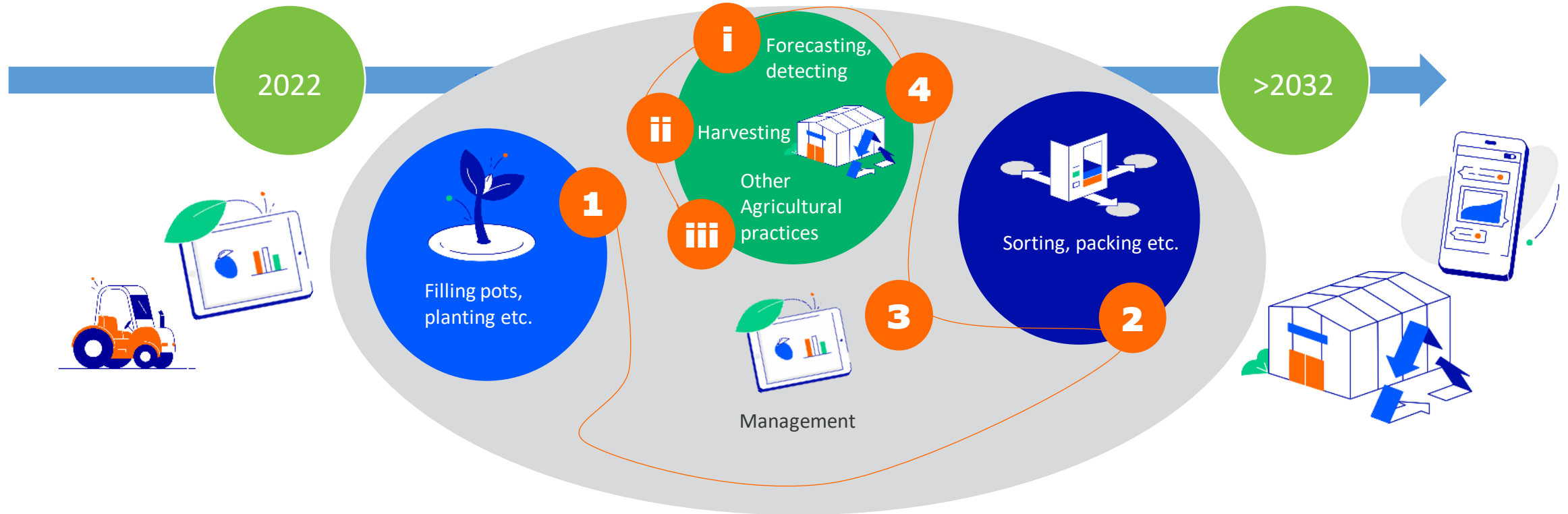
Regulation and sustainability requirements



> MECHANISATION, AUTOMATION & ROBOTIZATION

AN EVOLUTION AND NOT A REVOLUTION IN BERRY PRODUCTION

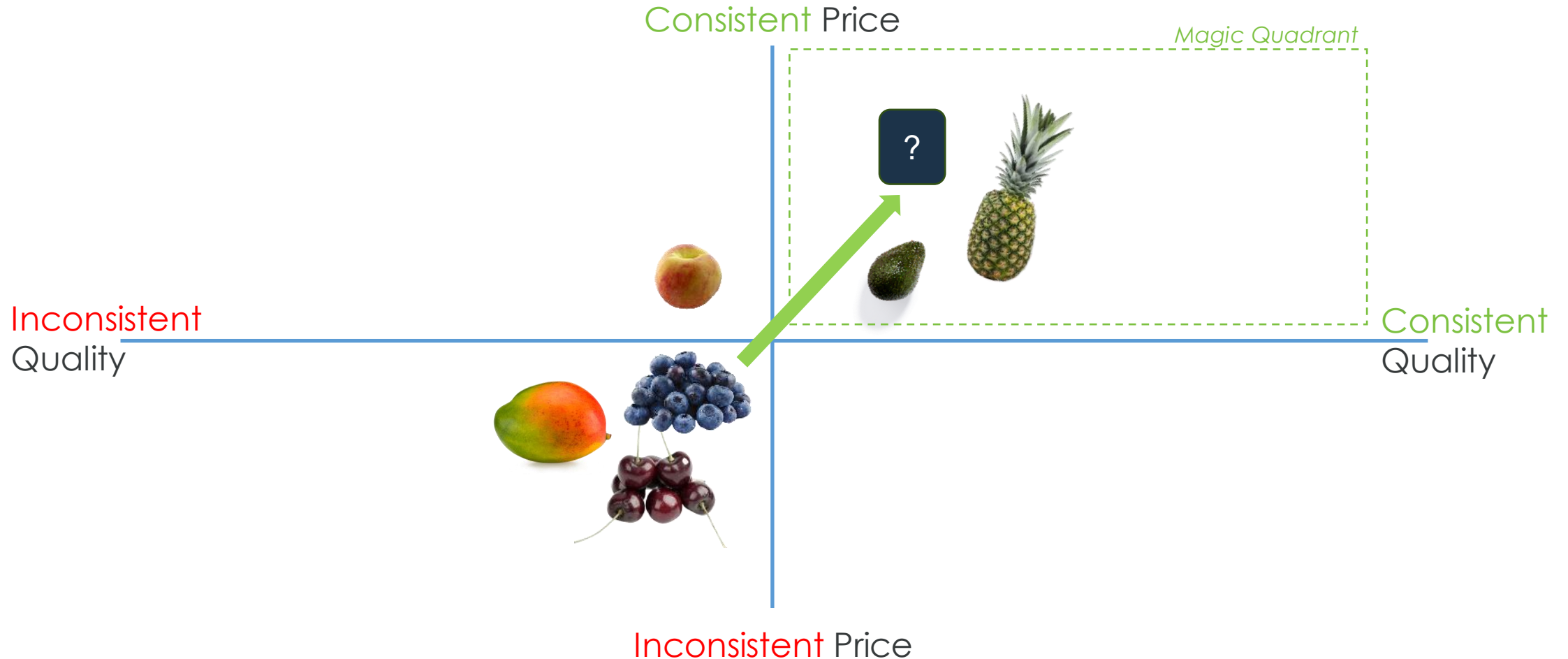
Production Efficiency is a key to competitive sustainability.



> CONSUMERS WANT BETTER VALUE FOR MONEY

IMPROVED QUALITY, CONSISTENTLY

Survey among US consumers on perceived fresh fruit value for money.



SOURCE: : North American Blueberry Council, 2024

© UNITED EXPORTS GROUP, 2024

> BLUEBERRY PRODUCTION TRENDS

SUMMARY

- The production sources continue to change.
- Innovation in low and zero chill genetics has created “New Big” producing countries.
- Good genetics are key to sustainable success. No different to other fruits.
- “Good genetics” – better quality (eating and post-harvest) and better production economics.
- The “New Big” are also pivoting and/or rolling out new genetics.
- Supply of berries is challenged more structurally.
- Automation / Robotization is evolving. Adoption is a requirement to be efficient/successful.
- Consumers (and Retailers) want good quality at a fair price on a consistent basis (52 weeks).

> CONSUMER

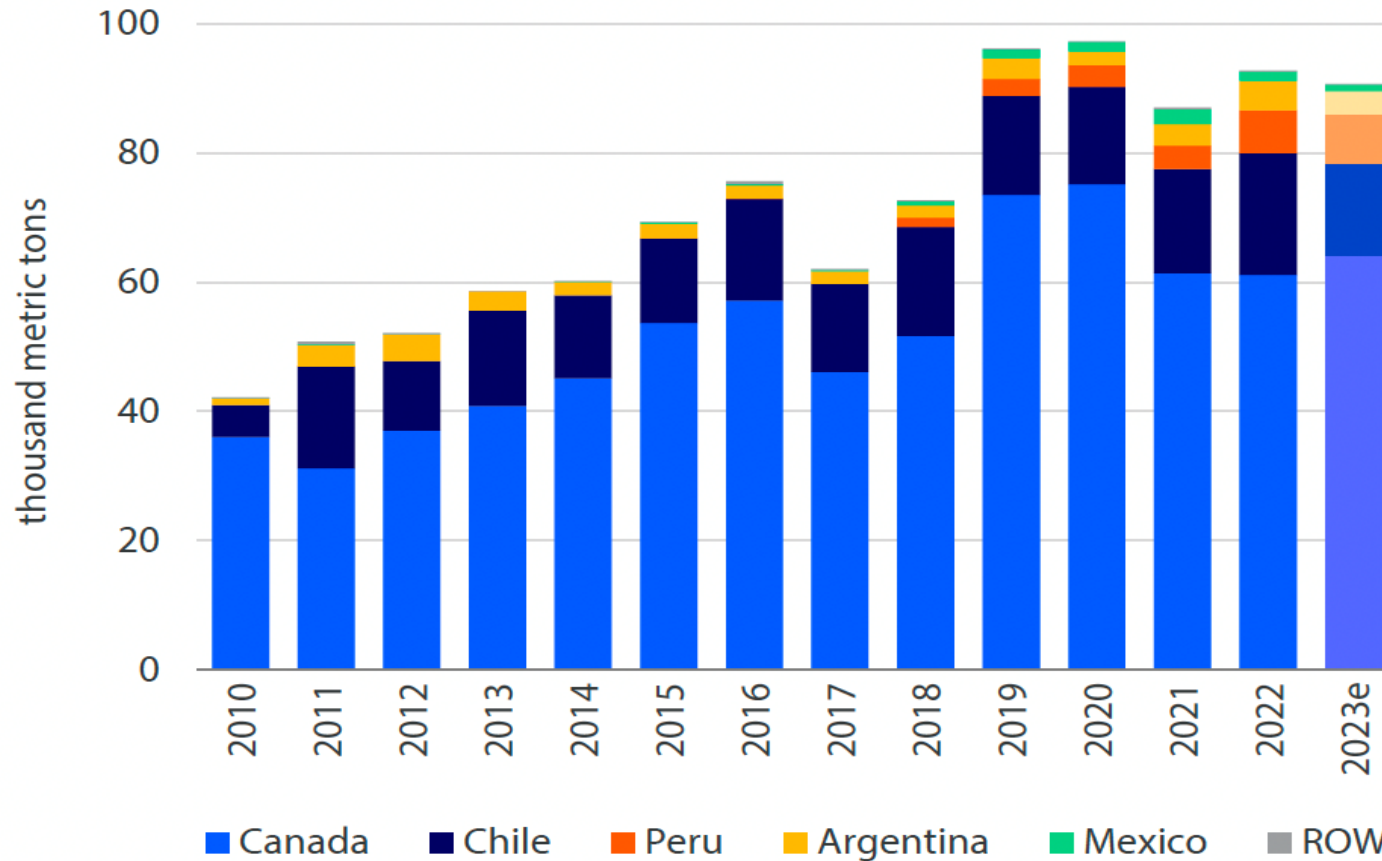
GLOBAL TRENDS SHAPING CONSUMER BEHAVIOUR...



> FROZEN CONSUMPTION IS GROWING

CHILE'S FRESH EXPORTS ARE DOWN 23% IN FOUR YEARS, VOLUME IS FLAT

US frozen blueberry imports by country of origin



SOURCE: International Berry Organisation (IBO), Rabobank 2023

© UNITED EXPORTS GROUP, 2024

> TIERING IN THE FRESH BLUEBERRY CATEGORY

UK REMAINS PRIVATE LABEL WITH ANYTHING FROM 3 TO 5 TIERS



Organic

Premium

Mid Tier

Entry



Duchy Organic
Blueberries
125g

★★★★☆ (345)

£2.50 £20/kg

Add



Waitrose Blueberries



Waitrose Blueberries
360g

★★★★☆ (376)

£4.60 £12.78/kg

Add



Waitrose Blueberries
225g

★★★★☆ (831)

£3.50 £15.56/kg

Add



Waitrose Blueberries
150g

★★★★☆ (306)

Add 2 for £4

£2.50 £16.67/kg

Add



Essential Blueberries
150g

★★★★☆ (821)

£2.00 £13.34/kg

Add

> TIERING IN THE FRESH BLUEBERRY CATEGORY

OTHER TIERS AND RELATED PRODUCTS



Mixed

Waitrose Mixed Berries
190g

★★★★☆(27)

£3.10 £16.32/kg

Add

Frozen

New lower price

Essential Frozen Blueberries
400g

Frozen

★★★★☆(453)

Was £2.50

£2.35 58.8p/100g

Add

Dried

New lower price

Waitrose Dried Blueberries
100g

★★★★☆(1)

Was £4.75

£3.95 £39.50/kg

Add

Other Products Riding the Wave

> TIERING IN THE USA ACHIEVING PRICE

QUALITY, SPECIFICATION AND BRAND PROVIDING PRICE ADVANTAGE



- Remains predominantly plastic
 - Trialing top seal in specific growing regions
 - Customers are interested in trying new ideas, but cost/technology is a barrier

Super Premium



Organic

- Premium
- Entry

Limited Edition

Jumbo

Conventional

- Premium
- Jumbo
- Entry

The screenshot shows the FreshDirect website interface. At the top, there is a navigation bar with the FreshDirect logo, a delivery address input field, a search bar, and a shopping bag icon. The main content area displays the product 'Oishii The Omakase Berry' under the category 'Produce / Fruit / Berries / Whole'. The price is listed as '\$11.99/ea | 6-8ct, approx. 4.2oz'. A red-bordered box highlights the price per kilogram: 'That's 120 grammes at \$11,99 or \$99,92 per KG.'. Below the price, there is a green 'Add to bag' button and a smaller 'Add to list' button. To the right of the text is an image of the product packaging, which is a clear plastic tray containing six strawberries. The packaging has the 'Oishii The Omakase Berry' logo on it.

> CONSUMER TRENDS IN THE USA

NIQ REPORT, THE GREEN DIVIDE



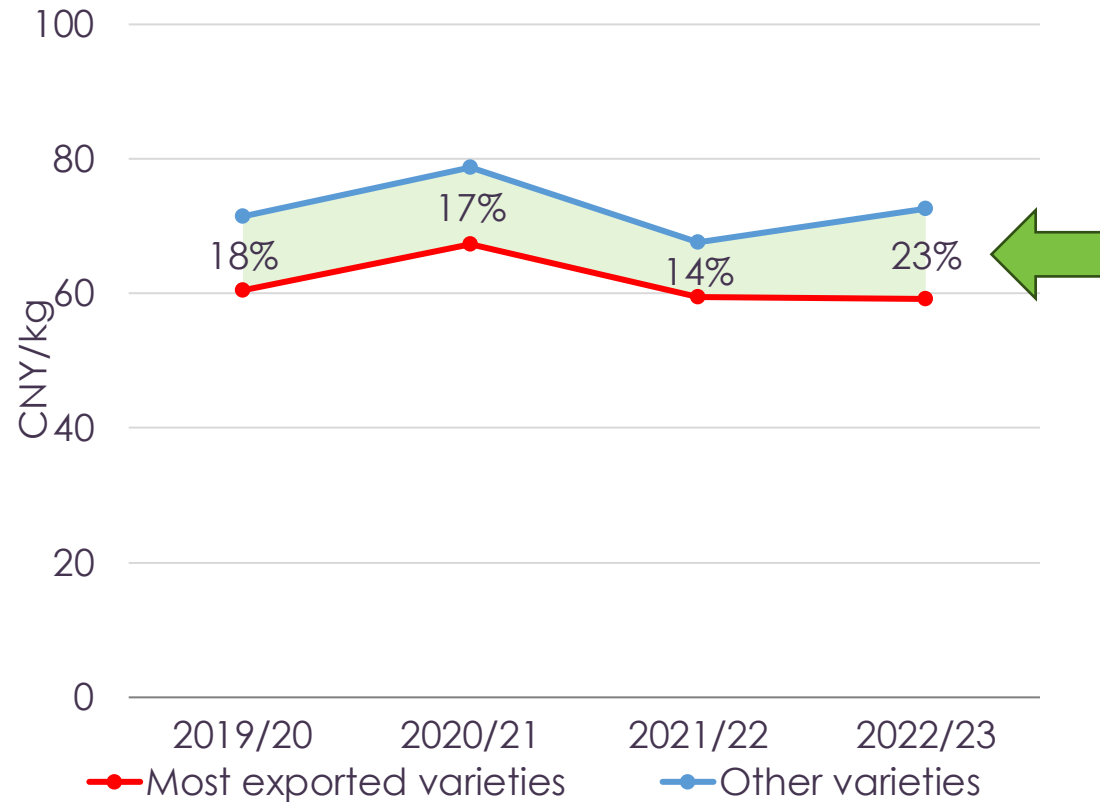
- 92% of consumers say that **sustainability** is important when choosing a brand today.
- In store, products with claims like “organic” are more popular than ever, while new and emerging claims around *regenerative agriculture*, *carbon footprint*, *water footprint*, and *responsibly sourced* are emerging and growing rapidly.
- This trend can be very beneficial for fresh food brands, especially those that source their products locally, sustainably, or responsibly. Blueberries are well placed.

> TIERING IN ASIA IS ACHIEVING PRICE

QUALITY, SPECIFICATION AND BRAND PROVIDING PRICE ADVANTAGE



Average wholesale price differential for blueberries in China, 2019/20-2022/23



> PACKAGE INNOVATION & TIERING

OCCASION BASED AND THEMED PACKAGING ATTRACTING A PREMIUM



- 60g per cup and 480g per box.
- Sales price 30% higher than 1.5kg package.
- Focus on snacking occasion and kids.

> PACKAGE INNOVATION & TIERING & OCCASSION

CHINESE MARKET – GIFTING ATTRACTING A 30% PLUS PREMIUM



- 250g per punnet and 1000g per box.
- Picked by bunch of berry and show fresh to customers.
- Sales price 30% higher than 1.5kg package and focus on premium channels.

> CONSUMERS WANT ASSURANCE AND TRANSPARENCY



NUTRITION, ENVIRONMENTAL IMPACT AND LEVEL OF PROCESSING

We will be measured and scored on how we are being part of the solution.



- Climate
- Pesticides
- Biodiversity
- Carbon Impact



> INNOVATION IN PACKAGING WILL CONTINUE

NUTRITION, ENVIRONMENTAL IMPACT AND LEVEL OF PROCESSING



FRANCE, 2023 - "Since 1 January 2024, a French decree has come into effect stipulating that fruits and vegetables packaged in batches of less than 1.5kg can no longer be sold wrapped in plastic."



Exemptions for Delicate Produce: The ban exempts certain fruits and vegetables considered "*at risk of spoilage when sold loose.*" Blueberries fall under this exemption list due to their delicate nature SGS.

Alternatives for Blueberries:

While plastic packaging is exempt for blueberries, some supermarkets in France are already exploring alternative packaging solutions like:

- Biodegradable or compostable wrapping materials
- Selling blueberries loose

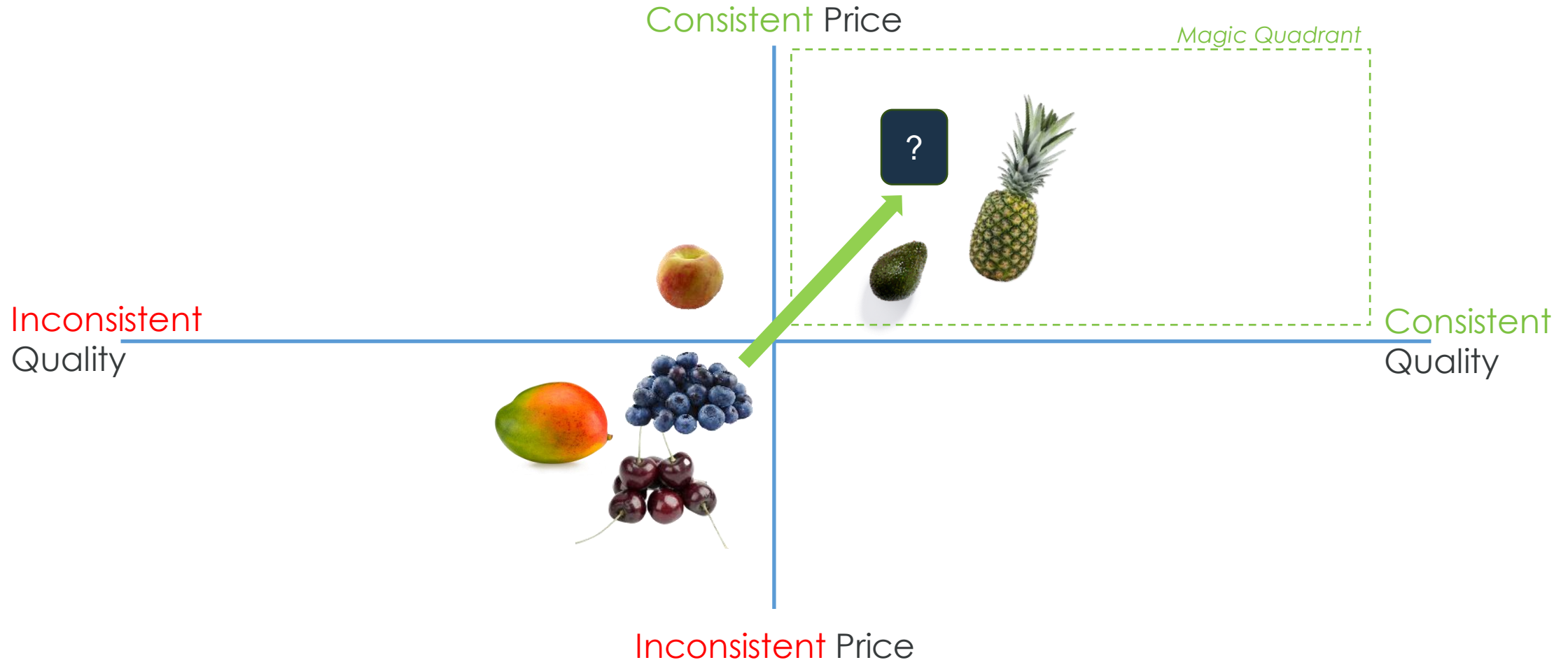
> CONSUMER TRENDS

KEY TAKEAWAYS FROM THE CONSUMPTION DATA

- China (45,8%) and the USA (50,8%) production is 50% processed – frozen is growing!
- 90% of all fresh blueberries are currently consumed in the four key markets.
- Western Europe (91,2%), the UK (83,8%) and the USA (69,1%) are net importers of fresh blues.
- Tiering prevalent in all key markets, but more so in the USA, China and the UK.
- Occasion based SKUs slowly gaining traction – China the most innovative.
- Price premium being achieved based on quality, specification and occasion.
- ESG matters to consumers, they want transparency, it will effect choice.
- Innovation in packaging will continue. It will be an evolution, but it will change.

> MARKET OPPORTUNITY EXISTS, IN THE MAGIC QUADRANT

IT WILL BE A JOURNEY OF QUALITY AND EFFICIENCY...THAT'S THE CATCH!



SOURCE: : North American Blueberry Council, 2024

© UNITED EXPORTS GROUP, 2024

THANK YOU...