

2010

World Blueberry Acreage & Production

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Introduction

After a corrective period spanning nearly two years in the blueberry business, coupled with a worldwide economic recession, the blueberry industry came back to life with renewed purpose and direction in 2010. Since the downturn began in 2008, the year for which the previous version of this report is published, virtually all of the additional fruit produced has been shipped and sold in the fresh market. With these significant diversions to fresh, a light wild crop and successful movement of frozen inventory, processed prices rebounded as global demand for frozen and processed blueberries continued to grow. Overall, the Southern Hemisphere with Chile in the dominant position, had a good 09/10 season and the 10/11 season has gone reasonably well thus far without considerable problems. Contained in this document is extensive data on acreage and production for 2010 (southern hemisphere data is for 2009/10 unless otherwise indicated). This year's report will review the industry's events of the last two years in detail, reference more distant history, examine key drivers, discuss trends and, to the best of the author's ability, attempt to predict what we might expect as participants in this increasingly global blueberry industry in the future.

Around the world, established growing regions are under pressures to professionalize as the crop moves from its niche position to that of a commodity in demand year-round. New regions are leaving infancy, providing glimpses of their future potential. Many challenges lie ahead from possible buyer black-lash against a return to high frozen prices, climate change, product quality issues, food safety concerns, new regulations, higher demands on shelf-life and shipping characteristics, higher quality expectations, more informed buyers, and pending production increases just to name a few. There are many new opportunities as well. Whole new regions of the world are awaking to consume blueberries; new varieties are making it possible not only to produce in new geographies but to improve grower economics and consumer experience everywhere, while many new products utilizing blueberries continue to be rolled out onto the shelves. Most contributors to this project expressed enthusiasm, optimism, excitement and passion for an increasingly dynamic industry.

Disclaimer Regarding Data Contained in this Report: Quantifying exact commercial acreage and production for every growing region is not a realistic undertaking for this project. Without a doubt there are regions with commercial acreage and production that have been neglected in this report and the acreage and production figures provided vary widely from very accurate to simplistic best guesses from individuals and parties active in those regions. The data and analysis presented in this document is therefore not intended to portray precise snapshots of what is in the ground and what was produced, but rather to draw attention to trends, both macro and micro in scale in order to achieve a better understanding of where the blueberry industry has been, where it is today and ultimately to speculate as to where it is going.

Many public and private sources of information and intelligence were utilized to compile the information delivered in this publication. Industry leaders from around the world anonymously contributed significant time, energy and their valuable insights to help build the body of information and intelligence presented here. In many cases, commonalities in the communications with contributors lead to the clear development of the trends outlined in this report. I would like to extend

my gratitude to the people who took the time to make these significant contributions that provide much of the content of this document. Special thanks to Nancy Bauer at Northwest Visuals who played a key role in framing and designing the formats for both the presentation and report for this project. Special thanks to Fall Creek Farm and Nursery and its customer base for their support and contributions. Thank you to all the individuals who invest their time, year after year, and share their information and insights for this and previous reports.

Methods and Objectives

Methods:

Data Collection, Intelligence, Sources: Thank you!

Industry Organizations: Increasingly, growers, service providers and handlers from production regions around the world are forming organizations to share information, promote consumption, track production and address issues pertinent to their realities. Blueberry committees and organizations can now be found on every continent and in most major growing areas. Data and intelligence from these groups, both published and provided upon request, has been vital to the generation of this report. Thank you to these organizations for their help and support and their service to the industry.

Surveys: Targeted surveys were sent to industry members around the world to collect acreage data, production data and intelligence. Rather than broadcasting a form survey as in previous years, more time was spent targeting each source and the areas of their expertise. Thank you to the many contributors who took the time to fill out surveys and provide their input.

Interviews with Industry Leaders: There is no replacement for person to person interviews. Thanks to technology, extended interviews are now possible not only over the phone but in video conference and through voice over internet protocol at low cost. The information shared in these conversations and interviews were invaluable to improving the amount of key intelligence available to the industry via this report. Care has been given to not disclose sensitive information that is meant to remain private. Thank you to all who took their time to be interviewed and particularly their willingness to be open and share their knowledge, experience and insights.

USDA FAS: In addition to helping US agricultural companies abroad, the FAS can be an excellent source of information on what is happening abroad in an industry. Thank you to the FAS contributors to the project.

Interviews with Buyers and End Users: Without the input of the final purchasers who deliver the product to the consumer and have a significant impact on decisions regarding products, promotion and pricing, to name a few, this report would be incomplete. As a result, buyers for supermarkets, consultants in marketing, food companies, and other purchasers were interviewed to ensure their perspective and input was included. Special thank you to those who help get our product to consumers and a willingness to take the time to share insights.

Consumers: Though not performed on an organized level in consumer research groups and consumer attitude surveys, this author made a continuous concerted effort during frequent travels in North America and abroad to discuss and interview regular consumers about their awareness, opinions and interest in blueberries. Their responses corresponded surprisingly well with the experience of those involved on the supply side of the business in the market.

Format

The format for this report will compartmentalize sections by geography and conclude with a global overview. Each section will evaluate geographies within a standard format:

Review: A written review of the data for region's previous season

Production and Acreage: Tables on its production and acreage data in the 2009/10-2010 season – All data will be in acres and million lbs.

Summary: A brief summary of the events of the season and/or overview of the region to date

Drivers: Bullets on the major drivers in the region's blueberry industry (demand, markets, technology, economics, positioning, opportunities)

Trends: The general trends for the geography looking to the future

Note on North America and Chile Sections: The largest blueberry industries in the world are in the United States and Chile. Special attention will be given to intelligence shared by industry contributors on the events of the last 24 months in the "Summary" sections for each of these regions.

Drivers: Categories

Demand and Market(s)

What are the market and demand realities that fuel the activity in the region(s)? What are the underlying drivers for the demand? Are there new markets? What are the established tendencies of existing markets?

Technology

Is new technology changing the supply side dynamics of the business? Is there a need for a new technology to improve economics, quality or affect the outcomes? How is technology being integrated in to the supply chain from the farm to the final sale?

Economics

How are macroeconomic events impacting the industry in a region and its participants? What are the economic realities dominant on the micro level within the industry? How are a country's economic policies affecting its domestic industry? What are the standout financial and economic themes driving the business? What realities most affect producer, vendor and handler costs?

Geography

Where is the industry located geographically and how does that impact its business potential? How does a region's geography impact climate, timing, quality and market access?

Themes for 2010

Rapid Growth Creates Unique Challenges: After years of breakneck industry growth, this theme stands out. The faster an industry grows, the more it tends to underperform for various reasons.

The Blueberry Industry is Going Global: Production and consumption are expanding around the world. Much of the growth in production in new areas is being driven by demand growth in new places.

New Consumers Now a Major Driver of Demand: Historically, much of the consumption increase was attributed to existing blueberry consumers eating more fruit, now there is a clear additional trend towards more people beginning to eat blueberries.

Drive towards Professionalism and Scale: The biggest winners during the downturn and in the current upswing have been the larger and increasingly professional run operations.

Repositioning and Re-tooling in Established Regions: As the competition increases, the industry grows and professionalizes and the market becomes more discerning, leading growers in established regions are renovating their businesses with new varieties, new technology, better infrastructure and ultimately pursuing greater efficiency, productivity and quality.

Fresh Dominates: Since the downturn in 2008, the vast majority of the production increase has been diverted to the fresh market.

Renewed Growth Potential in Processed: Having picked-up in 2010, the processed market looks poised for growth. Many new products using blueberries were developed in the last decade but have been held back when securing supply proved difficult. With increased production coming on, food companies are now finally willing to try rolling out the new products. In North America and around the world, the markets for frozen, IQF, and products using blueberries is growing. The landscape of today's processed market and industry show hope of the potential for supply growing while meeting renewed demand.

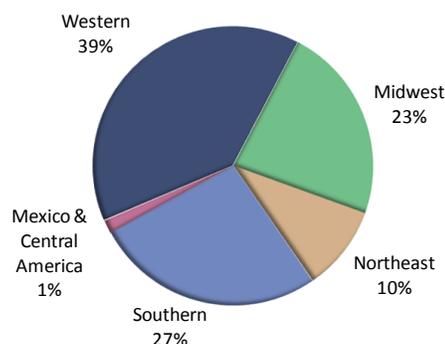
North America

Review:

Between 2008 and 2010 North America's estimated acreage grew from 95,607 to 108,791 Acres, a total of 13,184 additional acres and a 13.8% increase over 2 years (NA1 & NA2). Clearly acreage has continued to grow rapidly in North America, though not quite at the rate of the preceding years where planted acreage increased 10-20% annually. As of 2010, North America now has over 100,000 planted acres and over 57% of the world's blueberry acreage (see Global section). The Western and Southern

States remain the fastest growing regions with 7,765 acres added to the West and 3,950 added in the South. Mexico has been growing at a high rate though from a low acreage adding an estimated 857 acres since 2008 (NA1 & NA2). Standouts for production in 2010 included the State of Georgia growing from 31 in 2008 to 56 million pounds in 2010, while North Carolina, Oregon, Washington and British Columbia also saw significant increases in production (NA4). Also noteworthy is the North American production increase from 415.8 million lbs to 491.3 million lbs with the vast majority of the total increase shipped fresh since 2008. Between 2008 and 2010 the industry saw an increase in fresh diversion from 229.4 to 303.0 million lbs while in process, a mere increase from 186.4 to 188.3. Over the course of two years, the industry witnessed an increase of 75.5 million lbs, virtually all of which was shipped fresh (NA4 & NA5). Since the downturn in the processed market, fresh diversion and consumption has grown at incredible rates. In the following sections are tables and charts outlining these data and a summary of recent events and pertinent information and intelligence.

North America Acreage Distribution



Production and Acreage: (Denominated in Millions of Pounds)

Please note, all production and acreage data in this report are provided in pounds and acres. For metric references, there are approximately 2.47 acres in a Hectare and 2.204 pounds per Kilogram.

North American Acreage Growth; 2010 Crop (NA1)

NORTH AMERICA	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
GROWTH							
British Columbia	13,000	17,500	18,300	21,020	56.00	34.00	90.00
Washington	2,815	3,982	5,678	8,820	12.00	30.00	42.00
Oregon	4,410	5,516	6,234	7,458	25.80	27.50	53.30
California	2,370	3,949	5,120	5,790	27.00	1.00	28.00
Western	22,595	30,947	35,332	43,088	120.8	92.5	213.3
Michigan	18,500	19,300	21,200	22,750	49.50	49.50	99.00
Indiana	850	850	900	950	2.70	1.30	4.00
Others	1,055	1,275	1,300	1,500	1.90	-	1.90
Midwest	20,405	21,425	23,400	25,200	54.1	50.8	104.9

NORTH AMERICA	Acreage				2010 Production		
GROWTH	2005	2007	2008	2010	Fresh	Process	Total
New Jersey	7,500	7,900	7,960	8,120	32.00	8.00	40.00
New York	1,000	1,050	1,100	1,200	2.20	0.10	2.30
E. Canada	1,230	1,150	1,200	1,260	3.80	0.10	3.90
Nova Scotia	-	300	300	300	1.00	-	1.00
Northeast	9,730	10,400	10,560	10,880	39.0	8.2	47.2
Florida	1,800	3,200	3,450	3,950	15.00	0.80	15.80
Arkansas	350	530	550	550	0.50	-	0.50
Miss./Louisiana	2,140	2,500	3,300	3,850	3.00	4.50	7.50
Georgia	7,500	9,120	11,000	12,800	36.00	20.00	56.00
North Carolina	5,500	6,000	6,200	6,800	27.50	11.50	39.00
Texas	875	950	1,000	1,050	1.50	-	1.50
Others	-	-	-	450	0.60	-	0.60
Southern	18,165	22,300	25,500	29,450	84.1	36.8	120.9
Northern Mexico	60	180	260	295	0.75	-	0.75
Southern Mexico	120	350	530	1,350	4.20	-	4.20
Guatemala	-	15	25	27	0.05	-	0.05
Mexico & Cen. Am.	180	545	815	1,672	5.0	-	5.0
North America	71,075	85,617	95,607	110,290	303.0	188.3	491.3

By Region: North American Acreage Growth; 2010 Crop (NA2)

NORTH AMERICA	Acreage				2010 Production		
GROWTH TOTALS	2005	2007	2008	2010	Fresh	Process	Total
Western	22,595	30,947	35,332	43,088	120.8	92.5	213.3
Midwest	20,405	21,425	23,400	25,200	54.1	50.8	104.9
Northeast	9,730	10,400	10,560	10,880	39.0	8.2	47.2
Southern	18,165	22,300	25,500	29,450	84.1	36.8	120.9
Mexico & Cen. Am.	180	545	815	1,672	5.0	-	5.0
North America	71,075	85,617	95,607	110,290	303.0	188.3	491.3

North American Production Growth (NA3)

NORTH AMERICAN PRODUCTION GROWTH									
	1995	1997	1999	2001	2003	2005	2007	2008	2010
Western	56.4	55.4	74.9	86.6	81.2	95.1	162.6	163.6	213.3
Midwestern	70.8	75.5	72.8	71.5	63.0	75.1	93.6	114.1	104.9
Northeastern	33.0	33.8	35.8	45.9	55.2	70.2	54.8	60.7	47.2
Southern	35.4	30.0	43.6	41.9	46.2	61.6	45.9	75.2	120.9
Mexico & Central Am.	0.0	0.0	0.0	0.0	0.0	0.2	1.0	2.2	5.0
Total Production	195.6	194.7	227.1	245.9	245.6	302.2	357.9	415.8	491.3

North American Production & US Comparison: 2008 vs. 2010 (NA4)

NORTH AMERICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
British Columbia	40.00	35.00	75.00	56.00	34.00	90.00
Washington	6.50	23.50	30.00	12.00	30.00	42.00
Oregon	18.00	26.60	44.60	25.80	27.50	53.30
California	13.00	1.00	14.00	27.00	1.00	28.00
Western	77.5	86.1	163.6	120.8	92.5	213.3
Michigan	45.00	65.00	110.00	49.50	49.50	99.00
Indiana	2.30	1.50	3.80	2.70	1.30	4.00
Others	0.30	-	0.30	1.90	-	1.90
Midwest	47.6	66.5	114.1	54.1	50.8	104.9
New Jersey	46.00	8.00	54.00	32.00	8.00	40.00
New York	2.20	0.10	2.30	2.20	0.10	2.30
E. Canada	3.00	0.10	3.10	3.80	0.10	3.90
Nova Scotia	1.00	0.25	1.25	1.00	-	1.00
Northeast	52.2	8.5	60.7	39.0	8.2	47.2
Florida	9.00	-	9.00	15.00	0.80	15.80
Arkansas	1.50	-	1.50	0.50	-	0.50
Miss./Louisiana	1.90	1.80	3.70	3.00	4.50	7.50
Georgia	16.00	15.00	31.00	36.00	20.00	56.00
North Carolina	20.00	8.50	28.50	27.50	11.50	39.00
Texas	1.50	-	1.50	1.50	-	1.50
Others	-	-	-	0.60	-	0.60
Southern	49.9	25.3	75.2	84.1	36.8	120.9

NORTH AMERICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
Northern Mexico	0.50	-	0.50	0.75	-	0.75
Southern Mexico	1.60	-	1.60	4.20	-	4.20
Guatemala	0.10	-	0.10	0.05	-	0.05
Mexico & Cen. Am.	2.2	-	2.2	5.0	-	5.0
North America	229.4	186.4	415.8	303.0	188.3	491.3

North American Production & Use Comparison by Region: 2008 vs. 2010 (NA5)

NORTH AMERICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
Western	77.5	86.1	163.6	120.8	92.5	213.3
Midwest	47.6	66.5	114.1	54.1	50.8	104.9
Northeast	52.2	8.5	60.7	39.0	8.2	47.2
Southern	49.9	25.3	75.2	84.1	36.8	120.9
Mexico & Cen. Am.	2.2	-	2.2	5.0	-	5.0
North America	229.4	186.4	415.8	303.0	188.3	491.3

Summary:

North America continues to be the dominant player in the global blueberry industry (see Global sections). Due to its significance in both the global fresh and processed markets and the significant shifts of the last year, detailed attention will be given to the events of the 2010 North American season.

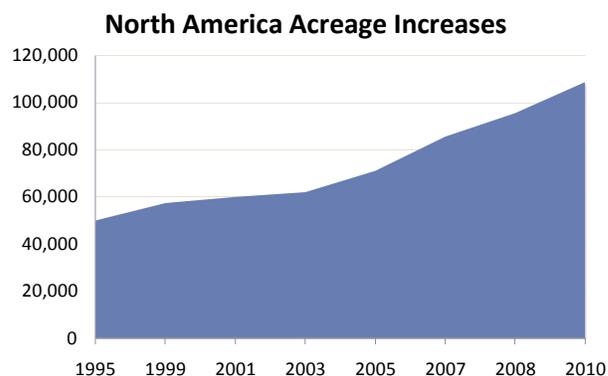
In 2010 North America saw a particularly dynamic year with surprises for some and disappointment for others. Below is a recount of the North American season.

A Complicated Spring

The beginning of the North American spring season was more condensed than other years. The early crop was delayed across the board in 2010. From Florida and Georgia all the way to the San Joaquin Valley of California, the industry experienced the frustration of a late start. Further complicating matters, production was amassed into a few weeks in the mid to late spring windows. With a strong North Carolina crop more or less on time and late California and Georgia deals meeting up with an on time New Jersey harvest, June saw a record crop beating every previous month with an estimated 8.5 million pint-flat equivalents (near 80 million lbs). 2010 marked the first year that the month of June out produced the month of July, thus the catch phrase, “June is the new July” echoed throughout the

industry. Growers and Marketers struggled in the late spring and early summer months to make sense of compressed volumes, a less than ideal supply curve and significant fresh diversion amidst uncertain processed prices.

This was a difficult season for many growers in the Central Valley of California. With difficulties in forecasting and a late, albeit somewhat short crop, California's growers and many sellers trudged through some very tough weeks. 2010 was not a bad season for all growers in the Golden state however with good pricing for the early coastal crop and excellent performance from the new early season varieties, particularly Snowchaser and Springhigh, across the state. With its challenges in cost of production, water availability and distance from the east coast market, many California growers are evaluating their options to diversify, lower costs, and broaden the shoulders of their season as they seek to sustain and grow.



Growers in the southeastern states faced similar market conditions though they are not facing the same structural challenges as California. As stated above, Georgia, Florida and North Carolina put a great deal of fruit into the market in overlapping windows. Many growers claimed to be 3 and even 5 weeks late compared to the previous year. After weeks with only a trickle of fruit moving through the fresh market, the wave of product from multiple states came together to fill the produce shelves in late May. These heavy fresh volumes moved surprisingly well, especially considering the low quantities that preceded it in a March and April with high prices and low consumption. Fresh consumption went from miniscule to massive in a matter of 2 weeks and prices remained sufficient for most growers to continue picking.

The standout region in the southeastern US in 2010 was Georgia, which has now exceeded the production of any other state in the South with 56 million pounds. It is now the third largest production region by tonnage after B.C. and Michigan. The growth has happened fast and much of it has been in older varieties, particularly older Rabbiteye varieties, which are proving a challenge to market and meet elevating consumer expectations. Some contributors expressed concern that a substantial portion of what has been planted in the South in recent years, as in other growing regions, may not remain competitive without further investment in different varieties and additional field modifications. With the challenges that rapid growth brings aside, the State of Georgia in a few short years has grown exponentially and come to command a strong position in the spring deal in North America.

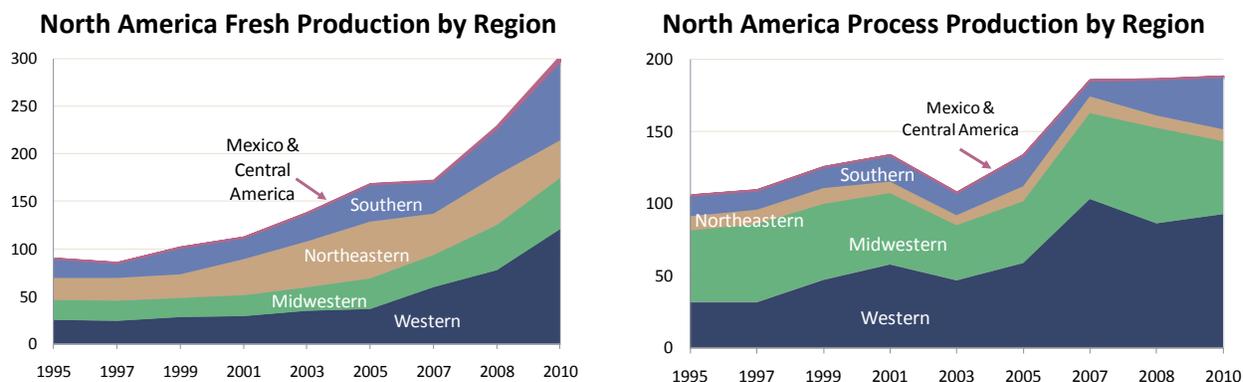
In the state of North Carolina there was much more planting activity going on over the last 2 years than reflected in the acreage growth in the table above (NA1). This is primarily due to a trend starting in a number of longer established regions – replanting and repositioning for the future. The actual figure of new acres for North Carolina is likely over 1,000 new acres though there are only an

estimated 600 more acres than 2 years ago. A major driver for this replanting is shifting in to better varieties to meet the cost structure and market needs of the future. Today the primary variety targeted for change out is Croatan, historically the mid season Southern Highbush variety of the deal. With the introduction of the plastic clamshell and a more discerning consumer and buyers, varieties whose quality issues were once tolerable are now obsolete and not acceptable.

Although the 2010 spring had its challenges, there was a notable silver lining. Fresh volumes shipped out of southeast increased considerably without significant changes in pricing relative to the previous year. Average returns remained strong well above cost. The May-June volumes in particular were substantial and were sold and consumed at acceptable prices. Much of the Southeastern Rabbiteye crop was sold on the fresh market keeping the process market clean for the summer Northern Highbush deal with New Jersey in the lead.

Recovery in the Process Market

The frozen market surged back to health in 2010 with demand and pricing likely to hold strong well through 2011. This turnaround was not anticipated in the gloom of the preceding winter. After record movement month after month from the winter through the spring, inventories were low by summer and demand was high. Two years of prices significantly below recent history to buyers and consumers, significant diversion to an attractive fresh option and new products in the processed markets kept consumption growing through the industry downturn and the global recession.



Another key factor that played a major part in this upturn is the light lowbush crop in 2010, down well over 40% from 2008 (see Wild/Lowbush section). Low wild blueberry volumes left the doors wide open for Highbush to meet the renewed processed demand for blueberries in 2010. Although inventories were lower than anticipated going into the summer months and the wild crop was light, clear processed prices to packers and growers did not emerge until late July, by which time much of the Northern Hemisphere had shipped fresh. This lack of clarity about processed prices limited diversion to the freezer during peak season. Growers generally opted for the greater certainty of the fresh option which has left inventories low and pushed frozen prices up significantly through the winter of 2010/11.

Also worth noting is the entrance of China and the greater Pacific Rim as a major net importer and consumer of frozen blueberries. China, South Korea and other Asian markets played pivotal roles in

absorbing 2009/10 frozen inventory and present an exciting export markets for future. These new growth markets are particularly exciting for growers with a process focus in the West.

The Summer Fresh Season

North Americans consumed more fresh blueberries than ever before in 2010. Commitments made early to retail programs in large packs at attractive prices combined with excellent quality helped drive consumption to new highs. Pricing held steady through July, even after Independence Day, and continued to rise from the mid season peak.

The western states added over 75 million pounds over 2 years since 2008 with the overwhelming bulk of the additional fruit being shipped fresh. In the Pacific Northwest, the origin of most of the west's increase, the new varieties Draper and Liberty were particular standouts this year as new fields began to enter mature production. Draper's large firm berries, concentrated ripening and efficient, low cost of harvest drew attention from the Pacific Northwest to Michigan. The quality of Liberty's mid-late season fruit stood out as well, particularly in Oregon where the plant seems to perform particularly well. Processed volume in 2008 vs. 2010 was almost stagnant, playing a major role in the rise in prices and the low inventories going in to the winter months.

A standout in the Pacific Northwest in 2010 is the growth of Washington State. In 2010 the state of Washington's acreage, for the first time, exceeded that of Oregon's making it the second largest region by acreage in the west after B.C. Central and eastern Washington began to exert influence as well in 2010 representing now over 1/3 Washington State's planted acreage. Distinct from the western growing regions of Oregon, Washington and B.C., many 'east side' growers are large vertically integrated operators in tree fruit or large independent growers of scale. With noteworthy exceptions, the focus of most growers in the Yakima and Colombia basin is fresh while that of the average 'west side' grower tends to be more on process with an option for fresh. Although the winters are hard in the high desert region, the long growing season, cool nights and warm days help growers put out an excellent product. The dry climate with lower disease pressure has led to a great deal of organic production as well in the region. The other rapid growth activity in the Evergreen State is occurring in the northwestern corner of the state across the border from B.C. Due to high land prices, the lack of available quality blueberry soils, pressure from urban development and other challenges, there is increasing movement of B.C. blueberry farmers into Whatcom and Skagit counties along the border. This "B.C. crossover" is generating significant new acreage, changing the nature of the Washington deal and contributing to the State's rapid growth.

New Jersey had a challenging season in 2010 due to disruptive rains in the Hammonton area during the late season and challenges in labor availability to harvest the crop. Primarily for these reasons, Jersey growers did not harvest their entire crop and the region actually has lower production than the 2008 figure. Interestingly, a portion of the labor shortage in New Jersey is being attributed to the growth of Georgia's blueberry industry. With a large and growing crop producing into the month of July with Rabbiteyes, New Jersey growers are concerned that pickers will stay on longer in Georgia thus creating a labor shortage in New Jersey. Although New Jersey acreage is not growing considerably, there is a great deal of replanting, field improvement and new variety adoption going on.

As land prices for good blueberry soils are high, as much as \$25,000 per acre or more, and availability limited, most growers are seeking to increase the productivity and quality of existing acres. As a result, although New Jersey's acreage is not anticipated to increase significantly in the coming years, though an increase in production is expected.

Michigan had a slightly smaller crop in 2010 although volumes stayed close to the 100 million lb mark. More notable is the even split between fresh and frozen in 2010 (NA4). As in other regions, including traditional process geographies, Michigan moved a large percentage of its crop fresh amidst ambiguity around process prices. As in New Jersey, labor is a continuing concern though it was sufficiently available for Michigan growers in 2010. Returns on the Michigan crop varied considerably for Michigan growers and the marketing of the fresh crop is becoming more dispersed. The crop in Michigan is becoming more predictable due installation of frost control in many fields. As in other mature growing regions, production is becoming more consolidated on a percentage basis as large farming operations increase in size. The leasing of small and medium sized farms to larger operations is becoming more common and the adoption of professional growing practices, particularly among the large scale growers, will likely lead to higher average yields in the coming years.

Pricing for late season fruit rose through September and October with volumes not arriving from Argentina until late October. Fruit volumes continued to decline by mid August across North America and the September and October months remain more underserved than even the spring months. The Elliott variety continues to account for the vast majority of late season fruit from North America and is saleable at higher prices as options remain few.

Alternatives to Elliott are beginning to attract considerable attention in some growing regions both in new late season northern Highbush varieties like Liberty and Aurora and higher quality new late season Rabbiteyes like Ocklockonee. Growers in the US and Canada producing late season fruit will maintain a freight, proximity and production advantage over foreign competitors though Argentina is not the only region with long term potential to compete in the late window.

What about Mexico?

Mexico is coupled with Central America in the tables due to its production dynamics and climate, Mexico will clearly be a major player over time in the North American market. Mexico is already an established supplier of fresh raspberries and both fresh and processed strawberries. In blackberries, Mexico controls majority market share of the fresh market for 7-8 months of the year. After over a decade of slow trials and scattered larger scale efforts, the Mexico blueberry industry is finally beginning to materialize. Although the industry is still very young and undeveloped, the potential of blueberries in the country is becoming clearer. Most of Mexico's blueberry crop today is produced in the winter months from late December through March and is based on one public variety. Establishing a competitive position will take time, but Mexican growers are innovative and resourceful. As new varieties become available and ongoing horticultural trials yield results, the rate of planting may increase. If Mexico does indeed grow as quickly as some anticipate there is potential for a repeat of the historical trends of rapid growth bringing underperformance. The history of blueberries is full of areas that overheat and plant too fast, making critical mistakes in variety selection,

field preparation, site selection, infrastructure design - these fields have chronically underperformed in many areas. Some of these trends are definitely occurring again in Mexico. Mexico, as has been seen in so many other crops, tends to be full of surprises. One of note is Mexican domestic demand for blueberries.

North America: Looking Ahead

Considering the downturn in both the blueberry business cycle and the global economy, 2010 marked a significant improvement on the previous 2 years. This was not an excellent season for everyone, however, and challenges from food safety and labor needs to increasing volumes and aggregate cost of production increases pose challenges. Also worth noting is the surprisingly low average per acre productivity in many regions. As the industry matures, there are clear trends which indicate competitive advantage for vertical integration, professionalization and operations of scale, especially in the more competitive production windows and regions.

Beyond the blueberry business, questions remain about the long term impact of macroeconomic disruptions in North America on the purchasing habits of consumers and access to capital of business. If process prices rise significantly in 2011 and 2012, there is fear among process industry leaders of a repeat in buyer backlash and reformulations just when end users begin to believe that they could access the berries needed to develop their products and go to market strategies. Volumes during peak months will likely continue to increase making crop estimates, planning and coordination all the more important. Such discipline and planning will be critical to ensure the returns that growers need to be sustainable and profitable while delivering the pricing and quality that keeps consumers coming back. Throughout the blueberry supply chain world, this report's contributors have expressed concern that many of the farming practices, post harvest systems and varieties common in North America's blueberry industry today are not aligned with what the market wants for the future. What will happen to this fruit and how those choices affect the market and consumption is a major question to be answered in the coming years. Countering these concerns is a great deal of optimism that the future will be bright for the North American Blueberry industry with good planning and a hands-on approach to the challenges faced. After one of the most challenging periods in the modern history for the home of the blueberry industry, North America's blueberry industry faces a new chapter offering both complex challenges and exciting opportunities to achieve new levels of growth and success.

Drivers:

Market: Domestic consumption sustaining in existing consumption regions, growing in new markets like the Southwest

Export Markets: Heavy demand from Pacific Rim

High Return Marketing Windows: The early and late fresh deals continue to offer high returns

Health message: Remains strong at home and abroad and driving consumption

Finance: Access to capital for operations and capital investments was more limited between 2008 and 2010 forcing many companies to rely on their own cash, limiting growth and in some cases upkeep

Labor: Availability of labor is an increasing challenge in many regions, limited ability to harvest for fresh and driving increased interest in mechanized harvest (though with limited success) for fresh

Process Market: Process market likely to return to health for growers in 2011 with demand and pricing likely to hold strong.

Fresh Market: Movement has been significant and there remains room for more growth especially in underserved market windows of the Spring and Early Fall.

Trends:

Consumption: People are eating more blueberries around the world

North American Market: North America is and will likely continue to be the largest global producer meeting domestic and foreign consumption for the medium and long term

Room for continued growth: There appears to be considerable room both domestically and abroad for growth in fresh and processed markets if pricing remains attractive

Fresh demand continues: Major movement into fresh likely to continue as consumption increases

New products create new demand: Increased product availability, particularly if pricing remains reasonable, will continue to foster the introduction of new products using blueberries

Growing operations of scale: Consolidation, economies of scale, food safety, traceability, predictability, and cost of doing business to marketers drive much of this need

Professionalization in farming practices, particularly in established growing regions

Low Yields: Many fields planted during the boom years are producing sub-par yields

Cost control: Dwindling margins pushing growers, large and small, to seek means to lower per unit cost

Mechanized Fresh Harvest: Though not nearly as feasible as many hope with today's varieties and technology, the development of systems to lower average harvest cost of the long term will be a critical initiative within the industry.

Replanting: Some areas are replanting more rather than expanding acreage

Variety Chang-outs: Will be driven first and foremost by cost of growing and harvest and the market demands of the future

Consolidation in Marketing over the Long Term: According to contributing industry experts, the number of marketers may be reaching its peak and will perhaps decrease over the next 10 years.

Mexico will become a significant player in the next decade?

Late Spring Production is Growing Rapidly: “June is the new July”, perhaps “May will be the new June”?

Filling the Troughs: Plantings targeting early Spring, late Summer and early Fall are likely to increase in North America as growers seek higher fresh returns.

Maintaining Gains, Growing Opportunities: The industry has proven that it can move huge volumes of berries at decent to good prices with good planning and marketing, even in a recession. If record breaking volumes can sell in June than July, can the same be done in August? Most months of the year still have very limited production compared to the high volume months. Expect growers to seek to lower costs during peaks and broaden the shoulders into lower volume months.

Optimism: North American contributors are on average highly optimistic about long-term the future

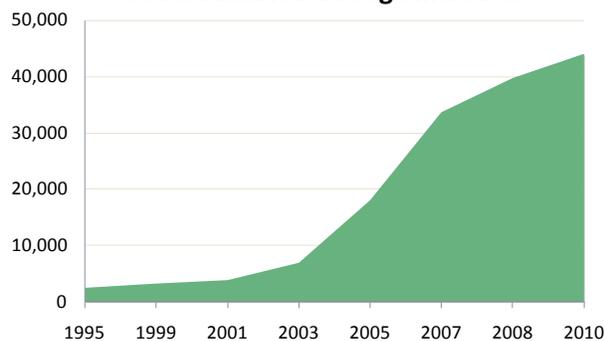
South America

Review:

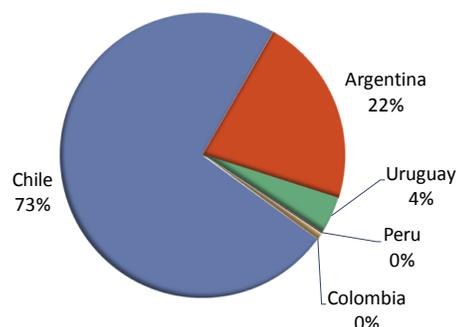
Between 2008 and 2010 South American acreage increased by 4,297 acres from 39,703 acres to an estimated 44,000 acres (SA1). This is a much lower rate of increase over 2 years than the breakneck growth earlier in the decade with over 6,000 acres planted between 2006/07 and 2008 and the estimated 15,000 acres planted between 2004/5 and 2007 (SA1). This is nonetheless remarkable considering the challenging years experienced in South America since the slowdown. Most notable is the fact that the overwhelming bulk of this planting has occurred in Chile, most of it in the central and southern growing regions, in fact Argentina’s managed acreage actually decreased as some farms were abandoned and fell into disrepair.

South America’s growth is indeed remarkable having grown from an estimated 2,500 acres in 1995 to 44,000 in 2010 (SA1). The focus of the industry remains on fresh production for the export market although there is a growing process alternative. The data below captures the 2009/10 season for South America and previous years, summary and diagrams follow.

South America Acreage Increases



South America Acreage Distribution



Production and Acreage:

South American Acreage Growth; 2009/10 Crop (SA1)

SOUTH AMERICA GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
Chile	11,120	22,700	26,908	32,250	109.51	14.00	123.51
Argentina	6,919	9,400	10,900	9,500	24.64	2.00	26.64
Uruguay	-	1,450	1,620	1,850	2.68	0.33	3.01
Peru	-	40	60	80	0.03	-	0.03
Brazil	-	50	200	300	0.20	-	0.20
Colombia	-	10	15	20	0.01	-	0.01
South America	18,039	33,650	39,703	44,000	137.1	16.3	153.4

South America Production & US Comparison: 2007/08 vs. 2009/10 (SA2)

SOUTH AMERICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
Chile	68.14	19.40	87.54	109.51	14.00	123.51
Argentina	22.20	3.00	25.20	24.64	2.00	26.64
Uruguay	1.60	0.60	2.20	2.68	0.33	3.01
Peru	0.03	0.01	0.04	0.03	-	0.03
Brazil	0.12	0.01	0.13	0.20	-	0.20
Colombia	0.01	0.01	0.02	0.01	-	0.01
South America	92.1	23.0	115.1	137.1	16.3	153.4

Summary:

Chile

2009/10: This biggest standout event for Chile in the last 2 years is the 60% increase in fresh production between the 2007/08 season and the 2009/10 season, even with disruptions discussed below. An increase of this scale was not to be for a number of reasons, one which drew international attention for months. There remained arrival issues during the first half of the season which were later worsened. The great defining event of the 2009/10 season in Chile was the Earthquake (8.8 on the moment magnitude scale) and the tremors and aftershocks that followed. There was a 7.5 earthquake in March 2010 as well. The earthquakes cut off the season early and disrupted exports considerably for at least 3 weeks. Many coolers did not have electricity and this loss of cold chain

cause additional quality issues. Delays in exports from the south of the country due the earthquake caused significant peaks in product flow in the later part of the season. Labor became an even larger issue than normal when many pickers were reticent to go to the fields to harvest after the natural disaster. As a result of the earthquake, there were both quality issues and a much shorter crop than anticipated. With the spring crop in North America late in 2010, late season Chilean fruit achieve good prices and growers in the south did particularly well. Though quality and pricing in 2009/10 was generally better than the previous year for Chile, unsettling events made the 2009/10 Chile deal very confusing with programs disrupted, quality problems and unpredictable volumes. Since the earthquake insurance companies have reportedly been supportive and recovery has been fairly upbeat.

2010/11: The 2010/11 Chilean season had a timely start and has thus far been smoother. With the season 50% complete in mid January and moving faster than 2009/10, the Chilean season looked to be a satisfactory year, particularly with good frozen prices, keeping weaker fruit out of the fresh market, and currency interventions improving the exchange rate. Quality has generally been acceptable and movement good. Accumulated volumes up to early January 2011 were close to on par with forecasted volumes though some weeks saw significant variances between the forecast and the actual exports. The exchange rate, amidst an ever appreciating peso, is becoming a major issue for growers and exporters this year. Almost 40% of the Chilean crop was exported when the peso was particularly high in advance of government efforts to devalue the peso with the \$12 BN intervention by the central bank to bring the peso closer to the 460-490 pesos/USD range. As Chile continues to suffer from “Dutch disease” (the inflation of a nation’s currency value due to high natural resource values or high FDI which undermines the competitiveness of a country’s exports), largely due to the high value of commodities like copper. There are concerns about the impact of high exchange rates, inflation, increasing real costs and the availability of labor.

Processed Diversion: The 2010/11 season will likely see much higher diversion to process as export requirements are becoming more disciplined among many companies and fruit that has concerns raised about its exportability is often being sent to IQF. There are still limits in processing and storage capacity and only a limited number of companies actively engaged on a professional level in the processed business.

Varieties: Varieties are becoming more important for grower success in Chile and much of what is planted in the country is of older varieties not suited for mechanized packing and long boat trips in Controlled Atmosphere. Much of this move to newer and improved varieties is also linked to the labor issue as having high yield and easy to pick fruit is not only critical for quality and returns but attracting sufficient picker to harvest. If a field does not offer an opportunity for a picker to make competitive wages, it often is not picked on time which can lead to additional quality issues. Timing, specifically producing earlier and later into the season continues and this effort is naturally closely tied to varieties.

New Markets: Also noteworthy for Chile is the opportunity for growth in exports to Asia, particularly China. China is increasingly coming up in conversations among Chile’s blueberry leaders. To quote an industry leader and use another example, “the Chilean industry sent 50% of their cherries

to China this year; 5 years ago this was only 10%”. Securing open access to China’s market, beyond Hong Kong, will be critical for the long term health of Chile’s blueberry industry.

Potential Impact of Mexico: Although the role of Mexico is not yet completely clear and the Mexican industry in its infancy, there is increasing awareness in Chile about the growth in Mexico. This has not stopped growers from moving forward with their plans, but it has certainly peaked interest. The example of raspberries and other crops, once major fresh exports of the country and now largely displaced by Mexico, is naturally on the minds of many.

The Chilean Blueberry Committee: Another significant recent development has been the advent of the Chilean Blueberry Committee. The committee has played a key role by helping to coordinate information regarding export volumes and production and crop trends consequently making decisions in package sizing, production and market predictions more transparent. Growers have access to this information which is helping their decision making process and increasing trust as they work with their marketers and make decision on pack sizes, fresh vs. process diversions and other key decisions. Exporters have better information and intelligence to run their programs and execute effectively while simultaneously being able to engage in more functional discourse and decision making with growers. The Chilean Blueberry Committee has played a major role in helping all active parties in Chile be more effective with better information and intelligence and has provided respectably accurate data on volumes.

There are other important trends well underway in Chile. Over the last two years many of the larger exporting companies have restructured their sourcing strategy to focus on consolidating production among fewer suppliers in an effort to improve quality and traceability and lower their cost of doing business. This led to the release of many small and some medium sized growers from these programs, leaving them to seek new channels for the export of their product. As a result of this shake up in the industry, the number of new exporters and, to a lesser degree, new importers have swelled.

The high costs to growers and marketers of rejections and quality issues have led to a significant shift in the industry. Forward looking growers are improving their harvest and post harvest systems to improve the treatment of their product and are investing in new varieties with better export quality fruit. Meanwhile, leading marketers are increasingly focusing on growers of scale able to meet certification and export quality requirements while lowering their risk and costs.

To summarize the input of contributors regarding farming dynamics, the key areas of concern that will impact the profitability of the Chilean grower in the future are as follows:

Export Systems: Post harvest and shipping systems to ensure the best arrival possible

Labor: Varieties and management systems that attract pickers with the opportunity to make money with high yields and good harvest efficiencies

Product Quality: Long shelf life with good firmness, size and flavor

Alternatives to Fresh: The development of a process alternative to maintain product quality in the fresh market and to give growers opportunity to capture the residual value of their non export fruit

Chile, having undergone years of rapid growth and the challenges that come with it, is now going through a corrective period that is painful for many in the industry. Those best suited to adapt to the growing pressure to professionalize, lower cost and improve quality are the operations of scale, the vertically integrated companies and other well capitalized entities eager to adapt and adopt new technologies and opportunities.

Argentina and Uruguay

A description of the 2009 season provides an ample outline of the challenges these industries face, particularly Argentina. Argentina's season began a little later than usual. Tucuman, traditionally the early region in northeast of the country, battled frosts and lost much of its crop, particularly the early fruit. Volumes were light throughout the first weeks due to freezes and a cool spring throughout the country. November 2009 brought considerable rains which disrupted harvest and caused additional product loss and making considerable volumes of fruit unreliable for export. In Concordia, Entre Rios Region to the North of Buenos Aires province, the rains were followed by exceptionally high temperatures bringing with it additional quality problems. Unfavorable weather events, the large percentage of varieties unsuitable for reliable export and the logistical challenges due to lack of infrastructure and phytosanitary restrictions made the 2009/10 season a difficult one. For these reasons and other challenges, Argentina's production in the fields has increased over the years, but the volume exported has not grown substantially. Also noteworthy is the distribution of Argentina's volumes on the marketing side with the sales of its 20+ million pounds highly fractionalized passing through more exporters and importers than there are during periods of significantly higher volumes elsewhere. In 2009/10 there were more than 70 handlers in the Argentine deal. Amidst the challenges facing growers and investors in Argentina, over 500 Hectares (over 1,200 acres) have been abandoned or left idle and uncared for.

Final production figures for the 2010/11 season will not arrive in time for the completion of this report, but early indications are that the exported crop volumes increased this last season, possibly by more than 25% in Argentina and over 80% for Uruguay. Product quality was better than the previous year due to better weather during harvest. To date, grower reactions to returns have not been positive across the board however with many concerned that their combined cost of production, picking and packing of one kilo of fruit continues to exceed their per-kilo returns in many weeks, especially when incurring the cost of air freight.

On the processed side of the business, there is some growth in frozen and IQF diversion. The frozen interest stems from existing frozen companies involved in other crops in Argentina and Chilean companies active in or diversifying in to frozen berries. Although Argentina will have some growth in processed blueberries in the coming years, Chile looks more likely to make a notable contribution.

With all the challenges in this growing region it is easy to miss the bright spots in Argentina and Uruguay. Much of Uruguay, though not of the scale of Argentina, is doing quite well and sustaining

gradual growth. Uruguay is the oldest democracy in Latin America and a highly functional place to do business. Uruguay's blueberry industry grew more slowly and thus fewer mistakes were made during establishment. In Argentina, there are professional operations which are re-tooling to ensure that they have the right horticultural management, the right varieties and the best post harvest and export systems to sustain and be profitable in the long term. Argentina presents an excellent example of one of the themes outlined in the introduction of this report: Rapid Growth Creates Unique Challenges - the faster an industry grows, the more it tends to underperform. There remains plenty of hope and opportunity in Argentina and Uruguay but there will continue to be a correctional period that will not be pain-free for many.

Peru

Peru remains in the early stages of development in blueberries. Although Peruvian growers have entered many industries rapidly and on a considerable scale like asparagus and citrus to name a few, success has yet to be sufficiently demonstrated to validate significant investment in blueberries. Though there are notable differences, the conditions indicate a need for similar horticultural systems to those used in Mexico. There are many serious farming and exporting companies in Peru and interest in blueberries continues to grow. Up to this point most activity has been driven by Chileans and pioneering Peruvians. Failure to sign the UPOV convention (the international treaty on Intellectual property in plant material and breeders' rights) and a long history of not respecting Intellectual property in Agriculture has prevented Peru and its growers from gaining legal access to newer low chill genetics. Another challenge for the foreseeable future is the need to fumigate any fruit exported to the US due to a Medfly quarantine.

Brazil

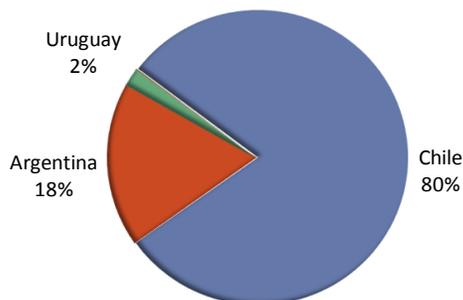
Though not booming on the scale of other major developing economies in the crop, Brazil is emerging both as a potential producer and a consumer of blueberries. With its mainly tropical climate and breadth of agricultural investment options, cultivation of the crop is not being adopted as rapidly as in neighboring countries. Growing blueberries in low latitudes, especially in tropical climates is very difficult and the lack of defined cultural programs and proven success presents challenges to growth. Most activity in blueberry production is occurring in the south of the country in Rio Grande do Sul, Parana and Santa Catarina where there is some chill and a possibility that Southern Highbush and Rabbiteyes can be grown in more traditional cycles, particularly in the higher elevation areas. Limited legal access to competitive genetics in the country has also kept growth at a slow pace. Unlike its rate of domestic production, Brazil's interest in consuming blueberries is growing.

Colombia

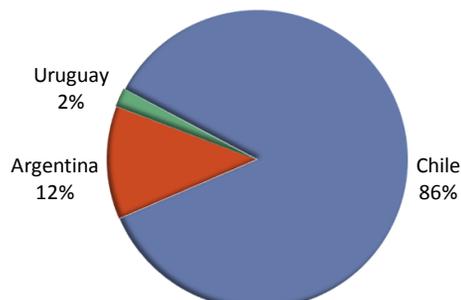
Activity in Columbia remains restricted to trialing though some of the trials have moved to a commercial trial stage. As elsewhere, development of production in Colombia is, at least initially, being driven by domestic demand. This demand is both in the tourism industry and in the larger cities with educated cosmopolitan consumers. Colombia actually has domestic *Vaccinium* species that have long been a popular local fruit. The introduction of Highbush blueberries offers an opportunity to

grow the local consumption of blueberries and over the long term a potential export. Due to the ultra low latitude of Colombia, the difficulty in introducing competitive genetics as the country is not a UPOV signatory, and time needed to develop effective horticultural systems, Colombia is likely many years away from significant development.

South America Fresh Production by Region



South America Process Production by Region



South America: Looking Ahead

Change for Chile

Industry leaders with an eye on trends not only in Chile but the greater industry at large are predicting a significant change in Chile's role as a counter-seasonal blueberry supplier in the coming decade. At the core of this trend is the pending gradual rise of Mexico as a blueberry supplier in the same market window as Chile's. With its market proximity and potential to product quality fruit within a day's truck ride of the market, many predict Mexico will come to dominate many of the months previously served by the Southern Hemisphere in North America. This gradual shift is not necessarily bad news for Chile, in fact this change corresponds with another significant shift in global consumption. It is highly likely that the growth of Mexico's supply of blueberries to North America will coincide with the growth of consumption in the other major Northern Hemisphere markets – Asia and Europe with Chile well positioned to supply.

Corrections in Argentina and Uruguay

Argentina and Uruguay are most likely to continue to experience a tumultuous corrective period. They will also, like Chile, face growing competition. Unlike Chile, however, Argentina and Uruguay will be harder pressed to compete as the quality and volume of late season fruit from the Pacific Northwest and Michigan improves, the north of Chile increases its presence and new regions like Peru and Mexico seek to enter Argentina's window as well. As in all mature growing regions, the winners will be those with the highest quality and the lowest per unit cost aligned with the best delivery system. Achieving this will be hard for many growers in these two countries. Competition will be fierce and it will likely take many years yet to see the winners rise to the top.

The New Regions: Peru, Brazil and Colombia

The rates of planting maintained during the boom of the 1990's and early 2000's is unlikely to be repeated by the new regions in South America. With its extensive infrastructure for exporting fresh produce, large established farming companies, and a culture of rapid adoption of new crops Peru is the most likely to establish a position in blueberry production and export of the 3 new players. Numerous Peruvian growing companies are in active commercial trialing stage now. The development of the Colombian industry is more likely to be gradual. Lastly, Brazil amidst its rapid economic development appears to be on track to become a net consumer over time.

Drivers:

Market Maturation: Increasing volumes in most production windows is giving buyers the ability to be more selective, creating winners and losers in the business

Geography: Northern Hemisphere consumption continues to grow, creating new market and demand opportunity for counter seasonal fruit.

Macroeconomic Growth Brings New Challenges: Success in development is changing the aggregate costs of key inputs and labor

Exchange Rate Economics: Currency policy, particularly the high Chilean peso, impacting terms of trade and profitability back to the farm

New Markets: Growth in Asia is increasing demand for South American, especially Chilean fruit

Varieties: Many varieties are no longer suitable for today's post harvest, export systems and consumer preferences.

Technology: Access to the best positions with maritime companies with good controlled atmosphere management is becoming a competitive issue, benefiting large exporters

Logistics: Over the long term ocean freight in controlled atmosphere is the only low cost means of exporting from South America.

Trends:

Growers seeking to lower cost and increase production as their per unit costs increase and returns decline

Larger and Vertically Integrated Operations continue to maintain higher profits and are thus able to continue reinvesting to professionalize operations

Labor Will be a Major Issue: Chilean, Argentina and Uruguayan growers will see higher labor costs and availability challenges in the coming years and adaptation to this new reality will be critical for success

Process: Processed diversion likely to increase in the 2010/11 season due to high prices and widespread availability of fruit not suitable for export

Challenges for Argentina: Continued turbulence in Argentina due to poor cost/return ratio. Argentina will likely undergo a protracted corrective period with big winners and losers.

Replanting will become commonplace in South America's established growing regions.

Variety Changes to 1) ensure good maritime arrivals and 2) secure much needed labor there will be a change out to more productive varieties with better quality fruit to attract harvesters.

Post Harvest Systems and Varieties: Forward looking growers are improving their harvest and post harvest systems to improve the treatment of their product and are investing in new varieties with better export quality fruit.

The Chilean Peso: Macroeconomic trends indicate that the Chilean peso will remain high relative to other currencies which will create challenges for the Chilean export industry. Cost of production and export relative to returns will become more of a challenge, pushing the industry to increase yields, lower costs, decrease shrink, increase efficiency, and maximize returns however possible.

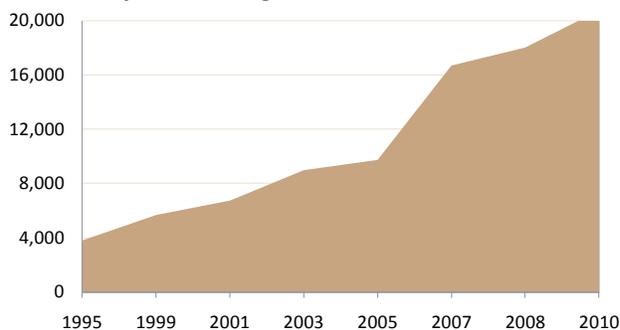
Continued Growth in South America: Chile will likely continue to replant and increase acreage while new regions will move from the trial to early commercial stage. Expanding global demand will drive this growth.

Europe

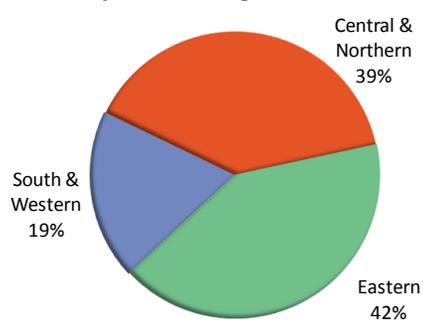
Review:

European acreage growth has been much more metered in the last two years, growing from 18,038 acres in 2008 to an estimated 20,780 in 2010 (EUR1). With an increase of 2,742 acres, a majority share of which was in the east, European acres have grown but not excessively (EUR2). The 2010

European Acreage Increases 1995-2010



European Acreage Distribution



crop was up from 56.6 million lbs in 2008 at an estimated 81 million lbs (EUR3&4). As will be explored in the Summary below, European consumption has yet to take off on the mainland to the degree it has in the UK, the absence of which has kept planting growing at a moderate rate.

The following sections provide updated data and intelligence regarding the European blueberry industry and market.

Production and Acreage:

European Acreage Growth; 2010 Crop (EUR1)

EUROPE GROWTH	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
France	741	810	840	890	3.75	0.22	3.97
Spain	494	1,870	2,100	2,600	17.63	-	17.63
Portugal	99	320	330	480	2.42	-	2.42
South & Western	1,334	3,000	3,270	3,970	23.8	0.2	24.0
Austria	-	100	110	125	0.60	0.11	0.60
Denmark	-	50	50	60	0.28	0.03	0.30
Netherlands	-	580	600	640	2.76	0.28	3.03
Germany	3,954	4,400	5,063	5,300	18.73	1.21	19.95
Ireland	-	25	35	35	0.13	-	0.13
Italy	445	540	600	680	3.64	0.22	3.86
Sweden	-	80	80	90	0.22	0.01	0.23
Switzerland	-	50	50	55	0.20	0.10	0.30
UK	49	550	550	670	2.40	0.10	2.50
Central & Northern	4,448	6,375	7,138	7,655	28.9	2.1	30.9
Baltics	-	250	290	335	1.10	-	1.10
Poland	3,954	6,700	6,900	7,800	13.84	9.91	23.75
Ukraine	-	160	180	190	0.44	0.22	0.66
Romania	-	100	120	130	0.42	-	0.42
Others	-	120	140	160	0.09	0.09	0.18
Eastern	3,954	7,330	7,630	8,615	15.9	10.2	26.1
Europe	9,736	16,705	18,038	20,240	68.6	12.5	81.0

By Region: European Acreage Growth; 2010 Crop (EUR2)

EUROPE GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
South & Western	1,334	3,000	3,270	3,970	23.8	0.2	24.0
Central & Northern	4,448	6,375	7,138	7,655	28.9	2.1	30.9
Eastern	3,954	7,330	7,630	8,615	15.9	10.2	26.1
Europe	9,736	16,705	18,038	20,240	68.6	12.5	81.0

European Production & Use Comparison: 2008 vs. 2010 (EUR3)

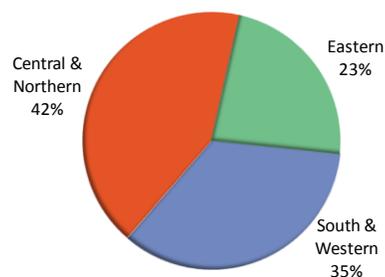
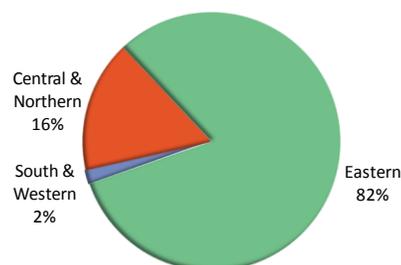
EUROPE PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
France	2.20	0.23	2.43	3.75	0.22	3.97
Spain	9.20	-	9.20	17.63	-	17.63
Portugal	1.00	-	1.00	2.42	-	2.42
South & Western	12.4	0.2	12.6	23.8	0.2	24.0
Austria	0.40	0.10	0.60	0.60	0.11	0.60
Denmark	0.10	0.10	0.30	0.28	0.03	0.30
Netherlands	3.30	0.30	3.60	2.76	0.28	3.03
Germany	16.53	0.33	16.86	18.73	1.21	19.95
Ireland	0.05	-	0.05	0.13	-	0.13
Italy	3.30	0.10	3.40	3.64	0.22	3.86
Sweden	0.10	0.10	0.20	0.22	0.01	0.23
Switzerland	0.20	0.10	0.30	0.20	0.10	0.30
UK	0.65	-	0.65	2.40	0.10	2.50
Central & Northern	24.6	1.1	26.0	28.9	2.1	30.9
Baltics	-	-	-	1.10	-	1.10
Poland	17.40	0.60	18.00	13.84	9.91	23.75
Ukraine	-	-	-	0.44	0.22	0.66
Romania	-	-	-	0.42	-	0.42
Others	-	-	-	0.09	0.09	0.18
Eastern	17.4	0.6	18.0	15.9	10.2	26.1
Europe	54.4	2.0	56.6	68.6	12.5	81.0

Production & Use Comparison by Region: 2008 vs. 2010 (EUR4)

EUROPE ANNUAL PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
South & Western	12.4	0.2	12.6	23.8	0.2	24.0
Central & Northern	24.6	1.1	26.0	28.9	2.1	30.9
Eastern	17.4	0.6	18.0	15.9	10.2	26.1
Europe	54.4	2.0	56.6	68.6	12.5	81.0

Summary:

The entrance of mainland Europe, along with Asia, as a major consumer of blueberries is an eagerly anticipated development in the blueberry industry. To date the UK continues to account for the majority of consumption, but consumption elsewhere in the continent is growing. Blueberry consumption on the mainland is centered primarily in Central and Northern European countries like Switzerland, Denmark, parts of Germany, Holland and Scandinavia. Urban centers in Spain, the major spring producer, are beginning to show signs of increased interest in blueberries and there is renewed interest in French supermarkets. Common feedback to suppliers in the large markets of France, Germany and elsewhere is that quality, specifically flavor and aroma, of blueberries must improve (along with price) for supermarkets to promote and consumers to try the product and/or consume more frequently. Also important to note is the dominant position of fresh consumption in Europe. Processed diversion, although starting from a low reference point in 2008 at 2 million lbs, grew six-fold to 12.5 million pounds in two years, a very notable development. The introduction of new products using blueberries continues in Europe, though not at the pace of North America. European consumption and use of blueberries has increased considerably in the last decade. Historically, health research was a major driver of consumption in the UK. Now new health research on blueberries is emerging in Central Europe in particular, which has gained considerable press coverage and may affect consumption. When considered together, these factors indicate that there remains considerable room for growth and market development in Europe.

2010 Europe Fresh Production**2010 Europe Processed Production**

South & Western Europe

Spain

The dominant volume player in the South and Western growing regions of Europe is Spain, currently the leading supplier of spring fruit. Expansion has slowed in Spain due to increased costs, lower returns and an emphasis on expanding into lower cost regions such as Morocco. Lack of availability of competitive varieties for most growers has also kept many from investing in further expansion in blueberries. Lamentably, there is increasing illegal propagation of protected varieties due to lack of access among Spanish growers. With the variety Star unprotected in Europe, much of what is planted is in this variety, resulting in a strong peak in May/June with limited volumes before and after. The greatest concern for growers is cost of production and long term trends in Huelva and southern growing regions is to seek lower cost systems for growing and shipping. Many growers in Spain are keenly interested in growing Southern Highbush varieties with machine harvest potential during the mid to late window to compete in the lower return periods of late May through June. Northern Spain is also beginning to develop a focus on higher chill material to be shipped domestically and to the UK and the rest of Europe.

Portugal

Though quite active during the early years when adopting blueberries in the 1990's and early 2000's, Portuguese growers slowed their rate of growth in the latter half of the last decade. Much of this slow down was due to a generational shift among blueberry growers and a slow-down in plantings by outsiders seeking to take advantage of the maritime climate, light soils and diverse microclimates. Very recently there has been renewed interest in blueberries in Portugal both driven by an upturn in domestic consumer interest in the product and opportunities to leverage advantages in growing both high and low chill blueberries.

France

France is a primary July producer in Europe with a production window more similar to western Oregon and Washington. Though France represents enormous market potential with a sizeable network of consolidated retailers, feedback from the French industry indicates that consumption will not grow significantly in the highly developed country of 65+ million consumers until the flavor and aroma profile of blueberries improves to meet the demands of the French palate. To quote a respected French grower, "the French market will not be developed on the back of Duke". Big fruit with strong crunch but a light flavor that Americans enjoy is not sufficient to keep the French consumer coming back for blueberries. Rather than Duke and Draper, varieties like Camellia and Liberty are more likely to be favorites. Beyond basic education and awareness of blueberries, the French market will not be more apt to take on aggressive blueberry consumption until varieties, post harvest systems and distribution systems are such that their preferences are served.

Central & Northern Europe

Central and Northern European industries have continued to plant and grow despite concerns about costs, availability of labor, limitations on farming tools available and other challenges that farmers face growing intensive crops in developed Europe. Much of the plantings that have gone in are driven by local markets and local consumption and the vast majority of plantings are focused on fresh.

Mainland Opportunity and Growth: As mentioned above, the UK remains the dominant market for blueberries in Europe – both fresh and frozen – and its growers are primarily fresh focused. As Polish production, concentrated between late July through late August and early September, increases, UK growers are seeking to pick earlier in June and early July (“The French Window”) and store their late fruit to sell after Poland is out. The first strategy is proving more effective than the second as the market does not accept poor flavor and quality willingly. While the peak volumes in North America are in June and July, Europe’s peak is in August during the Polish season. Late June and July production comes in smaller volumes from the UK, Benelux, France and Germany. Dutch blueberry growers continue to occupy a lower cost position during the summer months by entering the market with machine harvested fruit in the fresh market. An important note on Holland – the Netherlands did not plant 500+ acres between 2008 and 2010 but rather previous reported figures have been understated. A small portion of Dutch acres, estimated at 80, are committed to process while the majority is fresh focused with some diversion to process. Quality issues with machine harvested fresh fruit from Holland have been accused of depressing prices in the July period and is being held as the culprit for July prices not being higher considering the lower volumes during that period. Growers in the north of Italy have developed strong positions supplying quality fruit both to the growing domestic demand of Italy and exporting to Switzerland, Austria, Germany and elsewhere. Italy, though not a market the scale of France and Germany, is increasingly showing interest in blueberries. Italians are eager to try new things and the awareness and popularity of blueberries is growing throughout the urban centers of the country. Germany remains by far the largest player in the region with over 5,000 acres. The most populous country with the largest market in Europe, Germans are continuing to increase their consumption of blueberries and particularly eager to buy local product. With over 7,500 acres in Central and Northern Europe, over 40% it planted in the last five years, production will continue to increase. As most all of these countries present major potential markets, hope predominates that year round consumption will grow with the increase of local production.

Eastern Europe

Poland

The single dominate player in Eastern Europe is Poland. Poland is also the only European growing region with growers who make notable contributions to frozen and processed markets. The saying, “August is the July of Europe” is a result of Poland’s position as the largest producer and its peak a month later than the summer producers in North America. Indeed, June and July are comparatively light volume months. Planting has slowed down significantly this last year in Poland as production grew, capital became increasingly difficult to access and demand stalled amidst the economic downturn. Polish growers have historically been separated between growers who are GLOBALGAP

certified and those who are not. To access most western European markets, growers must have GLOBALGAP certification. As growers seek the higher returns of the Western European markets, many are getting certified and fewer are picking for the processed buyers. The other great divide among Polish growers is in size. Poland consists of a handful of very large growers and a huge number of very small growers. Many of these farms are managed by growers of limited resources. This factor combined with the age of the fields, many less than 5 years old, and the extreme low winter temperatures combined with spring frosts provides some explanation for the very low average productivity in Poland. Polish production can vary significantly year on year depending on winter temperatures and spring frosts. The weather leading into the 2009 season was mild leading to a large crop while the winter of 2009/10 had cold snaps with temperatures of -30°C / -22°F which combined with poor pollination weather lead to a lighter crop for 2010. Looking forward, growth in Poland will likely be led by larger operations and growers who remain competitive will likely become GLOBALGAP certified thus increasing market access.

Baltics

Growth in the Baltic regions has been led by a group of sizeable family farming operations focused on supplying both the eastern markets in Russia and major East European cities and to the Western European market. In the maritime regions of the Lithuania and Latvia winters can be milder than inner Poland and some farms are achieving good yields in the heavy peat soils.

Further Eastern Europe

As fresh and process production of Northern Highbush becomes more expensive in Western and Central Europe, countries further east are reportedly gaining some attention as potential suppliers to the growing markets in the Europe, Eurasia and the Middle East over the long term.

Drivers:

Market: Fresh consumption continues to account for most of Europe's consumption

Local Markets: The loca-vore movement in Europe is a strong driver for plantings, especially in the most developed Central and Northern European countries.

Technology: Interest in machine harvesting for fresh is growing throughout Europe as costs increase and labor is increasingly difficult to secure.

Economics: High costs of production pushing planting growth further East and South in pursuit of lower production costs.

Trends:

Investment in Promotion: Continued efforts will be needed to growth the mainland European market.

Spain: Growth in Spain is likely to focus on ultra early production and low cost mid to late Southern Highbush production.

Acreage Growth in Europe is most likely to continue to move east and south in pursuit of lower production and harvest costs.

Mediterranean & North Africa

Review:

Although in its infancy and very small by world standard, the Mediterranean and North African industries have begun to grow both driven by export opportunities and in some cases more localized consumption. Acreage nearly doubled from 2008 to 2010 from 355 to an estimated 672 acres with Morocco leading the pack with approximately 450 acres (MNA1). Production has also started to increase as young plantings mature bringing the 2010 crop to an estimated 2 million lbs (MNA1 & MNA2). Below find the data, Summary and intelligence on the region.

Production and Acreage:

Mediterranean & North Africa Acreage Growth; 2010 Crop (MNA1)

MED. & N. AFRICA GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
Morocco	-	170	180	450	1.76	0.02	1.79
Egypt	-	20	25	35	0.09	0.01	0.10
Turkey	-	-	120	150	0.13	0.01	0.14
Israel	-	25	30	35	0.10	-	0.10
Others	-	-	-	2	0.10	-	0.10
Med. & N. Africa	-	215	355	672	2.2	0.0	2.2

Mediterranean & North Africa Production & Use Comparison: 2008 vs. 2010 (MNA2)

MED. & N. AFRICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
Morocco	0.30	-	0.30	1.76	0.02	1.79
Egypt	-	-	-	0.09	0.01	0.10
Turkey	0.50	-	0.50	0.13	0.01	0.14
Israel	0.01	-	0.01	0.10	-	0.10
Others	-	-	-	0.10	-	0.10
Med. & N. Africa	0.8	-	0.8	2.2	0.0	2.2

Summary:

Morocco

As establishment, production and harvest costs in Spain increase, the move to producing in Morocco continues. Much of this growth is not only in blueberries but strawberries, vegetables, tree fruit and other products and often led by Spanish companies. Serious domestic operators are also growing rapidly in Morocco. Blueberry activity in Morocco today is restricted to a couple of large scale private developments and smaller scale trials by companies with limited variety options. One of the current limitations on growth in Morocco is the lack of legal access for legitimate companies to competitive genetics. As this situation changes, growth in Morocco for this and the reasons outlined above, will likely accelerate. In the medium to long term Morocco will most likely be the primary supplier of early spring fruit to the UK and European markets.

Egypt

Egyptian fruit production is dominated by a small group of very large vertically integrated grow-packer-exporters. These companies have become major suppliers of high value produce to the UK and European markets. Interestingly, much of the growth these companies are positioning specifically to serve is not just in the traditional markets of Europe, but in the Middle East and Russia. All blueberry activity in Egypt up to this point is in commercial trial stage. With low land, water and labor costs, ample resources and an adaptable climate, Egyptian growing companies have the potential to be low cost, high quality suppliers of scale over the long term. Also worth noting is the long term potential of the Egyptian market with a population of 80 million people (roughly the population of Germany) and a growing middle class. The impact of Egypt's revolution on the nascent industry remains unclear at the time this report is being written.

Turkey

Having already assumed a significant position in table grapes, stone fruit and cherries, interest in blueberries is now developing among Turkish growers. Domestically in Turkey, a developed country of over 70 million people, a nascent boom in blueberry demand is underway as Turkish consumers become aware of blueberries, their health benefits, flavor and convenience. With high duties on imported fruit, prices for blueberries in Turkey are high and though there is extensive interest in growing from small farmers to large agricultural corporations, the planted area remains relatively limited.

Drivers:

Middle Eastern Market: Consumers in countries like Turkey, Saudi Arabia, UAE and Dubai are increasingly demanding blueberries for the same reasons that drive consumption elsewhere.

Geography: Eastern Mediterranean countries are well located to supply Russia, the Middle East and Europe in addition to becoming blueberry consumers.

North Africa: Low cost of production and harvest in North Africa will continue to attract local and foreign investment in production.

Trends:

Morocco is on track to develop a position as Europe's low cost producer of quality Spring fruit.

Turkey could become a significant consumer of blueberries and may develop a domestic industry.

Southern Africa

Review:

Production in Southern African has grown gradually with an estimated 214 acres added since 2008, most of which were planted in Republic of South Africa (SoA1). Production has grown moderately to 2.3 million lbs (SoA2). See below for details on the Southern African industry.

Production and Acreage:

Southern Africa Acreage Growth; 2010 Crop (SoA1)

SOUTHERN AFRICA GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
South Africa	740	800	900	1,120	2.10	0.20	2.30
Angola	-	10	10	2	0.00	-	0.00
Zimbabwe	-	-	-	1	0.00	-	0.00
Others	-	-	-	1	-	-	-
Southern Africa	740	810	910	1,124	2.1	0.2	2.3

Southern Africa Production & Use Comparison: 2008 vs. 2010 (SoA2)

SOUTHERN AFRICA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
South Africa	1.10	0.44	1.54	2.10	0.20	2.30
Angola	0.01	-	0.01	0.00	-	0.00
Zimbabwe	-	-	-	0.00	-	0.00
Others	-	-	-	-	-	-
Southern Africa	1.1	0.4	1.6	2.1	0.2	2.3

Summary:

Republic of South Africa

For all intensive purposes, South Africa (RSA) has the only real blueberry industry in southern Africa. Activity in Neighboring Angola and Zimbabwe consists solely of trials. Growing and exporting of blueberries in South Africa is highly consolidated and focused on providing counter seasonal fruit to the UK market and Mainland Europe. As RSA must compete with Argentina and Chile for most of its season, the focus of most growers has been on market proximity, quality, leveraging its diverse climates and growing conditions and vertical integration. Another interesting trend in RSA is the small but expanding domestic market for blueberries. In recent years RSA has become not only a counter seasonal exporter of blueberries, but an importer during the Northern Hemisphere season to ensure year round supply to the domestic market. RSA faces some challenges today as an exporter as its currency appreciates with investors seeking solace from the financial instability of the developed world markets and buys South African bonds and the Rand. Putting the currency situation affecting all exporters aside, RSA continues to show promise to develop as a smaller but competitive supplier of Southern Hemisphere fruit and, over the long term, as a potential market.

Drivers:

South Africa's Model: Cost effective production of quality counter seasonal fruit for Europe

The Rand's value is increasing relative to the currencies of other exporting countries

Market: South African consumers are discovering blueberries.

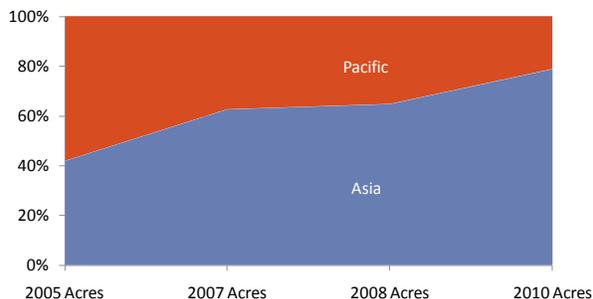
Trends:

New Developments: There is potential over the long term for development in other southern African countries

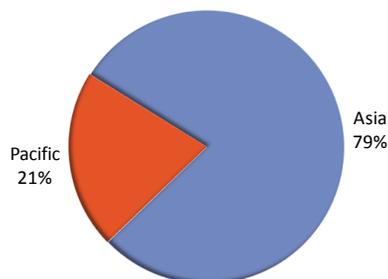
Growth in RSA is unlikely to expand rapidly due to costs and competition from other southern hemisphere growing regions.

Asia & The Pacific

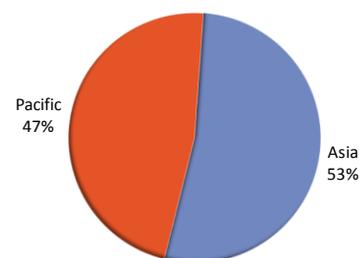
Asia & Pacific Acreage Increases 2005-2010



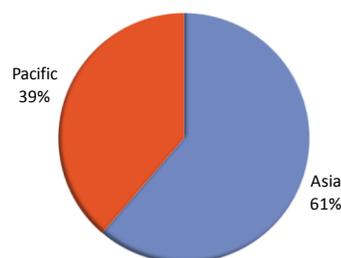
2010 Asia & Pacific Acreage Distribution



2010 Asia & Pacific Fresh Production



2010 Asia & Pacific Processed Production



The Pacific

Review:

Acreage growth in the Pacific region has been limited in the last two years with roughly 200 additional acres added bringing the total acreage just shy of 3,000 (Pac1). Production has grown however, nearly doubling to 10 million lbs since 2008 in the region. Below is the overview of the Pacific blueberry industry which essentially consists of New Zealand and Australia.

Production and Acreage:

Pacifica Acreage Growth; 2010 Crop (Pac1)

PACIFIC GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
Australia	1,384	1,450	1,470	1,530	5.70	0.90	6.60
New Zealand	1,050	1,290	1,290	1,450	2.00	1.50	3.50
Philippines	-	10	10	2	-	-	-
Pacific	2,434	2,750	2,770	2,982	7.7	2.4	10.1

Pacifica Production & Use Comparison: 2008 vs. 2010 (Pac2)

PACIFIC PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
Australia	4.40	0.88	5.28	5.70	0.90	6.60
New Zealand	2.00	1.50	3.50	2.00	1.50	3.50
Philippines	0.01	-	0.01	-	-	-
Pacific	6.4	2.4	8.8	7.7	2.4	10.1

Summary:***Australia***

The Australian blueberry industry continues to receive some of the highest fresh blueberry prices in the world due to its restrictions on fresh imports. The majority of production is along the central and northeast seaboard of the country where most growers manage Southern Highbush in evergreen systems allowing them to produce from late winter (August) into early summer (November/December). Varieties grown consist of privately owned genetics and public Southern Highbush varieties and some Rabbiteyes which allow the season to continue once the Southern Highbush are finished. Though limited, there is also high chill production in the far south of the country and in Tasmania. Australia has some of the highest per capita blueberry consumption in the world following American and English trends of consumption. The health message is firmly entrenched and the Australian consumer is an avid purchaser of blueberries for the same reasons of flavor, convenience, fun and health as in other established blueberry markets. Although Australia still does not allow imports of fresh blueberries, frozen imports are allowed and Australia presents an interesting opportunities for processors.

New Zealand

New Zealand (NZ) is both an exporter and a consumer of blueberries. During the 1990's and early 2000's NZ blueberries competed with Chile to service demand in North America and Europe. More recently as Chilean production has exploded and NZ growth more cautious, the NZ industry has turned to focus on primarily serving the Australia and NZ markets at home while developing a premium niche position in the high end markets in Asia and the Middle East. Planting in recent years has been limited and relegated primarily to the far south in pursuit of the late season market though spring frosts have been a problem in some of these plantings. In the increasingly commoditized markets in Asia, NZ fruit is finding it difficult to compete with Chilean product on price when there is not a premium for quality. As a result of the Chilean competition, the strategy of many NZ operators is to differentiate with high quality fruit, air freighted to the premium markets. NZ growers tend to be highly innovative with some of the highest producing farms in the world and exceptional quality. Target high end Asian markets include Singapore, South Korea, Kuala Lumpur and other 'tiger' markets. A major initiative underway for NZ as in other counter seasonal suppliers is an intensive

effort to gain direct access to the mainland Chinese market. With new consumers at home and abroad to serve, many in the NZ industry are optimistic about the future though there is plenty of work to be done.

Drivers:

Australian Market: Australia has some of the highest demand and per capita blueberry consumption in the world following American and English trends of consumption.

Geography: The Pacific blueberry producers are well located to serve both domestic and Asian demand

Asian Growth is creating strong pull for Pacific blueberries

Major efforts to open mainland China to New Zealand and Australian fresh fruit

Trends:

High Australian demand could drive frozen import growth from the Americas.

Asian demand will drive growth in Pacific production for counter seasonal fruit.

If mainland China opens to New Zealand and Australian fresh fruit imports potential for growth will increase.

Asia

Review:

Asia's acreage more than doubled between 2008 and 2010 growing from 5,100 acres to an estimated 11,135 acres (AsA1). The bulk of this growth has been in China as investment in the crop, often supported by provincial governments, increases. Production in Asia remains low with many young fields and poorly established farms yet to contribute much volume. Estimated 2010 production was 12.4 million lbs. As indicated in preceding section, the rise of Asia as a consumer of blueberries is beginning to be felt in major producing regions around the world.

Production and Acreage:

Asia Acreage Growth; 2010 Crop (AsA1)

ASIA GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
China	642	3,275	2,900	8,645	3.00	3.60	6.60
India	-	-	60	80	0.20	-	0.20
Japan	1,112	1,300	2,090	2,230	4.90	0.20	5.10
South Korea	-	40	50	180	0.50	-	0.50
Asia	1,754	4,615	5,100	11,135	8.6	3.8	12.4

Asia Production & Use Comparison: 2008 vs. 2010 (AsA2)

ASIA PRODUCTION	2008 Production			2010 Production		
	Fresh	Process	Total	Fresh	Process	Total
China	1.76	2.30	4.06	3.00	3.60	6.60
India	-	-	-	0.20	-	0.20
Japan	4.00	0.05	4.05	4.90	0.20	5.10
South Korea	0.10	-	0.10	0.50	-	0.50
Asia	5.9	2.4	8.2	8.6	3.8	12.4

Summary:

A common thread among all contributors to this report is the belief that the growth in Asian demand and consumption of blueberries will be immense over this next decade. From countries as small as Singapore, growing markets like South Korea and Taiwan, the established consumption of Japan and the behemoth that is China, the Asian market for blueberries and blueberry products is poised for development. With widespread cultural traditions devotedly focused on health and beauty, blueberries are a natural fit as incomes increase, awareness of higher value products like blueberries grow and the desire to be healthy, age gracefully and enjoy desirable foods continues to grow. There will be domestic production throughout Asia developed to meet the growing demand, but this production is not likely to increase at a rate sufficient to meet the rates of consumption.

China

Potential of China: In many global industries today, China is the 10,000 pound Panda in the room. In the case of blueberries, China is far off from being the gorilla in production, but the Chinese consumer is fast on their way to being the gorilla in consumption. Serving this market will likely be a major driver of growth for the Southern Hemisphere and the greater Pacific region.

In just a few years, perceptions of China as a potential mega-producer and low-cost exporter of blueberries have shifted to expectations of China becoming one of the world's largest consumers and possibly net importers of blueberries. Currently, demand is highest in the large coastal megacities though interest is quickly spreading to major urban centers throughout the country. With domestic supplies limited (see data tables) and technical phytosanitary barriers to importing fresh berries, major Chinese cities offer some of the highest prices for blueberries in the world. China played a major role in helping move North America's frozen inventories of 2010. The greater openness to frozen imports of blueberries is a notable opportunity today and, moving forward, for producers in the Americas in particular. Western retailers like Carrefour, Wal-Mart and Tesco have established strong positions in China as have numerous domestic and Japanese operators and the demand for high value produce is growing. Unlike big developing markets like India where distribution and logistics can be a challenge and the position of retail supermarkets is less dominant, China has a quickly maturing retail industry poised for expansion in the sales of blueberries in fresh, frozen, juices and CPG products. If or when efforts to gain access to the mainland fresh market are successful, countries allowed to export fresh blueberries to China will be positioned to participate in what appears to be years of exciting market growth.

Though China is unlikely to be a net exporter of blueberries any time soon let alone meet domestic demand, this does not mean that significant development on the production side is not underway. Plantings are in the ground and many more on the way, now throughout the country in numerous cases with local or provincial government support. As perishable logistics and cold chain can be a challenge in many parts of China, there is considerable opportunity to produce fresh fruit in the proximity of major urban areas. In pursuit of these and other opportunities there are now blueberry developments in 12 major provinces. Jilin and Shandong provinces lead the pack with the first focused on 'cultivated' lowbush and half-highs in rows and the former in Northern Highbush. Southern Highbush and Rabbiteye production in lower chill regions is beginning to pick up pace as well. Most all varieties being grown to date are public and there are many reports of mix ups in fields. Some patented varieties have leaked in to China but planting has only just begun. Another important point worth noting is the difficulty in obtaining reliable data on actual acres/hectares planted. Many blueberry projects are seeking government support which often incentivizes exaggerated reporting of progress. Also worth noting is the low productivity of many fields and the weather challenges growers face. To date there have been serious challenges in producing both Spring fruit and mid-late through late season fruit. In the primary production regions of Shandong, Dalian and Jilin heavy rains prevent the production of quality fruit from late July onwards. Challenges aside, Chinese blueberry production will continue to grow and domestic product in some windows will become increasingly available.

India

After year of working through red tape, the USHBC in cooperation with Thomas J. Payne Market Development have succeeded in securing access for fresh North American blueberries in India. Current shipments have yet to consist of large volumes. With its massive 1 Billion+ population, a large and growing middle and upper class, and an increasing number of highly educated people, India represents an exciting market opportunity. Current reported planting in India consist of research

trials and dispersed small commercial plantings, mostly in the north of the country. Due to the strong ties between the Punjab and the BC grower community, a number of the trials and projects reportedly have connections with the industry there. Logistics and cold chain can be a challenge in India due to the lack of infrastructure. As a result, domestic production for fresh product is likely to develop locally to serve nearby urban areas. Frozen sales are most likely to be successful in concentrated cosmopolitan areas where freezer storage is more widely available. Contributors have commented that the “easiest way in” to India is most likely with shelf stable packaged products with blueberries if distribution and consumption is to increase significantly in the short to medium term.

Japan

Since growing from a small niche market in the 1990’s to the substantial center of consumption it is today, Japan has developed both domestic production and a large business for imports. Much of this growth in awareness of blueberries and the growth in consumption in Japan, with its health conscious aging population, were spurred by the development work of the USHBC and WBANA. As the majority of Japan’s growing regions are lower chill and humid, its domestic production consists primarily of Southern Highbush. This puts most of Japan’s domestic production, which receives preference when available, in the spring time. As the summer time is generally the rainy season, exports from the northern hemisphere have the greatest opportunity to ship fresh product to Japan in the Summer through the early Fall.

In fresh sales Japan is now a competitive market for imported berries, primarily from North America and Chile. The high end market for IQF frozen blueberries has continued to grow though not at the pace experienced during the boom years, much of it in small manageable retail packs. Use of high end frozen product also continues in yogurts and other packaged and baked goods.

Another interesting piece of information sheds light not only on the growth of Japan in the blueberry business but the growth of the greater Asian market. With its long established international trading houses, Japan is becoming an exporter to Asia or, more correctly, a “re-exporter”. Multiple sources have expressed a belief that much of the frozen and fresh fruit being shipped to Japan is not being consumed domestically but rather repacked and shipped to other Asian countries, especially China. Although this is not the lowest cost delivery system by any means, there is clearly sufficient demand and pricing to rationalize the efforts. Blueberry consumption has now moved far beyond Japan in Asia and the Japanese are rushing to serve it.

South Korea

Though it does not represent the same level of behemoth market opportunity like its neighbor China, South Korea’s demand for volumes of blueberries is booming. Phytosanitary restrictions on fresh imports remain unresolved, but frozen movement to South Korea is growing rapidly. Although there is increased interest in domestic production, development has been limited up to this point. South Korea exhibits traits of a substantial net importer for years to come.

Drivers:

Asian demand and consumption of blueberries is anticipated to be immense over this next decade. Widespread cultural traditions devotedly focused on health and beauty make blueberries a natural fit as incomes increase, awareness of higher value products like blueberries grow and the desire to be healthy, age gracefully and enjoy desirable foods continues to grow.

Purchasing power of Asian consumers is on track for sustained growth.

Chinese Market: Domestic consumption and demand far exceed domestic supply and will likely continue to do so for some years. China has a quickly maturing retail industry poised for expansion in the sales of blueberries in fresh, frozen, juices and CGP products.

Trends:

Domestic production will grow in Asia to serve local demand in country, especially in fresh.

Imports: Asian production is not likely to increase at a rate sufficient to meet the increasing rates of consumption creating big opportunities for exporters.

New Products in China could become a major driver for processed blueberry demand

South Korea is on track to become “the next Japan”.

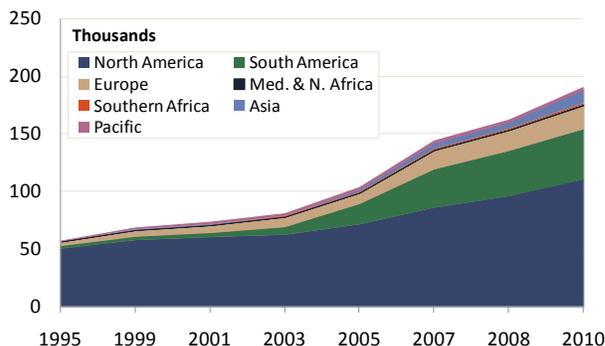
India may present opportunities for shelf stable products using blueberries.

Global Highbush Blueberries

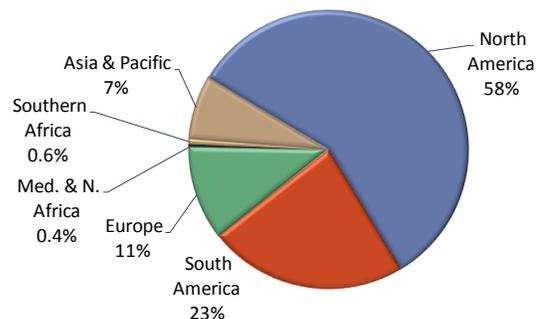
Global Highbush Acreage and Production

WORLD ANNUAL GROWTH TOTALS	Acreage				2010 Production		
	2005	2007	2008	2010	Fresh	Process	Total
North America	71,075	85,617	95,607	110,290	303.00	188.30	491.30
South America	18,039	33,650	39,703	44,000	137.07	16.33	153.40
Europe	9,736	16,705	18,038	20,780	68.64	12.50	81.02
Med. & N. Africa	-	215	355	672	2.18	0.04	2.23
Southern Africa	740	810	910	1,124	2.10	0.20	2.30
Asia & Pacific	4,188	7,365	7,870	14,117	16.30	6.20	22.50
World Acreage	103,778	144,362	162,483	190,983	529.3	223.6	752.8

World Acreage Increases 1995-2010



World Acreage Distribution



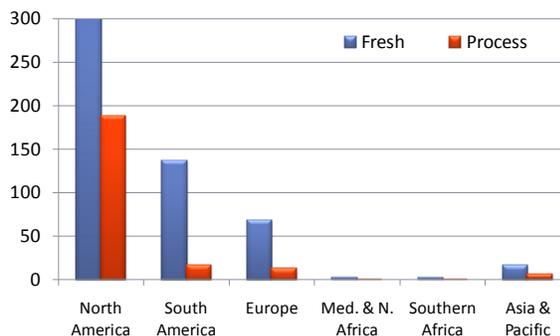
Global Highbush Crop and Usage: 2008 vs. 2010

	2008 Million Lbs.			2010 Million Lbs.		
	Fresh	Process	Total	Fresh	Process	Total
North America	229.40	186.35	415.75	303.00	188.30	491.30
South America	92.10	23.03	115.13	137.07	16.33	153.40
Europe	54.43	1.96	56.39	68.64	12.50	81.14
Med. & N. Africa	0.81	0.00	0.81	2.18	0.04	2.23
Southern Africa	1.11	0.44	1.55	2.10	0.20	2.30
Asia & Pacific	12.27	4.73	17.00	16.30	6.20	22.50
World Acreage	390.12	216.51	606.63	529.30	223.57	752.87

Global Highbush Summary & Review:

Global Highbush acreage grew between 2008 and 2010 by an estimated 27,001 acres from 162,483 to 189,484 acres. This Change represents a near 17% increase over 2 years. Clearly blueberry planting continued during the global economic downturn, driven by increasing local and global demand. Global production between 2008 and 2010 grew by 146.24 million lbs from 606.63 to 752.87 million lbs, an increase of 24% over 2 years. Incredibly, virtually all of this production increase was sold fresh around the world, a clear trend in recent years. Another standout for 2010 is the ratio of fresh to processed diversion. 524.3 million lbs fresh vs. 223.57 in processed represents a

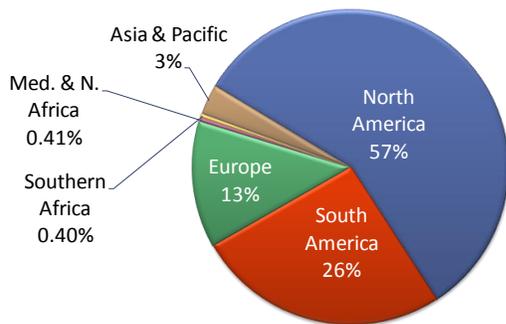
2010 World Highbush Fresh vs. Processed Production



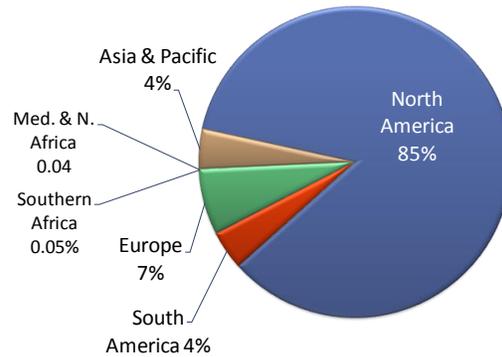
ratio of over 2 to 1 fresh to process diversion. In 2010 North America shipped twice the fresh volume that it did in process.

This imbalance may offer additional clarity as to why processed prices have turned up so quickly. The ability of the global fresh market to consume such rapid volume increases is encouraging. On the process side of the business the question of stability and predictability for both suppliers and buyers comes into questions. If such growth can be sustained in fresh, 139.18 million lbs in 2 years globally, why could the same not be accomplished in the processed side of the business? Sustaining the

2010 World Fresh Production

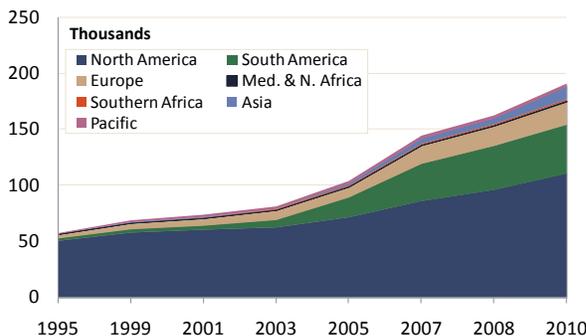


2010 World Processed Production

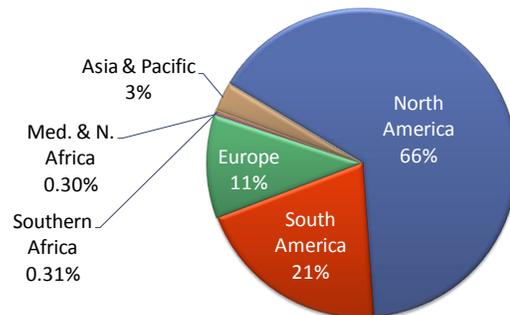


continuing growth in global consumption and demand for fresh while initiating and sustaining renewed growth in process will be a key determining factor in the Highbush Industry's continued success. This author anticipates this to be the greatest challenge of our global industry in the coming years.

World Acreage Increases 1995-2010



2010 World Production



Global Wild/Lowbush Blueberries

Global Wild Crop

	2008 Million Lbs.			2010 Million Lbs.		
	Fresh	Process	Total	Fresh	Process	Total
Quebec	2.0	78.0	80.0	2.0	28.0	30.0
PEI	0.0	9.8	9.8	0.0	9.0	9.0
Nova Scotia	0.0	40.0	40.0	0.0	27.5	27.5
New Brunswick	0.0	33.7	33.7	0.0	25.0	25.0
New Foundland	0.0	1.7	1.7	0.0	0.5	0.5
Maine	0.5	89.5	90.0	0.5	64.5	65.0
China V. Ulig., Vitis Idaea	0.0	6.6	6.6	0.0	10.0	10.0
Europe	0.0	25.0	25.0	2.0	15.0	17.0
Total Wild	2.5	284.3	286.8	4.5	179.5	184.0

Wild Crop Review:

The wild blueberry industry had a particularly light crop in 2010. As addressed in the North America section above, this light crop was a major contributor to the upturn in process prices upon the wild industry announcement of a short crop in the late spring of 2010.

China Wild Crop

The actual wild crop figures for China are highly elusive for a number of reasons. One key issue is one of semantics as much of China's wild crop is the North American wild blueberry, *Vaccinium Angustifolium*, but *Vaccinium Uliginosum* and *Vaccinium Vitis Idaea* harvested in the forests and mountains in the north of the country. These berries are in high demand among city dwellers and food companies domestically. Tracking volumes is difficult as there is no official data collected on harvests. The other source of "wild" blueberries in China is from cultivated fields of *Vaccinium Angustifolium* in the northeastern provinces. This fruit is destined for the same markets but managed more intensively. Production of "cultivated wild" *Angustifolium* in China appears to be growing.

European Wild Crop

The majority of wild blueberries in Europe are *Vaccinium Myrtillus*, or Bilberry. Annual crops vary considerably and are subject to both annual productivity and the whether or not crops are harvested in their respective production regions. When the economy is tough, people needing additional income have and time to spare, the crop increases considerably, particularly in Eastern Europe. Other supply regions include the Nordic countries, the UK and Central Europe. The data provided this year is based on best guesses by people connected with the industry as official data is not published. The predictability of the European wild crop has been a challenge which may create an opportunity for

future Highbush sales to European buyers who have traditionally sought European wild. This last season's European wild crop was reported as average.

North American Wild Crop

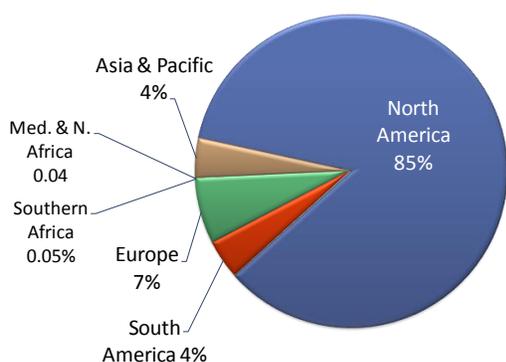
Comparing the 2008 to 2010 wild crops in North America, the drop is most notable. The 2010 lowbush crop was almost 100 million lbs lower than the 2008 crop at 157 million lbs down from 255.2 in 2010. Quebec saw a major crop loss falling from 80 million lbs in 2008 to 30 million in 2010. Maine and Nova Scotia also had significant drops. Looking to the future, this light year may set the stage for a turn-around in the wild crop in 2011 as light production years in lowbush are often followed by bumper crops. Multiple contributors have commented that the unpredictable nature of the wild blueberry crop is driving increased interest in Highbush among many buyers.

Global Crop: Highbush and All Wild Blueberries Combined

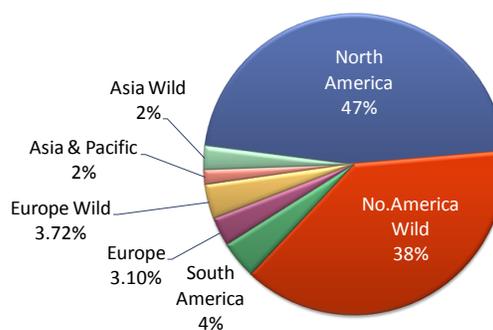
2008 vs. 2010 Combined Highbush and Wild

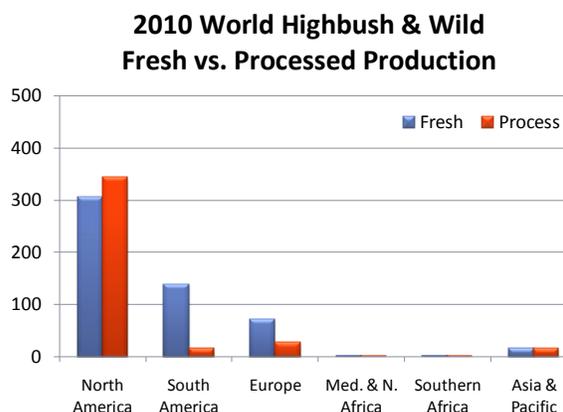
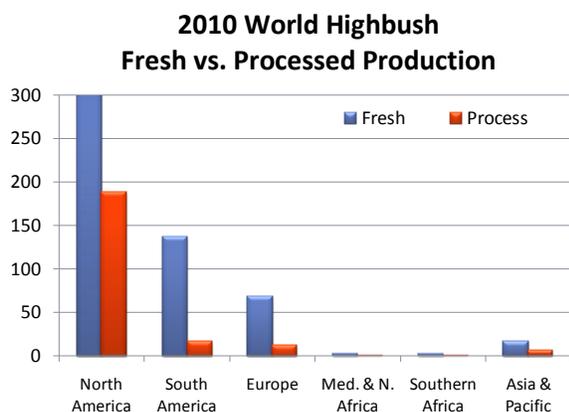
	2008 Million Lbs.			2010 Million Lbs.		
	Fresh	Process	Total	Fresh	Process	Total
North America	231.9	439.1	671.0	305.5	342.8	648.3
South America	92.1	23.0	115.1	137.1	16.3	153.4
Europe	54.4	27.0	81.4	70.6	27.5	98.1
Med. & N. Africa	0.8	0.0	0.8	2.2	0.0	2.2
Southern Africa	1.1	0.4	1.6	2.1	0.2	2.3
Asia & Pacific	12.3	11.3	23.6	16.3	16.2	32.5
TOTAL	392.62	500.81	893.43	533.80	403.07	936.87

2010 World Highbush Processed Production



2010 World Highbush & Lowbush Processed Production





Global Highbush and Wild Crop Summary and Review

When the 2010 global Highbush and Wild crops are combined and compared to 2008, the greatest standout in the table is the impact of the light Wild crop. Although Highbush volume increased considerably in the last 2 years, the decrease in wild production kept the global volume increase of blueberries under 50 million lbs at 43.44 million lbs between 2008 and 2010. To provide perspective, this figure for global ‘combined’ crop increase is less than the 2010 Oregon Highbush crop. This lack of significant increase in total blueberry volume in all its forms around the world may provide some additional insight into the current demand situation in the processed market. While global consumption has continued to grow through the global recession, 2010 Highbush diversion to process was eclipsed by fresh, the Wild crop in North America was down and the ***total global supply of processed did not increase but in fact decreased.*** The total volume of blueberries in all forms diverted to fresh between 2008 and 2010 actually decreased from 500.81 million lbs to 403.07 million pounds. ***In 2010 the global processed market was shorted almost 100 million lbs relative to supply in 2008.*** This factor is not only critical to understanding the market trends of the last year, but also what is possible in the future. If the 2011 and other future Wild crops are higher, the Highbush crop grows as anticipated and diversion to processed increases, what could the impact be on the processed market?

Predictions: Review and Trends

Global Highbush Crop Predictions

In previous reports, future production predictions have consistently lagged the actual estimated levels experienced. Taking this trend into account, this year’s forecast of global production for the coming years, outlined below, is more modest than that of previous years. There are three primary reasons for this decrease in the predicted rate of growth:

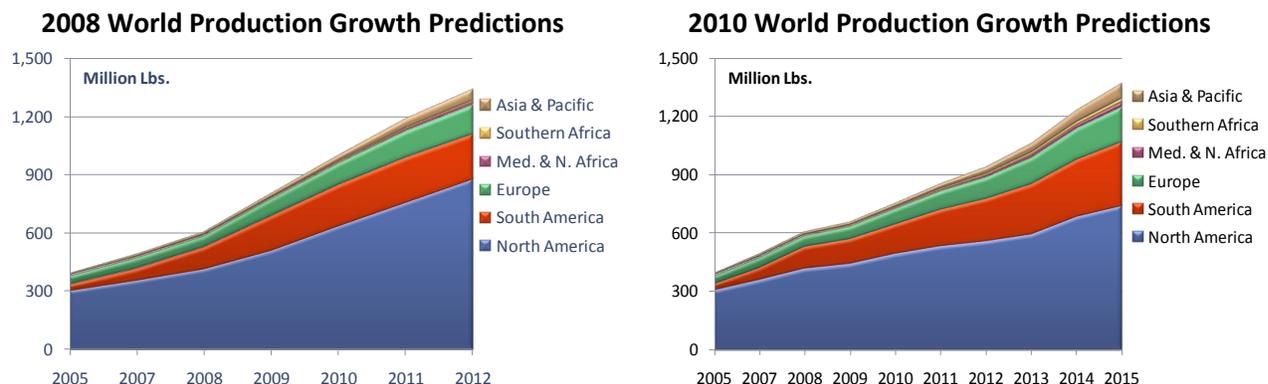
- 1) This year the decision was made to make predictions using formulas that did not predict “optimized” growth (IE the potential crops in the field of each year) but rather took into account actual production harvested versus planting trends. As discussed in points 2 and 3, all regions reaching full potential is simply a highly improbable outcome.

- 2) The odds of record crops in any more than a few geographies is simply too unlikely and events often tend to be offsetting – global weather trends, old fields, labor challenges and disease pressure to name a few, make simultaneous record crops around the world highly improbable. The number of disease challenges in blueberries is in fact increasing, not decreasing and the tools available to fight these challenges are not increasing at the same rate. In fresh regions, a big crop in the fields is frequently not accompanied by available labor to ensure its full harvest. The apparent increase in unpredictable global weather patterns contribute to the unlikelihood of good crops in all regions. As explained by a contributing weather expert, independent of any climate change trends, when weather is extreme and disruptive in one part of the globe it is often more favorable in others. All regions reaching optimum potential in the same year has not been the historical trend.
- 3) The third practical trend is linked to one of the key themes of this report, namely that the rapid rate of growth in recent years comes with challenges – the industry has grown quickly and as a result there will be tendencies to underperform. All areas that expanded at an extremely rapid pace such as BC, Georgia, Chile and Argentina have underperformed relative to anticipated production curves. This trend appears likely to continue in rapidly growing regions such as Mexico and China. In regions where growth is extreme, this trend is most prevalent, fields are installed in weaker sites, inferior varieties are planted, available expertise is limited, poor quality nursery stock is often used and a dearth of clear harvesting, post harvest and marketing plans all contribute to lower performance. The faster an area grows, the more likely it is to underperform as a region. This plays a strong role in these revised predictions.

Global Highbush Crop Predictions by Region

World Production Growth Predictions	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015
2007 Predictions	393.30	493.93	572.00	692.00	806.00					
2008 Predictions	393.30	493.93	606.83	805.50	1,002.00	1,191.00	1,343.00			
2010 Predictions	393.30	493.30	606.83	656.80	752.75	852.60	938.00	1,058.50	1,229.00	1,368.00
North America	305.00	358.00	415.75	440.00	491.30	530.00	555.00	590.00	680.00	735.00
South America	35.00	64.00	115.13	130.00	153.40	190.00	220.00	260.00	295.00	330.00
Europe	42.10	54.00	56.59	65.00	81.02	95.00	110.00	135.00	160.00	180.00
Med. & N. Africa		0.45	0.81	1.00	2.23	5.00	9.00	14.00	18.00	25.00
Southern Africa	1.00	1.11	1.55	1.80	2.30	5.60	8.00	11.50	14.00	18.00
Asia & Pacific	10.20	15.74	17.00	19.00	22.50	27.00	36.00	48.00	62.00	80.00

The global production growth predictions for 2010 and onward reflect a growth curve quite similar to that of the 2008 predictions. The difference is the time frame (see x axis in graphs above) over which these production increases are anticipated to be realized. Predictions provided in 2008, which this author felt were at the time reasonably conservative, exceeded actual growth. This prediction for 2010 reflects the key factors outlined above and a potentially more realistic outlook through 2015.



Conclusions

Reiterating Themes, Posing Questions

Having interacted with contributors from all over the world, this author sees global trends in the blueberry business coupled with a number of critical questions that must be answered in the coming years. From the grower to the packer/marketer to the buyer and even in some cases the consumer and media. Examining the data and intelligence provided by contributors around the globe, the trends and questions are surprisingly common and can be placed into two categories which frame the themes outlined in the beginning of the report:

1) Growth in Global Production and Consumption

The Blueberry Industry is Going Global: Production and consumption are expanding around the world. Much of the growth in production in new areas is being driven by demand growth in new places. To quote an Egyptian grower discussing the Middle Eastern market, “people in the western world aren’t the only one’s interested in eating healthy and enjoying good food”. Blueberries are being grown in more places and more people are consuming them around the world.

New Consumers Now a Major Driver of Demand: Historically, much of the consumption increases in blueberries have been attributed to existing blueberry consumers eating more fruit, now there is a clear additional trend towards more people beginning to eat blueberries. More people in existing markets and new markets around the world are discovering blueberries and seeking them out. How can this new demand be supplied?

Fresh is a Major Driver: Fresh consumption has been growing steadily for years. During the recession the vast majority of the production increase was diverted to the fresh market. Can this rate of fresh consumption growth be sustained and how?

Opportunity and Challenges in Process: Though challenges remain, the processed market has potential to grow. With production increasing, it may finally be feasible for the introduction of new products using blueberries in the food industry. Massive fluctuations in processed blueberry prices, quality and product types have reportedly been confusing and a frustrating for buyers and end users. Concerns about the predictability of the wild crop may drive greater interest in Highbush blueberries among process buyers if greater predictability can be offered. In North America and around the world, the market for processed blueberries in all forms is growing. The landscape of today's processed market and the greater blueberry industry exhibits the potential for supply growing while meeting renewed demand. Growth in processed blueberries has lagged behind fresh, how can this trend be turned around? How can the successes in fresh production and consumption growth be repeated in process?

2) Winners and Losers

Rapid Growth Creates Unique Challenges: The faster an industry grows, the more it tends to underperform. This trend applies to a number of producing regions which are not as likely to achieve full potential without repositioning. With so many plantings established during the years of rapid growth, many are under-achieving. From Poland to Argentina, China to Florida, average productivity per acre is significantly lower than that of a field achieving reasonable productivity. Will changes occur in time for these boom regions to remain competitive?

Drive towards Professionalism, Quality and Scale: The biggest winners during the downturn and in the current upswing have generally been the larger and professionally run operations. Buyers and consumers are becoming more, not less selective and educated. This trend may eventually render many of today's product types, brands, varieties, fields, infrastructure, post harvest systems, etc... obsolete. Will the separation between such operations become increasingly apparent? How will it manifest itself? How will smaller operations position and align to compete?

Repositioning and Re-tooling in Established Regions: The industry is growing and professionalizing and the market becoming more discerning, leading growers in established regions are renovating their businesses with new varieties, new technology, better infrastructure and ultimately pursuing greater efficiency, productivity and quality. What are the most important steps to take to remain competitive? What does a "winner" look like in the future?"

Special note regarding industry organizations: A great deal of the success in the blueberry industry's success and growth over the last 20 years can be attributed the research and promotional activities of the USHBC, The Chilean Blueberry Committee and WBANA and other industry organizations. Many industries around the world have formed their own organizations to engage in similar activities. 2011 marks the year of formation of the International Blueberry Organization. Continued efforts in research, dissemination of the health message, generic promotional activity and market development will be critical in supporting the sustained growth in use and consumption of blueberries around the world. In an increasingly interconnected world, enhanced global cooperation on such key issues which transcend the commercial interest of individual entities presents exciting opportunities to build a strong and sustainable future for all in the blueberry industry.

After years of consistent increases in production, consumption and pricing, much of the industry experienced a severe downturn in 2008, 2009 and early 2010. The dramatic effect of this event brought some of the lowest prices in real terms in many years. Two years of reasonable prices to buyers and consumers, significant diversion to an attractive fresh option and new products in the processed markets kept consumption growing through the industry downturn and the global recession.

The world is slowly pulling out of recession and the optimism in the blueberry business is palpable among contributors to this report. Blueberry production AND consumption is increasingly global. Since the last report in 2008, this development is evidenced by the many new consuming centers of blueberries. Blueberries are following the same trend as most other food-stuffs and consumer items spurred by the growth of global communication and redistribution of wealth around the world. The world economy is becoming global and blueberry production and consumption is growing with it. Many questions about the future of the blueberry industry remain unanswered. As an element of predictability and stability returns to the business and the blueberry notably moves from its position as a niche product to that of a ‘must have’ commodity, there are many new challenges and opportunities. Old models, once highly effective, appear to be giving way to new systems and ways of engaging in the business to ensure success. The rewards are great and the stakes higher. As in so many other industries facing similar trends of globalization, increased competition and ever faster rates of game change, the challenges ahead for the blueberry industry are stark and the opportunities exciting and manifold. The systems and strategies developed to face these new realities head on will be the determining factors of future success in this increasingly dynamic industry.