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Berry Sector's Growth Has Important Consequences for the Campo

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Report Highlights:
Fresh berry production in Mexico has seen impressive growth in recent years. While the domestic market for quality and specialty berries is growing, export sales are the key growth driver. The industry estimates combined exports of strawberry, raspberry, blackberry, and blue berry will reach $1 billion within five years, mostly to the United States. Protected agriculture is largely responsible for production growth and has important benefits for the Mexican countryside.

General Information

The fresh berry sector in Mexico is of increasing importance. While originally comprised mainly of traditional varieties of strawberries with half of production going to the frozen or processed market, the sector now produces the newest varieties of strawberries as well as raspberries, blackberries, and blueberries, with a focus on the fresh market[1]. Much of the production growth over the last several years is due to Mexico's varieties of microclimates, protected agriculture installations (greenhouse/shadehouse), strong export demand (mainly to the United States), growing domestic consumption, and the increasing involvement of international (again, mainly U.S.) companies. Growth in the sector has had two main impacts: it has positioned Mexico as a major berry exporter and it has promulgated a uniquely successful rural agricultural development model. Both of these changes have impacts that can be felt in the United States.

Dating back to at least the 1950s, strawberry production, especially in central Mexico, has long been an important agricultural endeavor. Irapuato is a traditional heartland of vast open field seasonal production and certain times of the year continue to see large roadside sales operations. Mexico has also been a significant supplier of strawberries to the United States, sending about $70 million in 1995, and nearly $110 million in 2004[2]. Baja California is the most famous U.S. supplier. A major change has occurred, however, over the last ten or so years with strawberry (and other berry) production moving from open-field into protected agriculture (greenhouse/shadehouse) establishments. This migration means that although acreage planted to strawberries has fallen slightly since 2000, production volume has risen by almost 65 percent, reaching 228.9 TMT on 7000 hectares (17,300 acres) in 2011[3]. Exports of fresh strawberries hit $211 million in 2012[4]. Other types of berries, such as raspberry, blackberry, loganberry, and blue berry, started from a smaller base and have thus shown even more impressive growth. Commercial blackberry production did not begin until the 1980's with the arrival of Brazilian cultivars. In the late 1990's, driven by international producers, blue berry and raspberry production began. Blue berries, for example, grew from 60 acres and 285 MT of production in 2000 to 783 hectares and 6,700 tons[5]. In 2012, Mexico exported $168 million worth of other fresh berries[6]. Industry leaders[7] see continued growth in the sector and expect to see $1 billion in exports within 5 years. This compares to current exports of tomatoes ($1.7 billion), avocadoes ($893 million), sugar ($822 million), and peppers ($789), the top four agriculture products from Mexico[8].

The berry sector has also had an important impact on rural development in the regions of the country where it has taken hold. The well-known, worldwide agricultural trend towards increased mechanization and reduced labor requirements that has lead to falling rural populations and increasing economies of scale, especially land under management, has slowly but steadily

[1] The frozen/processed market is still important and is briefly covered later in this report.
[2] Commodity Profile, Strawberries. 2006. UC Davis
[3] SIAP
[4] Global Trade Atlas (Mexican Export Data)
[5] SIAP
[6] Global Trade Atlas (Mexican Export Data)
[7] The Mexican berry association is known as Aneberries and can be found at: http://www.aneberries.mx/
[8] Excluding the number 1 item, beer. Source: Global Trade Atlas (Mexican Export Data)

been changing rural Mexico. That said, history has provided Mexico with large tracts of communal lands worked by (relatively) large numbers of small scale farmers managing less than 12 acres. Such communal lands are known as *ejidos* in Mexico and Post believes that half of Mexico's farmers, or about two million, live on ejido lands and that this communal land makes up about half of Mexico's farm land. With the opening of trade that has come with NAFTA and other agreements (Mexico has signed 50 free trade agreements), small scale farmers growing acre-sized plots of corn or beans have found it increasingly difficult to earn a living. In fact, most small scale ejido production is consumed on site, rather than sold commercially, with families relying on income from other non-farm sources.

Opening of trade has, of course, significantly benefited other sectors of the Mexican agricultural economy, especially for those producing fruits and vegetables. The growth of Mexican exports of avocados and tomatoes is well known—see Post reporting over the years on these commodities, most recently MX2084 Avocado Annual 2012 and MX 2036 Tomato Annual 2012. Less heralded, however, has been the tremendous growth in the berry sector. Some of these figures have been alluded to above. The on-the-ground impacts of this production expansion can also be felt in the ejido communities where greenhouse/shadehouse production installations have been established. Put simply, the high-tech, high-value model of berry production emerging in Mexico has made it possible for farm families to again make a living farming on just a few acres of land. Models vary, but a typical installation might be a cluster of greenhouse-type constructions on an ejido farmed by several individuals. The community and farmers provide the labor while a major berry producing and marketing company, such as Driscoll's (an international berry company based in the U.S.), supplies financing for installation materials and inputs, training and technology transfer of management best-practices, access to the latest and greatest root-stock varieties, and a reliable buyer complete with supply chain and marketing infrastructure. As berry production tends to require above average levels of manual labor, job creation at the ejido level is also an uncommon and welcome side benefit.

Table 1 contains industry estimates on protected agriculture's share of berry production in Mexico and average labor requirements per hectare of protected installations.

Table 1

Berry	Protected agriculture share of production	Ave. labor requirement (worker/ha)
Strawberry	50%	7
Raspberry	90%	7.8
Blackberry	40%	10
Blue berry	50%	7.8

Frozen and Processed

As mentioned above, frozen and processed berries are also important. Mexico has long produced strawberries specifically for processing into juice, jams, and specialty frozen for confectionary. Similar to consumption of fresh, consumption of frozen berries, especially blue berries, is also growing in Mexico. The healthy image of berries is driving this growth.

The processing industry is also important as it allows berry producers to focus on selecting the choicest berries for the fresh market since they know they will be able to get an acceptable price for berries showing slight cosmetic defects from the processors. Production and trade data for processed berries are not easy to separate out in publicly available data.

Production

Table 2. Berry Production in Mexico

	2004			2010			2011		
	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*
Blue berry	60	280	4.67	402	1,059	9.99	783	6,704	10.54
Raspberry	315	3,045	10.8	1,217	14,344	16.04	1,345	21,468	16.2
Strawberry	6,466	177,230	28.02	6,555	226,657	36.08	7,005	228,900	32.8
Blackberry	2,198	26,697	12.48	8,188	61,558	9.63	11,297	135,563	12.64
Total:	9,038	207,251		16,361	303,618		20,430	392,634	

Source: SIAP

Mexican Berry Production by Berry and State:

Table 3. Strawberry Production

Mexico – Strawberry Production						
Top States	2011			2012 Estimates[9]		
	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*
Baja California	1,820	84,995	46.7	2,480	140,388	65
Guanajuato	1,060	12,593	12.2	908	16,809	19.7
Michoacán	**3,351**	**114,170**	**34**	**4,714**	**197,807**	**44.3**
Other	774	17,141		912	25,714	
TOTAL	**7,005**	**228,899**		**9,014**	**380,718**	

Source: SIAP

[9] As a traditional major commodity, SIAP produces estimates for strawberries, but not for the other berries discussed in this report. The 2012 estimates for other berries are based on industry data.

Table 4. Raspberry Production

Mexico – Raspberry Production						
Top States	2011			2012 *Estimates		
	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*
Baja California	160	4,640	29	238	7,590	31.9
Jalisco	**939**	**13,493**	**14.4**	**1,395**	**22,105**	**15.8**
Michoacan	179	2,821	15.8	266	4,626	17.4
Other	67	513		100	1,392	
TOTAL	**1,345**	**21,467**		**2,000**	**13,608**	

Source: SIAP and Aneberries

Table 5. Blackberry Production

Mexico – Blackberry Production						
Top States	2011			2012 *Estimates		
	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*
Jalisco	389	4,357	11.8	428	5,550	13
Michoacan	**10,752**	**129,404**	**12.7**	**11,827**	**165,224**	**14**
Other	156	1,802		172	3,034	
TOTAL	**11,297**	**135,563**		**12,426**	**173,808**	

Source: SIAP and Aneberries

Table 6. Blue berry Production

Mexico – Blue berry Production						
Top States	2011			2012 *Estimates		
	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*	Area Planted *Hectares*	Production *MT*	Yield *Mt/Ha*
Jalisco	**518**	**5,709**	**14.6**	**1,688**	**37,871**	**22.44**
Other	265	995		312	1,371	
TOTAL	**783**	**6,704**		**2,00**	**39,242**	

Source: SIAP and Aneberries

Fresh Berry Exports from Mexico[10]:

Table 7

Volume	2004		2011		2012	
	Exports *MT*[11]	Exports to US *MT*[12]	Exports *MT*	Exports to US *MT*	Exports *MT*	Exports to US *MT*
Strawberry	37,394	42,227	76,890	110,144	113,634	158,913
Other berries	9,574	11,064	44,695	67,029	52,530	82,584
Total:	46,968	53,291	121,585	177,173	166,164	241,497

Table 8

Value *USD*	2004		2011		2012	
	Exports[13] *(million)*	Exports to US[14] *(million)*	Exports *(million)*	Exports to US *(million)*	Exports *(million)*	Exports to US *(million)*
Strawberry	$59.83	$70.09	$155.19	$234.71	$210.99	$348.52
Other berries	$36.33	$51.91	$137.34	$311.93	$167.68	$408.58
Total:	$96.16	$122	$292.53	$546.64	$378.67	$757.1

Mexican berry industry leaders continue to promote the idea of market possibilities beyond the United States, targeting specifically Asia and the EU. The highly perishable nature of their product and the logistics challenges to other destinations versus the ease of shipping to the U.S., both contribute significant headwinds to expansion goals. Most if not all berry shipments that do arrive in Asia and the EU transit first through U.S. shipping infrastructure. Increasing name recognition and a reputation for reliable supply and quality are factors that will support the industry desire to expand beyond the U.S. market.

Mexico faces no specific regulatory export windows for berry shipments to the United States and instead exports according to the production cycle and industry marketing goals. For example, strawberry producers focus on winter production but also aim to ship during high demand times such as Thanksgiving and Valentine's Day. In contrast, blue berry producers report that the U.S. market demands more than they can produce and so ship whenever product is available.

Mutual Benefits

Although producers continue to open new overseas markets, 90 percent of Mexico's berry exports go to the U.S[15]. Trade is not one-way, however, as Mexico imports top quality strawberries and continues to see a growing domestic market for other berries, especially blue

[10] A review of tables 7 and 8 shows significant discrepancies between U.S. and Mexico trade data
[11] Global Trade Atlas (Mexican Export Data)
[12] Global Trade Atlas (U.S. Import Data)
[13] Global Trade Atlas (Mexican Export Data)
[14] Global Trade Atlas (U.S. Import Data)
[15] Aneberries estimate

berries and organic products.

In addition, Mexican producers rely on U.S. producers for access to the latest and greatest rootstock varieties of different types of berries. Mexico also benefits from U.S. advancements in management techniques, including pest mitigation and fertilization technologies. The logistics of world trade routes also means that a significant amount of the infrastructure for Mexican berry production is either manufactured by or imported and distributed by U.S. companies—plastics, fertilizers, chemicals, machinery, irrigation equipment and the automated systems that monitor flows of water and other inputs—are all heavily sourced from U.S. suppliers. Consequently, imported Mexican berries, like many other Mexican products available in the U.S., are estimated to contain 40 percent U.S. "content". Increased employment also has societal impacts that benefit the United States, including diminished northern migration pressure and fewer people working in illicit industries.

U.S. Berries in Mexico

As mentioned above, U.S. fresh berries have dominated Mexican imports for decades and appear poised to do so in 2013 and the foreseeable future. Demand for U.S. fresh berries remains strong in the Mexican food service sector, which prefers larger berries with fewer blemishes. U.S. berry producers may benefit from focusing export marketing activities on the retail sector, as opposed to the industrial sector where Mexican berries have experienced double digit demand growth for strawberries and blueberries.

Table 9. Mexican Fresh Berry Imports from the United States

	2004 (million USD)	2011 (Million USD)	2012 (Million USD)
Strawberry	9.8	12.5	15.3
Other berries	0.055	1.1	1.1
Total	9.9	13.6	16.4

Source: Global Trade Atlas (U.S. Export Data)

Despite the strong demand for U.S. fresh berries, Mexican import demand for all berries is falling as lower-priced domestic production accounts for more and more of Mexican domestic consumption. Mexican domestic production has grown at such a strong pace that prices for domestic berries are almost half of the price of imported berries and this trend looks set to continue. Many U.S. berry producers have shifted their frozen and berries for ingredients promotions to Asia, where competition remains limited.

For More Information

FAS/Mexico Web Site: We are available at www.mexico-usda.com or visit the FAS headquarters' home page at www.fas.usda.gov for a complete selection of FAS worldwide agricultural reporting.

FAS/Mexico YouTube Channel: Catch the latest videos of FAS Mexico at work http://www.youtube.com/user/ATOMexicoCity

Useful Mexican Web Sites: Mexico's equivalent of the U.S. Department of Agriculture (SAGARPA) can be found at www.sagarpa.gob.mx, the equivalent of the U.S. Department of Commerce (SE) can be found at www.economia.gob.mx, and the equivalent of the U.S. Food and Drug Administration (SALUD) can be found at www.salud.gob.mx. The Mexican agricultural statistics agency can be found at: www.siap.gob.mx/.These web sites are mentioned for the reader's convenience but USDA does NOT in any way endorse, guarantee the accuracy of, or necessarily concur with, the information contained on the mentioned sites.

Commodity Profile, Strawberries. 2006. UC Davis: Boriss, Hayle, Henrich Brunke and Marcia Krieth. Found at: http://aic.ucdavis.edu/profiles/Strawberries-2006.pdf