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Hard Freeze Damages Sinaloa Corn and Produce

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Report Highlights:
Cold weather across northern Mexico during the first few days of February wrought havoc on agricultural production and sent federal and state officials into crisis-management mode. Corn production losses could at their worst reach as high as 3 million metric tons and in the best case will almost certainly exceed 1 mmt. Some sources indicate that the majority of the open-field tomato crop in Sinaloa has been lost. Even though grain stocks and warehoused horticultural products are available for the short-term, prices for some horticultural commodities originating from the affected areas are surging higher.

General Information:

Uncommon Freeze Nips Northern Mexico

The Secretariat of Agriculture, Livestock, Rural Development and Fishery (SAGARPA) issued a press statement that it, the National Water Commission (CONAGUA), and the rural development departments of several states (Baja California, Coahuila, Chihuahua, Durango, Sinaloa, Sonora, and Tamaulipas) are investigating the impact of cold weather on agricultural production. The weather phenomenon occurred with little notice in the first few days of February 2011 and took producers, industry, and government officials by surprise. Areas of particular concern are the states of Sinaloa and Sonora in northwestern Mexico. News stories and government sources report that officials are touring the areas, assessing damage, and visiting with affected producers and producer organizations.

According to SAGARPA's Information Service for Agriculture and Fishery (SIAP), 2009 Fall/Winter irrigated and rain-fed production area for the above states totaled nearly 2.3 million hectares. Sources indicate that similar areas were planted in the 2010 Fall/Winter crop cycle and, as such, wide areas of land were affected.

The Government of Mexico has not determined how significant the damage was to the area and whether crops (cereal grains and horticultural commodities) will be able to recover, or whether it was a total loss that will necessitate reseeding. Government officials and industry sources report the adverse weather affected open-field as well as shade-house agricultural production. In a statement released February 10, 2011, on SAGARPA's website, the Government of Mexico reports that it has seed sufficient to re-seed 300,000 hectares of white corn, 150,000 hectares of sorghum, and 15,000 hectares of safflower. Industry sources report, however, that it may be difficult to get this seed into the ground in the immediate future as significant portions of the production area are irrigated and it may be necessary for the soil to dry before re-seeding. Industry contacts anticipate that by February 22 they will have more accurate estimates of damage from SAGARPA and private producers. Corn flour millers expect to meet with SAGARPA and the Secretariat of Economy (SE) to discuss the emergency measures to be implemented to face the serious problem of the corn harvest in Sinaloa.

Cereal Grains

Industry sources report that the impact on white corn production is of paramount concern, but that other field crops (e.g., durum wheat, sorghum, and dry beans) could suffer yield losses, as well. The frost in Sinaloa is of especial interest as that state accounts for approximately 70 percent of Mexico's fall/winter white corn production.

Industry sources indicate that while 100 percent of the white corn area in Sinaloa was affected by the freezing temperatures, not all areas are forecasting a total loss. Other sources report that as much as 30 percent of Sinaloa's white corn crop could be lost. Noting that SAGARPA was expecting Sinaloa white corn production to reach 4.532 mmt in the 2010/11 fall/winter planting, this implies a reduction of 1.5 mmt.

Preliminarily, the GOM is expected to replant approximately 170,000 hectares of corn and between 120,000 and 140,000 hectares of sorghum. The corn must be replanted by the end of February, as otherwise, yields would suffer substantially: the harvest would stretch into July and August, and heat stress would reduce yields and thus production. If this area is not replanted by the end of February due to problems with seed delivery or inability to plant wet fields, losses in the worst case could reach 3 mmt. Either way, even if the corn should be replanted quickly, yields are expected to reach no more than 7 mt/ha, versus the normal average yield of corn in Sinaloa of 10.5 mt/ha.

An industry source reported that 70 to 80 percent of the white corn area could be replanted and that the remainder of the cereal grain area could be planted to other crops (e.g., sorghum). This would also imply a 1 to 1.5 million metric ton reduction in MY2010/11 corn production estimates. If these loss estimates are borne out, the total damaged area for the 2010/11 fall/winter white corn crop in Sinaloa could reach approximately 300,000 hectares (Ha) of a total 405,801 already planted.

A major corn milling company estimates that only 1.5 mmt of Sinaloa's white corn was not damaged by the frost, and that from this volume approximately 800,000 mt (53 percent) would be of the quality required by the corn flour industry, while the rest could be used for animal feed. Other sources advised they expect that any Fall/Winter 2010/11 corn that survived the frost or that is produced from re-seeding will be directed to human consumption and that sorghum and other feed grains will be used for animal feed.

Horticulture

Tomato, pepper, cucumber, squash, lettuce, cabbage, and cauliflower production areas were damaged by the cold weather. Industry sources report that horticultural product damage was most severe in open fields, but that shade house facilities experienced damage, as well. One source indicated that nearly the entire open-field tomato crop in Sinaloa has been lost, and stated that packing houses are laying off workers as there will be no fruit to pack.

According to industry sources, citrus trees in eastern and northeastern Mexico that were flowering at the time will experience production loss as the buds were nipped. However, fruit on trees was insulated with the ambient moisture that accompanied the cold weather in Veracruz and Tamaulipas.

Major retailers report difficulty in sourcing product and expect it will become increasingly difficult. However, several retailers report that they are choosing to remain with existing suppliers in lieu of purchasing from new or alternate origins even if they have to pay significantly higher prices.

Government Actions

Due to time restraints, GOM is proposing to producers of white corn to shift lost area to sorghum. In this case, there is no replanting problem and production of these hectares could reach 350,000 to 400,000 mt of sorghum, which could be harvested in June-July.

At the same time, the GOM, through SAGARPA and ASERCA, is seeking to renegotiate with the animal feed industry and livestock producers white corn contracts concluded under the forward-contract purchases program ("*Agricultura por Contrato")*, in order to shift them to the tortilla and corn flour

industries. The livestock producers and animal feed industry could receive in exchange sorghum, with some kind of subsidy. However, SAGARPA has not officially announced how the support mechanism would operate. Reportedly, approximately 2 mmt of domestic white corn was covered by the *Agricultura por Contrato* program for the feed milling sector.

Corn Prices Steady for Now, Horticultural Prices Jumping

The Secretariat of Economy (SE) publishes daily agricultural and certain food product prices as recorded at wholesale markets throughout the country. Even with the cold weather, the prices of white corn and tortillas in Mexico City have remained flat from February 2 to February 9, 2011. Sinaloa-origin white corn remained unchanged at 4 pesos per kilogram and tortilla prices moved from 10.18 pesos to 10.19 pesos per kilogram in Mexico City. Similar moderate trends have been witnessed in other wholesale markets.

Some corn flour millers are negotiating purchases of U.S. yellow corn and will use it to make tortillas (most U.S. white corn is produced under contract and thus is not available on the spot market). Some corn merchandisers, such as Cargill, have advised the tortilla sector that the corn price will increase next March, from 3,500 pesos per mt (roughly U.S. $280/mt) to 5,000 pesos (U.S. $400) FOB. This quote is a rough reflection of current Chicago futures prices plus the basis Chicago-Mexico City.

Horticultural product prices, however, tell a different story, as the cost of products from the affected areas is skyrocketing. Seedless lemons in 20-kilogram packages from Veracruz have gone from an average price of 400 pesos to 600 pesos per kilogram from February 2 to 9, 2011. Sinaloa-origin bell peppers in 12-kilogram boxes went from 90 to 250 pesos during the week and cucumbers in 25-kilogram boxes went from 110 to 210 pesos. Sinaloa-origin salad tomatoes in 13-kilogram boxes went from 90 to 150 pesos and ball tomatoes in 10-kilogram boxes went from 100 to 180 pesos during the week. Sinaloa-origin small and big garbanzo beans increased from 13.8 and 16.5 pesos to 15.5 and 17.5 pesos per kilogram, respectively.

In some instances, similar products from other areas are rising to match the affected market prices even though they did not likely experience the cold weather. For example, Michoacan salad tomatoes in 13-kilogram boxes increased in price from 130 pesos to 200 pesos per kilogram. In other instances, e.g., Zacatecas black beans and Chihuahua pinto beans, prices remain unchanged.

Table 1. Mexico: Planted, Harvested, and Damaged Area of Select Mexican States in Fall/Winter 2009/10 and Value of Agricultural Production in Hectares and Thousands of Pesos

State	Planted Area	Harvested Area	Damaged Area	Value of Ag Production
BAJA CALIFORNIA	144,399	130,164	14,236	4,227,945
CHIHUAHUA	85,361	83,133	2,228	1,179,883
COAHUILA	32,218	30,961	1,257	407,776
DURANGO	26,487	26,411	76	230,541
SINALOA	749,798	731,255	18,542	25,571,233
SONORA	419,786	417,905	1,881	10,871,308
TAMAULIPAS	840,351	815,980	24,371	6,561,794
Area Total	**2,298,399**	**2,235,808**	**62,591**	**49,050,480**

Data as of December 2010 (most recent available)
Source: SAGARPA SIAP

Table 2. Mexico: 2009/10 Fall/Winter Corn Planted, Harvested, and Damaged Area with Production and Yields in Select Mexican States in Hectares and Metric Tons as of December 2010

	Area, in Hectares				
State	**Planted**	**Harvested**	**Damaged**	**Production (MT)**	**Yield (MT/Ha)**
CHIAPAS	109,612	109,512	100	147,347	1.35
CHIHUAHUA	34	20	14	14	0.70
DURANGO	50	50		178	3.56
SINALOA	472,149	472,020	129	4,988,393	10.57
SONORA	30,152	30,121	31	193,799	6.43
TAMAULIPAS	106,684	94,380	12,305	454,043	4.81
All Others	436,420	428,560	7,858	912,956	NA
TOTAL	**1,155,101**	**1,134,663**	**20,437**	**6,696,730**	**5.90**

Source: SAGARPA SIAP

Table 3. Mexico: 2010/11 Fall/Winter Corn Planted, Harvested, and Damaged Area with Production and Yields in Select Mexican States in Hectares and Metric Tons as of December 2010

	Area, in Hectares				
State	**Planted**	**Harvested**	**Damaged**	**Production (MT)**	**Yield (MT/Ha)**
SINALOA	405,801	NA	NA	NA	NA
SONORA	22,631	NA	NA	NA	NA
TAMAULIPAS	2,742	NA	NA	NA	NA
All Others	296,636	NA	504	NA	NA
TOTAL	**727,810**	**NA**	**504**	NA	NA

Source: SAGARPA SIAP

Table 4. Mexico: 2009/10 Fall/Winter Tomato Planted, Harvested, and Damaged Area with Production and Yields in Select Mexican States in Hectares and Metric Tons as of December 2010

	Area, in Hectares				
State	**Planted**	**Harvested**	**Damaged**	**Production (MT)**	**Yield (MT/Ha)**
BAJA CALIFORNIA	267	266	1	17,633	66.29
COAHUILA	24	11	13	545	49.55
SINALOA	14,040	13,774	266	667,559	48.46
SONORA	1,563	1,543	20	45,219	29.31
TAMAULIPAS	766	766	NA	24,522	31.99
All Others	12,455	10,835	1,620	350,059	NA
TOTAL	**29,115**	**27,195**	**1,920**	**1,105,537**	**40.65**

Source: SAGARPA SIAP

Table 5. Mexico: 2010/11 Fall/Winter Tomato Planted, Harvested, and Damaged Area with

Production and Yields in Select Mexican States in Hectares and Metric Tons as of December 2010

	Area, in Hectares				
State	**Planted**	**Harvested**	**Damaged**	**Production (MT)**	**Yield (MT/Ha)**
BAJA CALIFORNIA	152	NA	50	NA	NA
COAHUILA	9	7	NA	325	46.43
SINALOA	12,300	593	NA	29,820	50.29
SONORA	665	NA	NA	NA	NA
TAMAULIPAS	370	NA	NA	NA	NA
All Others	6,225	327	20	8,066	NA
TOTAL	**19,721**	**927**	**70**	**38,211**	**41.22**

Source: SAGARPA SIAP