2018/2019 Crop Overview
2018/2019 Pecan Market

❖ Current supply
❖ Short-term market impactors
❖ Long-term market impactors
❖ Industry initiatives
❖ Red Flags
### Product available for sale by US (MT)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018 (est.)</th>
<th>2019 (est.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Year Carry-In</td>
<td>70,365.86</td>
<td>81,765.21</td>
<td>89,676.13</td>
</tr>
<tr>
<td>US Crop</td>
<td>133,289.49</td>
<td>100,335.66</td>
<td>124,739.18</td>
</tr>
<tr>
<td>Mexican Imports</td>
<td>114,894.60</td>
<td>125,567.77</td>
<td>113,399.26</td>
</tr>
<tr>
<td>Total Supply</td>
<td>318,549.95</td>
<td>307,668.64</td>
<td>327,815.57</td>
</tr>
<tr>
<td>Carry-out</td>
<td>81,765.21</td>
<td>89,676.13</td>
<td>68,039.55</td>
</tr>
<tr>
<td>Consumption</td>
<td>236,784.74</td>
<td>217,992.51</td>
<td>259,775.02</td>
</tr>
</tbody>
</table>

Note: Figures are expressed in metric tons, inshell basis, and do not take into account US Inshell sent to Mexico for shelling. **Carry-in meats are converted assuming a 44% yield. Mexican import meats are converted assuming a 50% yield.** Data Sources: USDA NASS & FAS, USDA Market News & Nature’s Finest Foods
US Pecan Exports (MT)

Source: USDA Foreign Ag Service
US Consumption vs Total Exports

Source: Foreign Ag Service & Nature’s Finest Foods

Crop Year

Inshell Equivalent (Metric Tons)

Consumption (MT)  Total Exports (MT)

Source: Foreign Ag Service & Nature’s Finest Foods
## World Supply - Inshell Metric Tons

<table>
<thead>
<tr>
<th>Country</th>
<th>2017</th>
<th>2018 (est.)</th>
<th>2019 (est.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>133,289.49</td>
<td>100,335.66</td>
<td>124,739.18</td>
</tr>
<tr>
<td>Mexico</td>
<td>146,169.77</td>
<td>162,499.07</td>
<td>146,003.81</td>
</tr>
<tr>
<td>South Africa</td>
<td>16,500.00</td>
<td>18,200.00</td>
<td>19,000.00</td>
</tr>
<tr>
<td>Australia</td>
<td>3,500.00</td>
<td>2,000.00</td>
<td>3,400.00</td>
</tr>
<tr>
<td>US Carry-In</td>
<td>70,365.86</td>
<td>81,765.21</td>
<td>89,676.13</td>
</tr>
<tr>
<td><strong>WORLD TOTAL</strong></td>
<td><strong>369,825.12</strong></td>
<td><strong>364,799.94</strong></td>
<td><strong>382,819.12</strong></td>
</tr>
</tbody>
</table>

*Note: World total does not include China or other emerging countries

2018 Market Impactors

- Heavy rains throughout US Pecan growing region
- US – China Trade Dispute
- China’s over-purchase on inventory in 2017
- Production increases in South Africa and Mexico
### Mexican Exports to US (MT)

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Inshell Equivalent (Metric Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.00</td>
</tr>
<tr>
<td>2001</td>
<td>20,000.00</td>
</tr>
<tr>
<td>2002</td>
<td>40,000.00</td>
</tr>
<tr>
<td>2003</td>
<td>60,000.00</td>
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<tr>
<td>2004</td>
<td>80,000.00</td>
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<tr>
<td>2005</td>
<td>100,000.00</td>
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<tr>
<td>2006</td>
<td>120,000.00</td>
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<tr>
<td>2007</td>
<td>140,000.00</td>
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<tr>
<td>2008</td>
<td>200,000.00</td>
</tr>
<tr>
<td>2009</td>
<td>200,000.00 (est)</td>
</tr>
<tr>
<td>2010</td>
<td>200,000.00 (est)</td>
</tr>
<tr>
<td>2011</td>
<td>200,000.00 (est)</td>
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<tr>
<td>2012</td>
<td>200,000.00 (est)</td>
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<tr>
<td>2013</td>
<td>200,000.00 (est)</td>
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<td>2014</td>
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<td>2015</td>
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<td>2016</td>
<td>200,000.00 (est)</td>
</tr>
<tr>
<td>2017</td>
<td>200,000.00 (est)</td>
</tr>
<tr>
<td>2018</td>
<td>200,000.00 (est)</td>
</tr>
<tr>
<td>2019</td>
<td>200,000.00 (est)</td>
</tr>
</tbody>
</table>

Source: Foreign Ag Service, Nature’s Finest Foods, Ltd.
# Breakdown of Mexican Exports to US (MT)

<table>
<thead>
<tr>
<th></th>
<th>April 14, 2017</th>
<th>April 14, 2018</th>
<th>April 14, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inshell</strong></td>
<td>26,877.29</td>
<td>23,135.64</td>
<td>34,590.52</td>
</tr>
<tr>
<td><strong>Shelled Kernels</strong></td>
<td>30,402.43</td>
<td>27,459.69</td>
<td>34,824.96</td>
</tr>
<tr>
<td><strong>Converted</strong></td>
<td>87,682.15</td>
<td>78,055.02</td>
<td>104,240.44</td>
</tr>
<tr>
<td><strong>7/31 Crop Year Final</strong></td>
<td>106,869.45</td>
<td>105,812.24</td>
<td>125,567.88*</td>
</tr>
</tbody>
</table>

*NOTE: NFF Estimate of Gross Exports assuming 50% conversion of meats to inshell

Source: USDA Federal State Market News
Long Term Market Impactors

❖ Continued production increases in Mexico and South Africa (including new plantings in Zambia, Namibia & Zimbabwe).

❖ Cheap Labor and minimal regulatory burden in Mexico, S. Africa, China and other developing pecan producers

❖ Mexico’s ability to meet GFSI Food Safety Standards and shift to selling directly to US Market

❖ Additional Plantings in China

❖ Major US firms changing payment terms, conditions of contracting, etc.
Pecan production
United States vs Mexico

Crop Year

Source: USDA NASS, Foreign Ag Service, Mexican Agriculture Information Service & Nature's Finest Foods
### Pecan production
#### United States vs Mexico

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>US Crop (MT)</th>
<th>Mexico (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>0.00</td>
<td>40,000.00</td>
</tr>
<tr>
<td>2009</td>
<td>0.00</td>
<td>40,000.00</td>
</tr>
<tr>
<td>2010</td>
<td>0.00</td>
<td>60,000.00</td>
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<tr>
<td>2011</td>
<td>0.00</td>
<td>80,000.00</td>
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<td>2012</td>
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<td>100,000.00</td>
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<tr>
<td>2013</td>
<td>0.00</td>
<td>120,000.00</td>
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<tr>
<td>2014</td>
<td>0.00</td>
<td>140,000.00</td>
</tr>
<tr>
<td>2015</td>
<td>0.00</td>
<td>160,000.00</td>
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<tr>
<td>2016</td>
<td>0.00</td>
<td>180,000.00</td>
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<tr>
<td>2017</td>
<td>0.00</td>
<td>200,000.00</td>
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<tr>
<td>2018 (est)</td>
<td>0.00</td>
<td>220,000.00</td>
</tr>
<tr>
<td>2019 (est)</td>
<td>0.00</td>
<td>240,000.00</td>
</tr>
</tbody>
</table>

Source: USDA NASS, Foreign Ag Service, Mexican Agriculture Information Service & Nature's Finest Foods
South Africa: Projected Pecan production

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Inshell Equivalent (Metric Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.00</td>
</tr>
<tr>
<td>2007</td>
<td>5,000.00</td>
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<tr>
<td>2008</td>
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<td>2011</td>
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<td>2012</td>
<td>30,000.00</td>
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<td>35,000.00</td>
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<td>2017</td>
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<tr>
<td>2018</td>
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<tr>
<td>2019 (est)</td>
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</tr>
<tr>
<td>2020 (est)</td>
<td></td>
</tr>
<tr>
<td>2021 (est)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Golden Peanut & Tree Nut, SA & Nature’s Finest Foods
Price paid to US Grower by China

Dollars/kg Paid to Grower

Crop Year

Source: Foreign Ag Service
Price paid to US Grower by Sheller’s

Source: USDA NASS
Price paid to Sheller for Jr Mammoth Halves

Source: NFF Estimate

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Dollars /KG Paid to Sheller</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>$4.96</td>
</tr>
<tr>
<td>2002</td>
<td>$4.96</td>
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<td>2003</td>
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<td>2008</td>
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<td>2015</td>
<td>$18.00</td>
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<tr>
<td>2016</td>
<td>$13.89</td>
</tr>
<tr>
<td>2017</td>
<td>$13.89</td>
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</tbody>
</table>

Source: NFF Estimate
Price paid to Grower for Improved Inshell

Crop Year

Source: USDA NASS
Price paid to Grower for Improved Inshell

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Price Paid to Grower</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0.00</td>
</tr>
<tr>
<td>2002</td>
<td>1.00</td>
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<tr>
<td>2003</td>
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<tr>
<td>2016</td>
<td>2008</td>
</tr>
<tr>
<td>2017</td>
<td>2009</td>
</tr>
</tbody>
</table>

Inshell: Price/KG Paid by China (incl: China/HK/VN)

Average Inshell Price per KG - Improved

Source: USDA NASS
US Supply Vs Consumption & Price

National Pecan Sheller’s Association Initiatives

❖ NPSA Shelf Life Study (partially funded by APC)
❖ NPSA Chef Summits (partially funded by APC)
❖ Development of shelled kernel standards (sent to APC)
❖ Certification Process for all inshell coming to the US
American Pecan Council Initiatives

❖ APC Marketing/Launch of new Brand – *American Pecans: The Original Supernut*
❖ APC Launch of Annual and Monthly Industry Statistical Reports
❖ APC contracting of The Boston Consulting Group to develop an industry strategic plan
❖ Development and implementation of inshell & kernel standards
❖ APC Acreage Survey
Growing costs

Profitability at market price of $\textbf{3.00}$ per in-shell lb.
- Approx. 2017 max price

• Approx. 2017 max price

Profitability at market price of $\textbf{1.75}$ per in-shell lb.
- Approx. 10-year low (ex. recession; inflation-adjusted)

*NOTE: 1. Price / in-shell lb. paid by China of ~$2.93 in 2017
2. Inflation-adjusted price of US average in-shell of $1.73 in 2012
3. "West" includes West Texas

Source: Nature's Finest Foods; USDA; UC Davis; UGA; Market interviews

Loss of China demand, increasing in-shell supply, and other factors could lower in-shell prices

Specific MX grower economics TBD, though structurally advantaged given lower costs
Production Expense: Pecans vs other tree nuts

Regardless of region, pecans generally cost more to grow vs. other tree nuts given lower yield per acre.

<table>
<thead>
<tr>
<th></th>
<th>Pecans</th>
<th>Almonds</th>
<th>Walnuts</th>
<th>Pistachios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growing cost ($/acre)</strong></td>
<td>~2,000</td>
<td>~2,500</td>
<td>~3,300 to 4,900</td>
<td>~3,200 to 3,750</td>
</tr>
<tr>
<td><strong>In-shell yield (lbs/acre)</strong></td>
<td>~1,000</td>
<td>~2,000</td>
<td>-</td>
<td>~5,000 to 6,000</td>
</tr>
<tr>
<td><strong>% meat</strong></td>
<td>~45%</td>
<td>~55%</td>
<td>-</td>
<td>43.5%¹</td>
</tr>
<tr>
<td><strong>Meat yield (lbs/acre)</strong></td>
<td>~450</td>
<td>~1,100</td>
<td>~2,200 to 3,000</td>
<td>~2,200 to 2,600</td>
</tr>
<tr>
<td><strong>Meat growing cost ($/lb)</strong></td>
<td>~$4.40</td>
<td>~$2.30</td>
<td>~$1.50 to $1.70</td>
<td>~$1.40 to 1.45</td>
</tr>
</tbody>
</table>

¹ Based on USDA ERS “Fruit and Nut Tree Yearbook” average walnut kernel yield

Cost per pound highly variable—both across and within regions—given differences in scale, yield, weather, alternate bearing seasons, etc.

Note: Growing cost per acre excludes amortization of land and tree/establishment investments. Almond figures reported in meat yield basis only.

Source: Almond Board; UC Davis; USDA; market interviews
Mexican Shellers vs US Shellers

Ranges of total shelling costs ($ / meat lb.)

Mexican shellers benefit from lower costs.

With right processes and/or investments and lower transport costs, some US Shellers are competitive with MX Shellers.

Directional cost estimates; excludes carrying / transportation costs & mill loss

Source: Market interviews
Red Flags

- Lack of Growth in Chinese Consumption
- New Production in China, Argentina and elsewhere
- Uncommitted Inventory
Projected Supply Increases from S. Africa & China,

Annual pecan production across top markets

<table>
<thead>
<tr>
<th>Year</th>
<th>US (Millions)</th>
<th>Mexico (Millions)</th>
<th>South Africa (Millions)</th>
<th>Others (Millions)</th>
<th>Total (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>324 48%</td>
<td>9 ~1%</td>
<td>36 5%</td>
<td>8 9%</td>
<td>360 680M lbs</td>
</tr>
<tr>
<td>2022</td>
<td>411 43%</td>
<td>10 1%</td>
<td>88 9%</td>
<td>101 10%</td>
<td>949M lbs</td>
</tr>
<tr>
<td>2027</td>
<td>516 43%</td>
<td>116 10%</td>
<td>348 37%</td>
<td>403 34%</td>
<td>1.2B lbs</td>
</tr>
</tbody>
</table>

- **China** may produce up to 5-10% of global pecan supply; may affect U.S. imports
- **South Africa** to continue rapid growth, comprise >10% of world supply in ten years - well suited to cater to Chinese demand
- Must stimulate demand to capture new supply and diversify global demand beyond China

Base case estimate of supply; sources of supply growth may vary based on actual productivity of S. Africa, China, & others

Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenuez; SAPPA; Industry Interviews; Stakeholder survey

Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as directional approximation
US Exports to China vs S. African Production

Crop Year

Source: USDA Foreign Ag Service, Golden Peanut & Tree Nut – SA, Nature’s Finest Foods, Ltd.
US Exports to China vs S. African Production

Crop Year

Source: USDA Foreign Ag Service, Golden Peanut & Tree Nut – SA, Nature’s Finest Foods, Ltd.
Cold Storage Holdings - NASS, APC & Committed Inventory

Month

Inshell Equivalent (Metric Tons)

2018/2019

Source: USDA NASS, American Pecan Council
Committed Inventory
In Cold Storage

Source: American Pecan Council
Questions?