

# California DURUM

## 2019 CROP QUALITY

Sacramento and San Joaquin Valleys

### Milling, Semolina, and Pasta Characteristics of Durum Varieties

| WHEAT<br>Location               | Desert King HP<br>Sac Valley |         | Platinum<br>San Joaquin Valley |         | Desert King HP<br>San Joaquin Valley |        |
|---------------------------------|------------------------------|---------|--------------------------------|---------|--------------------------------------|--------|
|                                 | 2019                         | 2018    | 2019                           | 2018    | 2019                                 | 2018   |
|                                 | Protein (12% MB)             | 11.1    | 12.2                           | 12.8    | 10.4                                 | 13.0   |
| Ash (12% MB)                    | 1.83                         | 1.63    | 1.77                           | 1.80    | 1.83                                 | 1.70   |
| Moisture                        | 9.1                          | 8.0     | 7.7                            | 6.5     | 6.8                                  | 7.1    |
| Falling Number (sec)            | 515                          | 592     | 405                            | 535     | 684                                  | 627    |
| Micro Sedimentation (CC)        | 58                           | 59      | 60                             | 50      | 56                                   | 61     |
| <b>Test Weight</b>              |                              |         |                                |         |                                      |        |
| lb/bu                           | 62.8                         | 63.2    | 62.8                           | 64.2    | 61.2                                 | 62.6   |
| kg/hl                           | 81.7                         | 82.3    | 81.7                           | 83.6    | 79.7                                 | 81.5   |
| 1000 Kernel Weight (g)          | 42.5                         | 44.3    | 44.1                           | 40.9    | 39.8                                 | 45.7   |
| <b>Kernel Size Distribution</b> |                              |         |                                |         |                                      |        |
| Large/Medium/Small              | 87/13/0                      | 88/12/0 | 90/10/0                        | 85/15/0 | 84/16/0                              | 91/9/0 |
| <b>SEMOLINA</b>                 |                              |         |                                |         |                                      |        |
| Lab Mill Extraction (%)         | 75.4                         | 76.6    | 75.8                           | 75.9    | 75.8                                 | 76.9   |
| Semolina Extraction (%)         | 72.5                         | 72.7    | 70.4                           | 70.9    | 71.4                                 | 72.6   |
| Protein (14% MB)                | 10.2                         | 11.0    | 11.6                           | 8.6     | 12.1                                 | 12.8   |
| Ash (14% MB)                    | 0.88                         | 0.80    | 0.85                           | 0.91    | 0.91                                 | 0.79   |
| Specks (no/10 sp in)            | 26                           | 28      | 29                             | 25      | 24                                   | 20     |
| Wet Gluten (14% MB)             | 27.9                         | 28.2    | 31.1                           | 27.1    | 33.7                                 | 33.9   |
| Gluten Index                    | 74                           | 80      | 86                             | 94      | 75                                   | 69     |
| Color 'b' value                 | 29                           | 30      | 28                             | 30      | 28                                   | 28     |
| <b>MIXOGRAPH</b>                |                              |         |                                |         |                                      |        |
| Absorption%                     | 59.3                         | 60.5    | 61.1                           | 60.5    | 61.2                                 | 62.6   |
| Peak Time (min)                 | 3.4                          | 2.9     | 3.6                            | 3.8     | 3.3                                  | 2.9    |
| Peak Height (mu)                | 4.6                          | 5.2     | 5.5                            | 5.1     | 5.3                                  | 6.1    |
| MT Score (1-8)                  | 8                            | 8       | 7                              | 8       | 7                                    | 8      |
| <b>ALVEOGRAPH</b>               |                              |         |                                |         |                                      |        |
| P (mm)                          | 112                          | 102     | 100                            | 86      | 109                                  | 112    |
| L (mm)                          | 36                           | 48      | 43                             | 68      | 43                                   | 69     |
| P/L Ratio                       | 3.3                          | 2.2     | 2.4                            | 1.3     | 2.7                                  | 1.7    |
| W (10 <sup>-4</sup> joules)     | 169.1                        | 171.5   | 182.5                          | 196.0   | 189.2                                | 248.0  |
| <b>PASTA</b>                    |                              |         |                                |         |                                      |        |
| Color L                         | 57.5                         | 58.6    | 57.3                           | 57.9    | 57.8                                 | 59.0   |
| a                               | 0.7                          | 0.4     | -0.1                           | 1.0     | 0.3                                  | 0.3    |
| b                               | 40.3                         | 42.2    | 40.7                           | 39.8    | 41.8                                 | 41.9   |
| Color Score                     | 9.0                          | 9.5     | 9.0                            | 8.8     | 9.5                                  | 9.5    |
| Cooked weight (gm)              | 29.3                         | 30.0    | 30.1                           | 29.6    | 28.9                                 | 29.5   |
| Cooking Loss (%)                | 5.6                          | 5.7     | 5.8                            | 6.5     | 5.5                                  | 5.6    |
| Cooked Firmness (g cm)          | 5.9                          | 6.2     | 6.3                            | 5.5     | 7.1                                  | 7.0    |

Pasta and semolina color - Minolta Chromameter Model CR-200. Weather, soils, and cultural practices can influence the quality of all varieties between years and of particular lots of any one variety. Wheat and semolina protein - Leco Combustion Nitrogen Analyzer Model TruSpec. 2019 durum wheat samples were milled on a Modified Chopin CD2 mill. Extraction rates are calculated against total products on an "as is" moisture basis. A correction factor was used to adjust Lab Mill Extraction (%) and Semolina Extraction (%) for 2019.