2015 Sorghum Harvest and Export Quality Reports – Comparison

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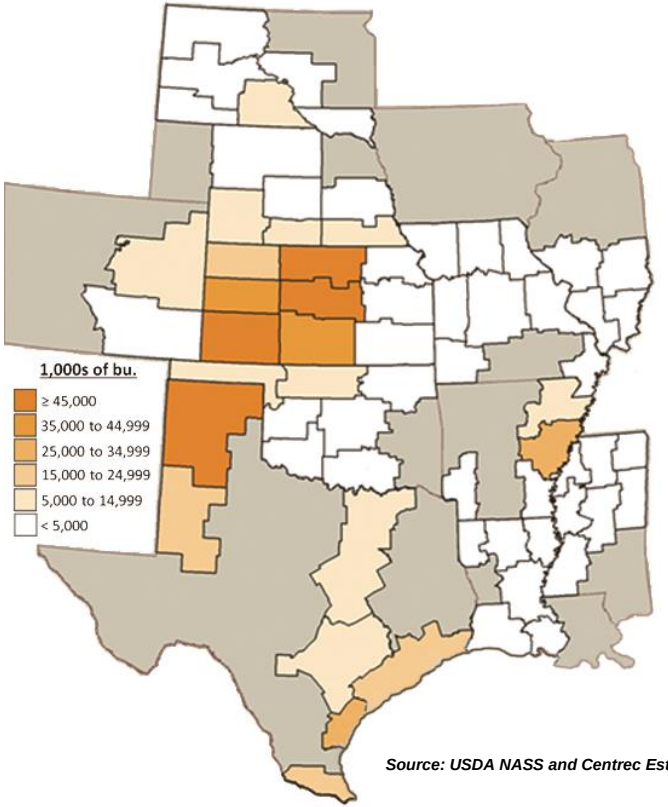
Developing markets. >> Enabling trade. >> Improving lives.

U.S. Production by ASD (2015P)

The geographic areas included in the Harvest sampling area include the highest sorghum-producing regions in the United States

This map represents projected 2015 sorghum production by USDA Agricultural Statistical District (ASD) and was used to allocate the 2015 sampling



Source: USDA NASS and Centrec Estimates

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Harvest and Export Cargo Report

Harvest
U.S. Aggregate
Plus
Two Harvest Areas

Export Cargo
U.S. Aggregate
Plus
Two Export Outlets

207 samples

Late Harvest

Early Harvest

182 samples

Texas

NOLA

Quality across key production areas

Export quality early in marketing year

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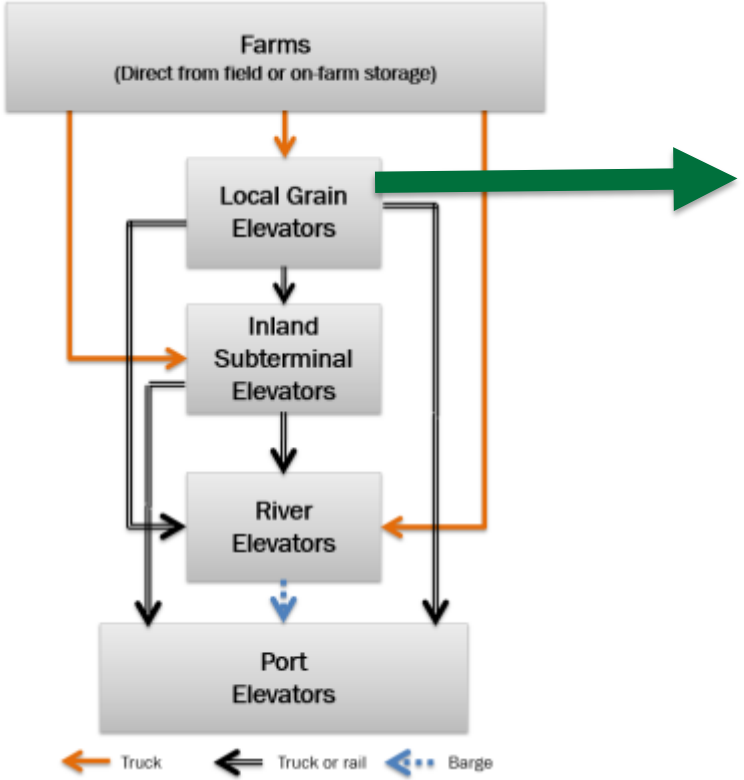
USGC Quality Sampling



Harvest Sampling

- Initial levels and variability of quality characteristics across the diverse geographic regions
- Inbound, unblended commodity samples from local elevators

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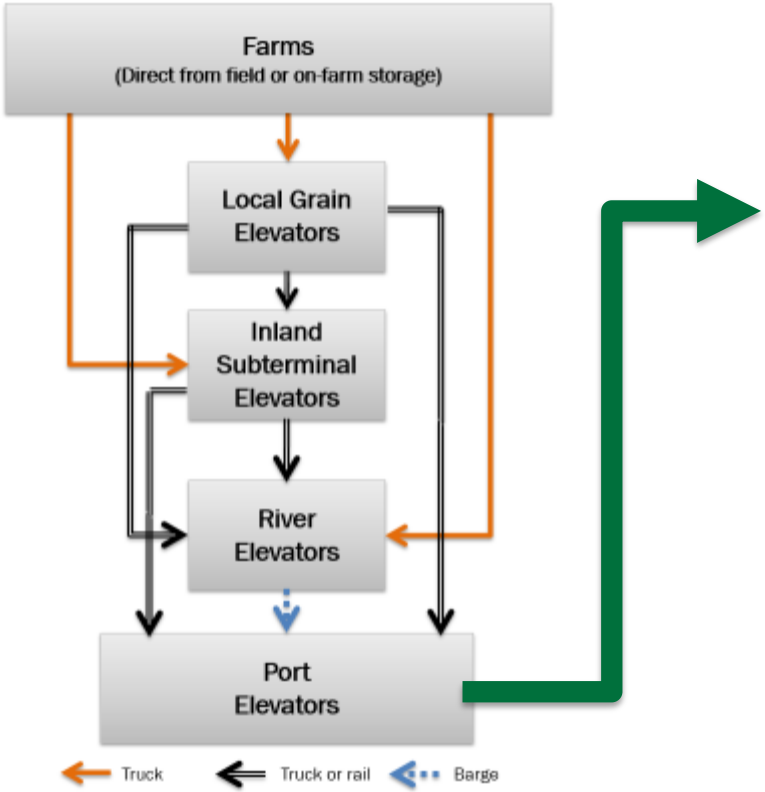
USGC Quality Sampling



Export Sampling

- Initial levels and variability of early export quality at ports
- Commodity sorghum samples collected by USDA at key export outlets

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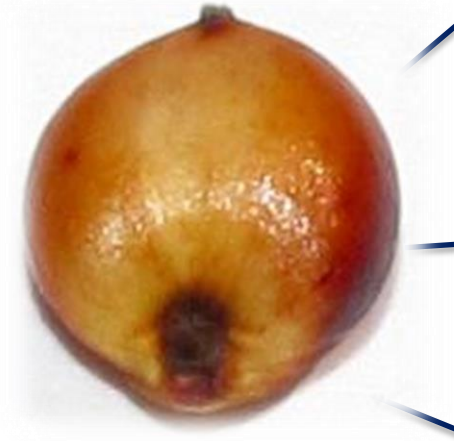
Grade Factors and Moisture at Harvest

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Test Weight (lb/bu)	207	58.9	1.68	46.1	62.5
Test Weight (kg/hl)	207	75.9	2.16	59.3	80.4
BNFM (%)	207	1.7	0.93	0.0	6.7
Foreign Material (%)	207	0.6	0.41	0.0	4.8
Total Damage (%)	207	0.1	0.13	0.0	5.7
Heat Damage (%)	207	0.0	0.00	0.0	0.0
Moisture (%)	207	14.1	1.19	10.1	17.9

Grade Factors and Moisture at Export

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Test Weight (lb/bu)	182	59.0	0.75	56.2	60.5
Test Weight (kg/hl)	182	76.0	0.97	72.3	77.9
BNFM (%)	182	1.9	0.52	1.0	4.6
Foreign Material (%)	182	0.9	0.39	0.1	3.4
Total Damage (%)	182	0.5	0.33	0.0	2.1
Heat Damage (%)	182	0.0	0.00	0.0	0.0
Moisture (%)	182	13.8	0.34	12.3	14.6

Sorghum Chemical Composition



Protein
- Important for poultry and livestock feeding
- Supplies essential amino acids

Starch
- Important source of metabolizable energy and substrates

Oil
- Supplies energy and fatty acids
- Important co-product of value-added processing

Influenced by genetics, crop yields, weather and available nitrogen during the growing season

Influenced by genetics, weather and crop yields

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Chemical Composition Factors at Harvest

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Protein (Dry Basis %)	207	10.9	1.02	6.8	14.1
Starch (Dry Basis %)	207	73.2	0.80	68.7	75.6
Oil (Dry Basis %)	207	4.5	0.27	3.0	5.1

Chemical Composition Factors at Export

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Protein (Dry Basis %)	182	10.8	0.51	9.7	12.6
Starch (Dry Basis %)	182	73.0	0.38	71.4	75.0
Oil (Dry Basis %)	182	4.5	0.13	3.7	4.9

Physical Factors at Harvest

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Kernel Diameter (mm)	207	2.53	0.09	2.18	2.90
TKW (g)	207	26.30	2.00	19.49	34.66
Kernel Volume (mm^3)	207	19.34	1.44	14.31	25.40
True Density (g/cm^3)	207	1.359	0.013	1.295	1.402
Kernel Hardness Index	207	71.0	6.2	37.1	91.5

Physical Factors at Export

	No. of Samples	Avg.	Std. Dev.	Min.	Max.
Kernel Diameter (mm)	182	2.60	0.04	2.47	2.71
TKW (g)	182	27.57	0.85	24.28	30.02
Kernel Volume (mm^3)	182	20.28	0.66	17.91	22.12
True Density (g/cm^3)	182	1.360	0.012	1.333	1.496
Kernel Hardness Index	182	71.3	2.3	55.6	79.8

Mycotoxins and Tannin

Aflatoxins

- All the harvest samples had no detectable levels (≤5 ppb) of aflatoxins
- 96.2% of the export samples had no detectable levels (≤5 ppb) of aflatoxins and below the FDA action level of 20 ppb

DON

- All harvest and export samples tested below the FDA advisory level of 5 ppm

Tannin

- Sorghum harvest and export samples were tannin-free