

Veggie Tales: Stories from the World of Agricultural Data

Nemo Semret
CTO, Gro Intelligence



What We Do

Gro Intelligence structures the world's agricultural data, transforming it into searchable information and powerful analytics.

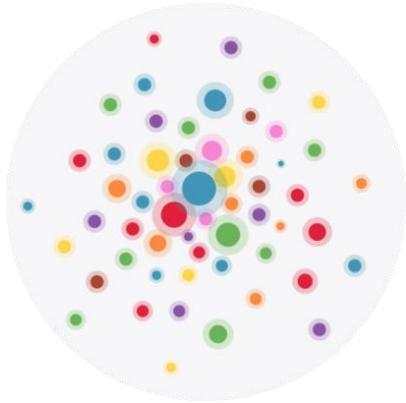
Intelligence at Scale

Our flagship product eliminates the need for teams of experts and specialized technical software to answer questions around global food and agriculture.

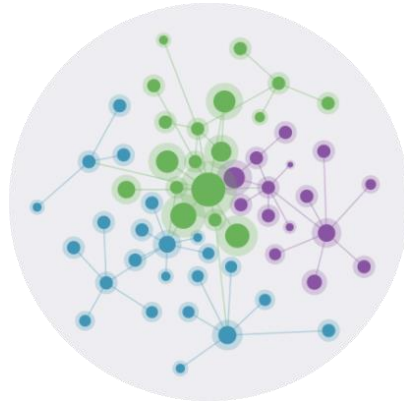
We enable data discovery and access to predictive modeling at a scale never possible before.



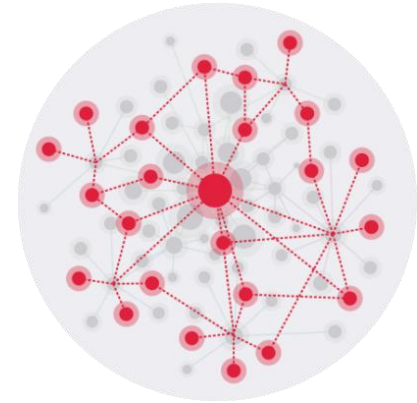
From Disparate to Connected



Disparate, unformatted data points from a myriad of sources are brought together into one place.



These points are normalized to Gro's own ontology (or classification system) and connected to each other.

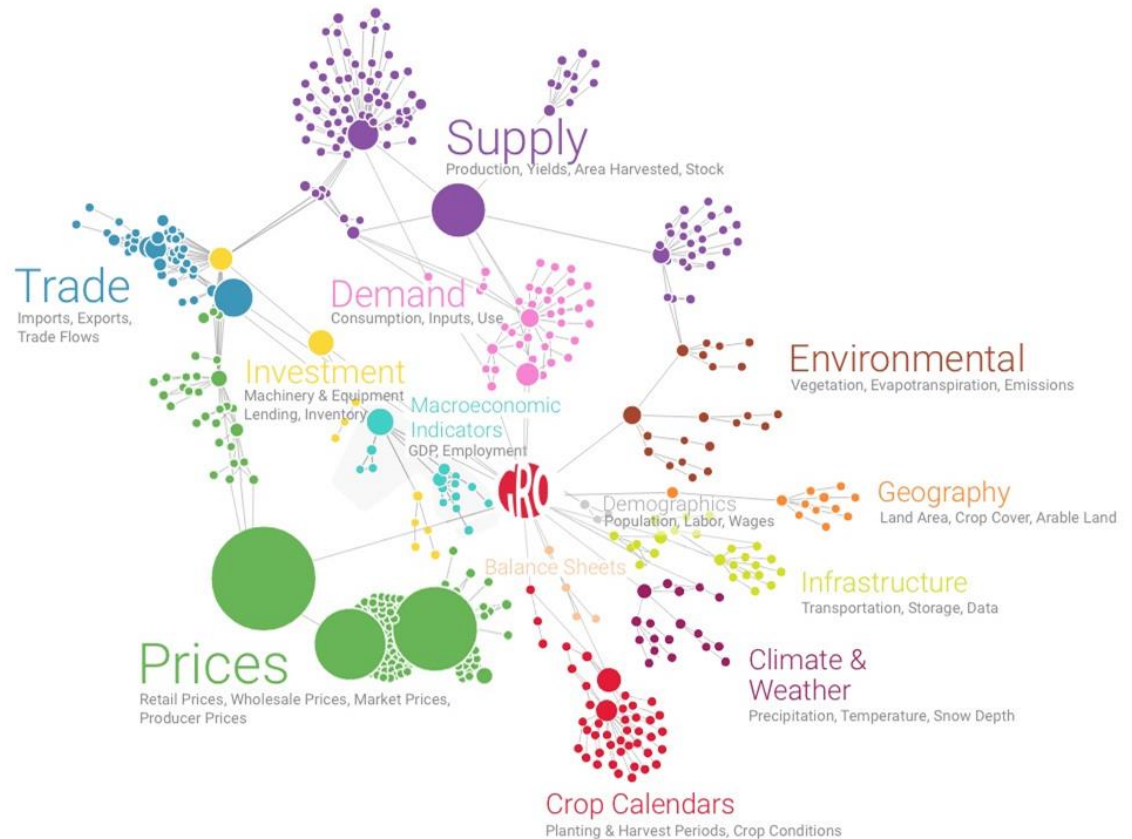


New insights and richer data lead to a more comprehensive picture of the world of agriculture.

Gro's Ontology

Gro has designed its own ontology that organizes the world's fragmented food and agricultural information. All sources are classified using this ontology.

Sources include government agencies, satellites, international trade organizations, NGOs, and other various types of data providers.



Agriculture in the Media

Maize shortage sparks fears of high flour prices

By **Citizen Reporter**, Citizen Digital
Published on 22 June 2016

As drought hits corn, Tanzania cooks up a sweet potato fix

By Kizito Makoye and Beatrice Rabachi/Reuters on Sep 8, 2015 at 8:22 a.m.

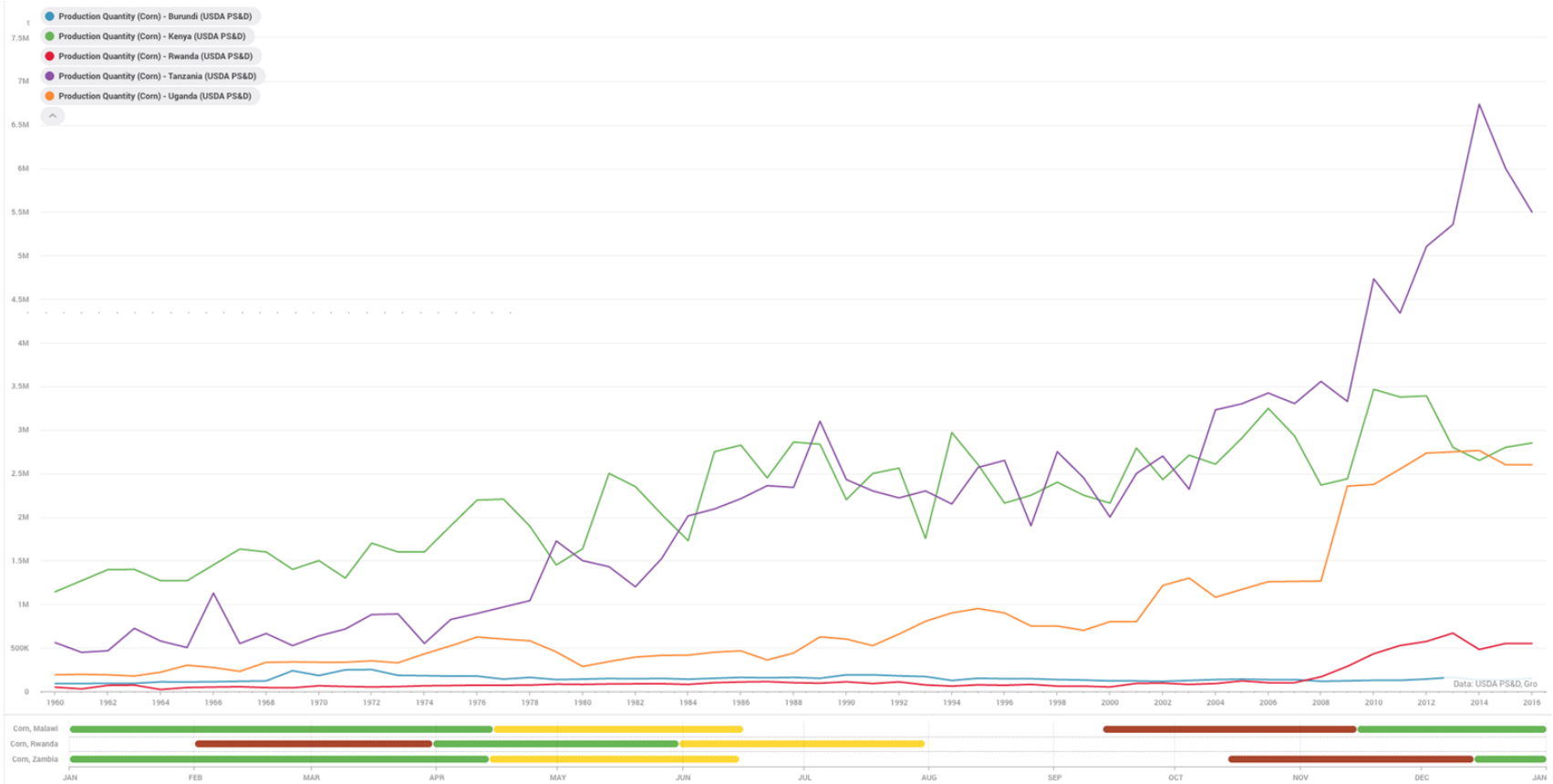


"The Tanzanian maize has just started to come in to the market and I just want to say that we don't bring that maize in, the traders do. We see a tightness of supply and I don't know where prices are going to end up," Mr Hutchison said.

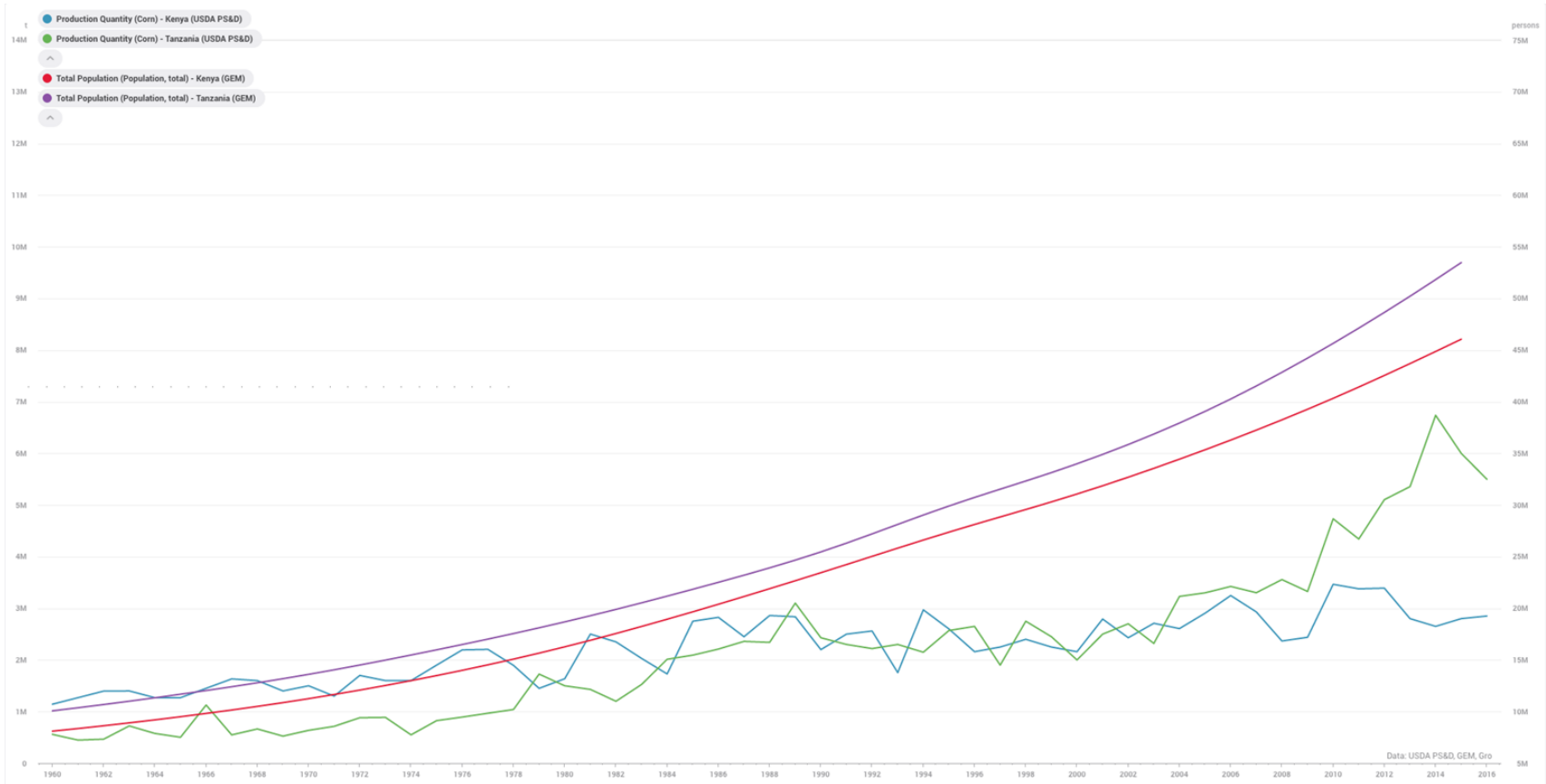
Tanzania's Corn Production After Its 2016 Drought



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Tanzania's Corn Production After Its 2016 Drought

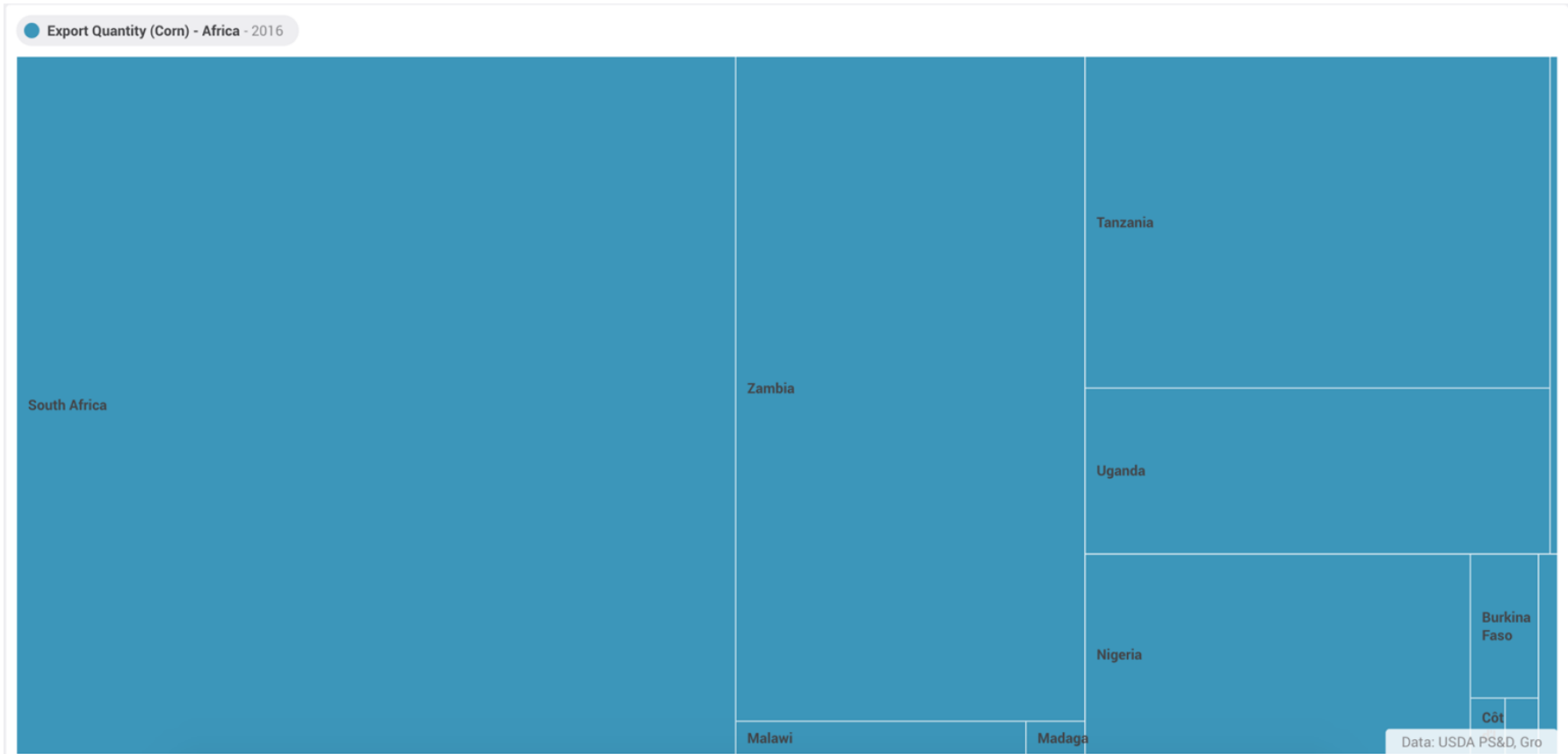


Tanzania's Corn Production After Its 2016 Drought

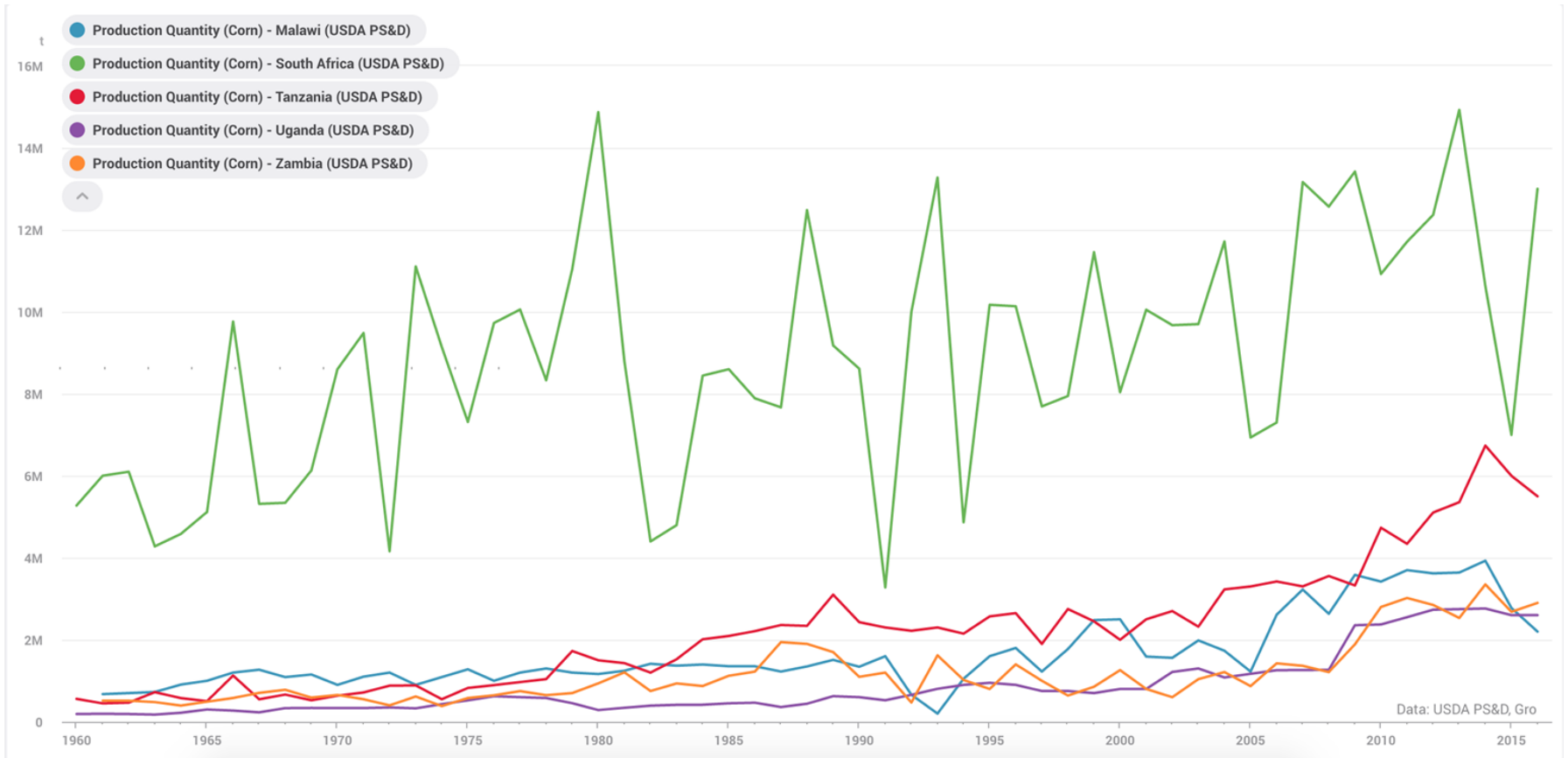
● Export Quantity (Corn) - Africa - 2002



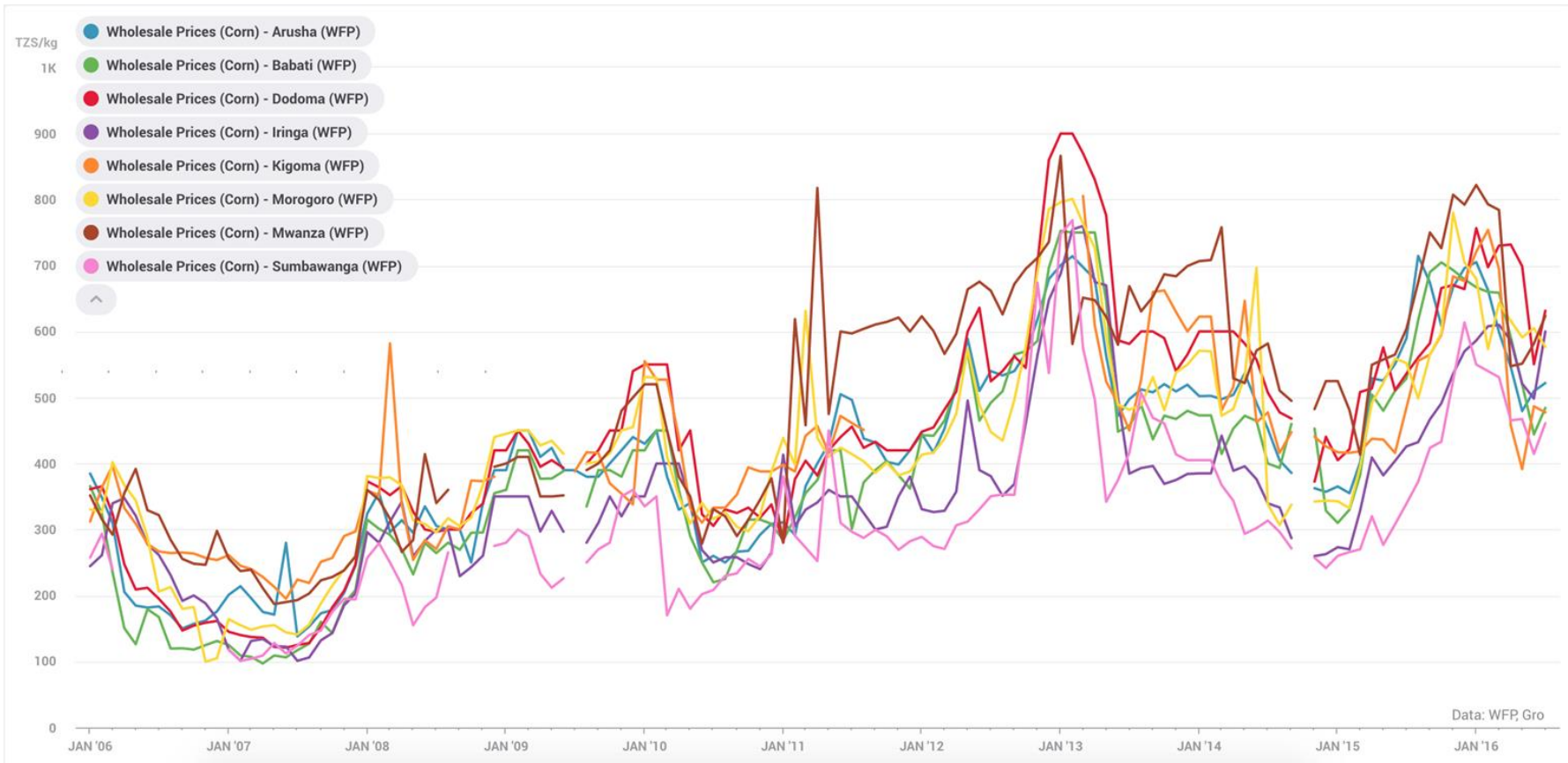
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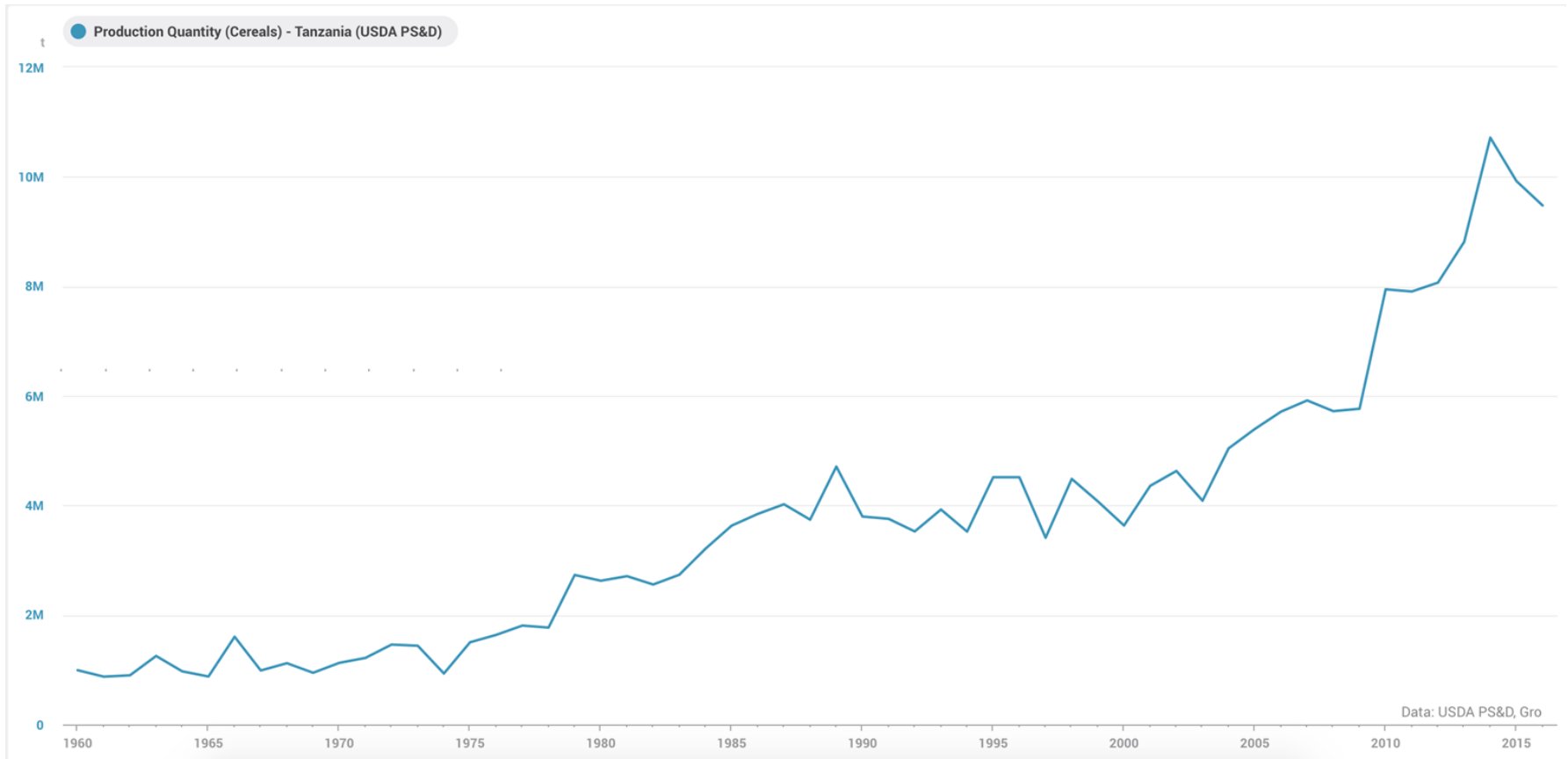
Tanzania's Corn Production After Its 2016 Drought



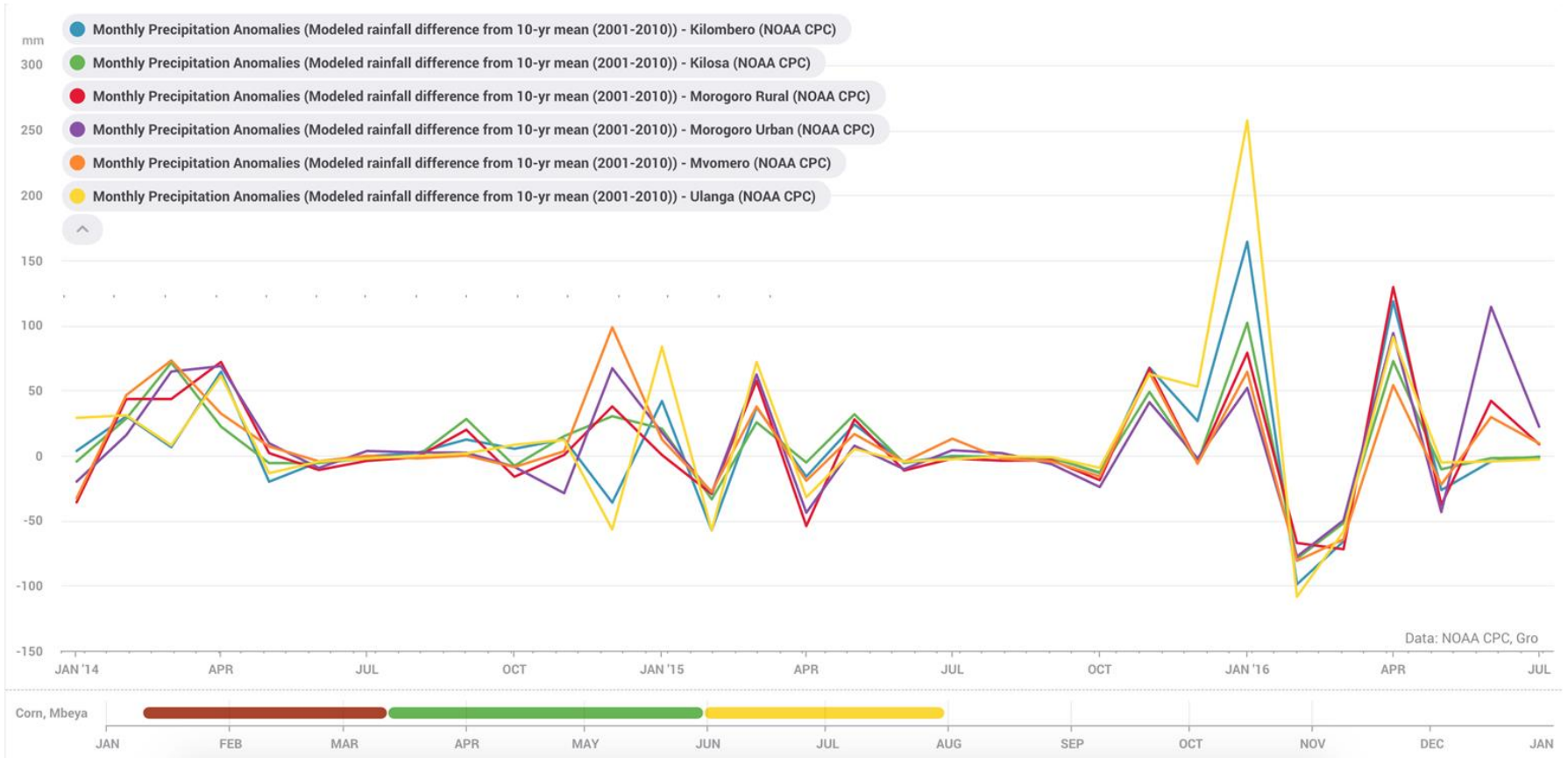
Tanzania's Corn Production After Its 2016 Drought



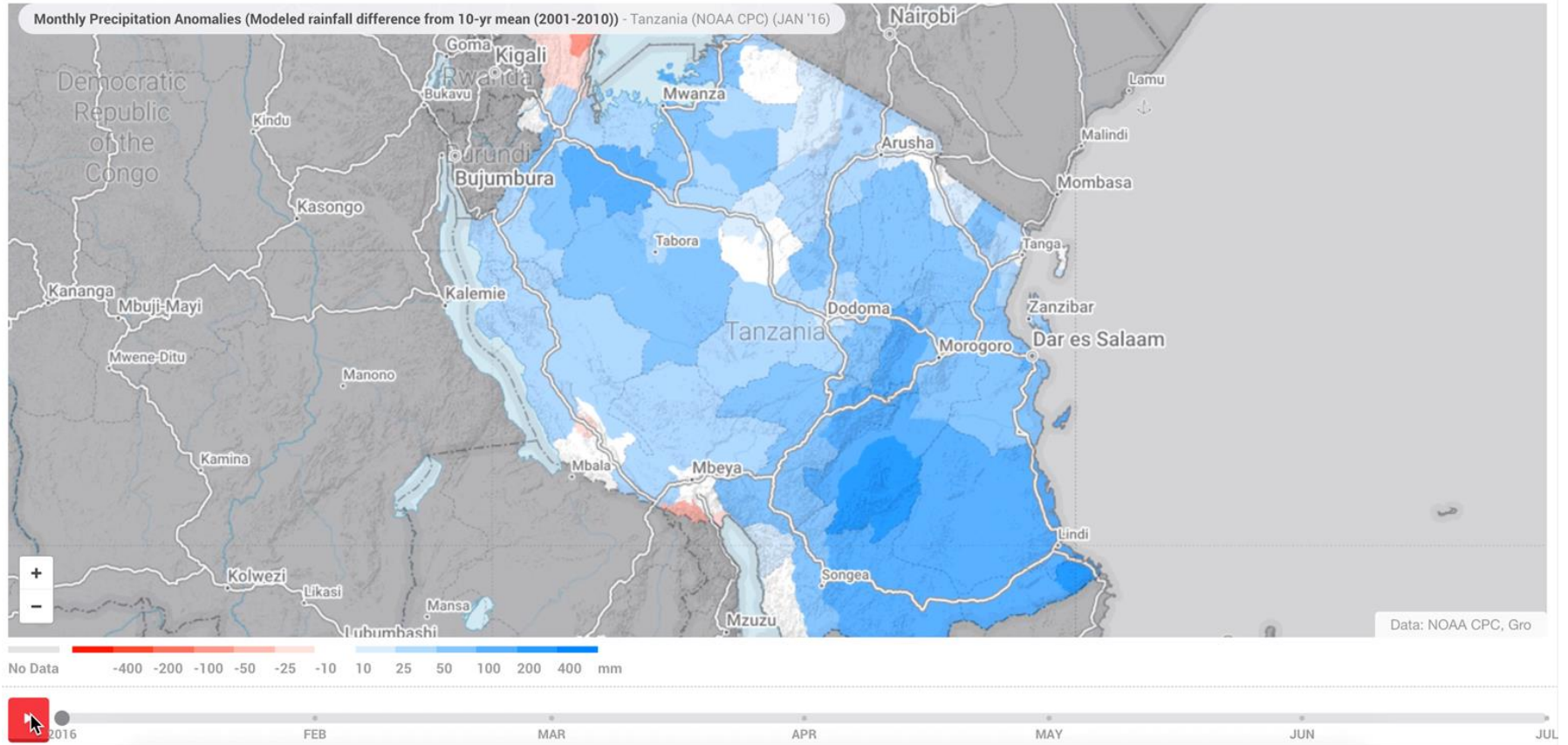
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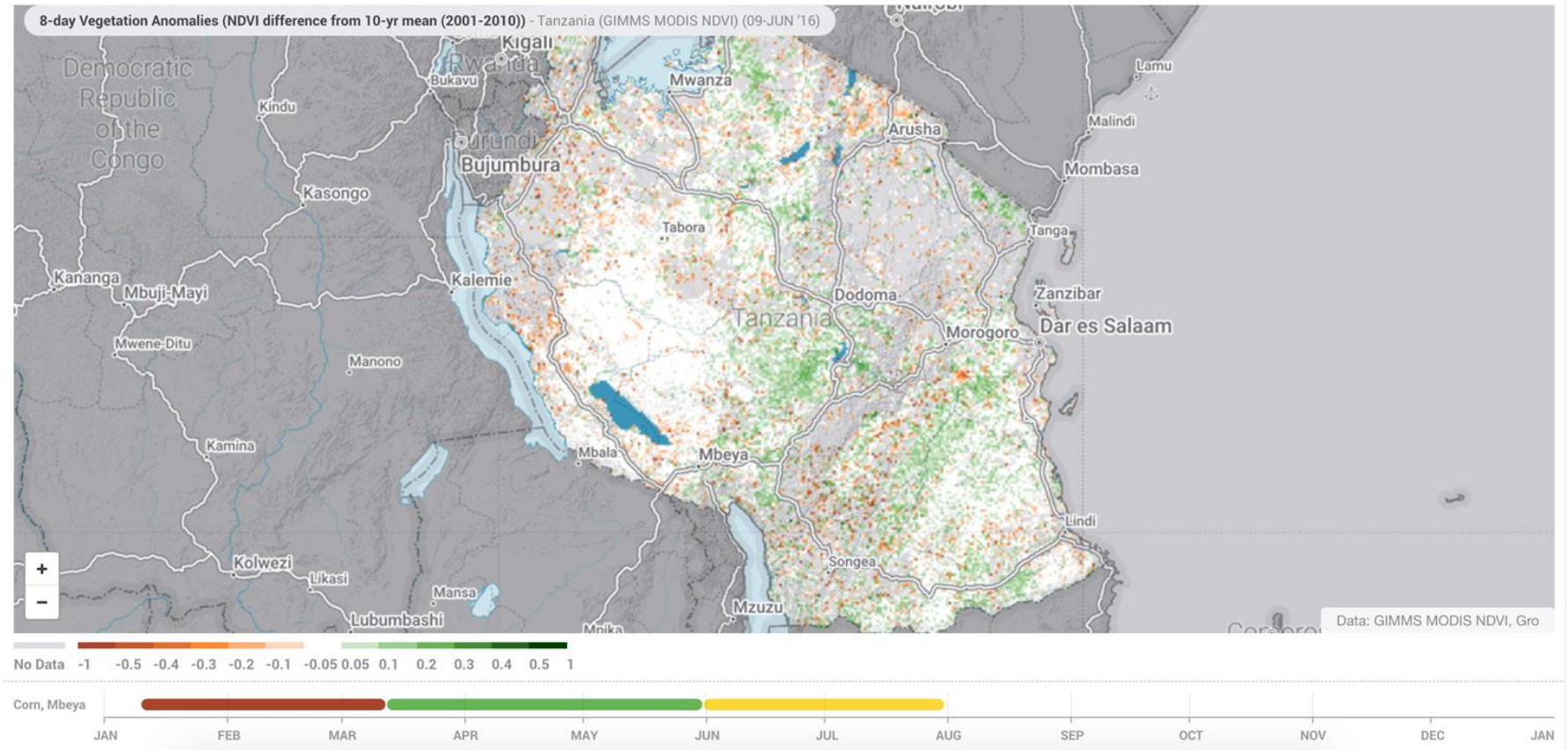
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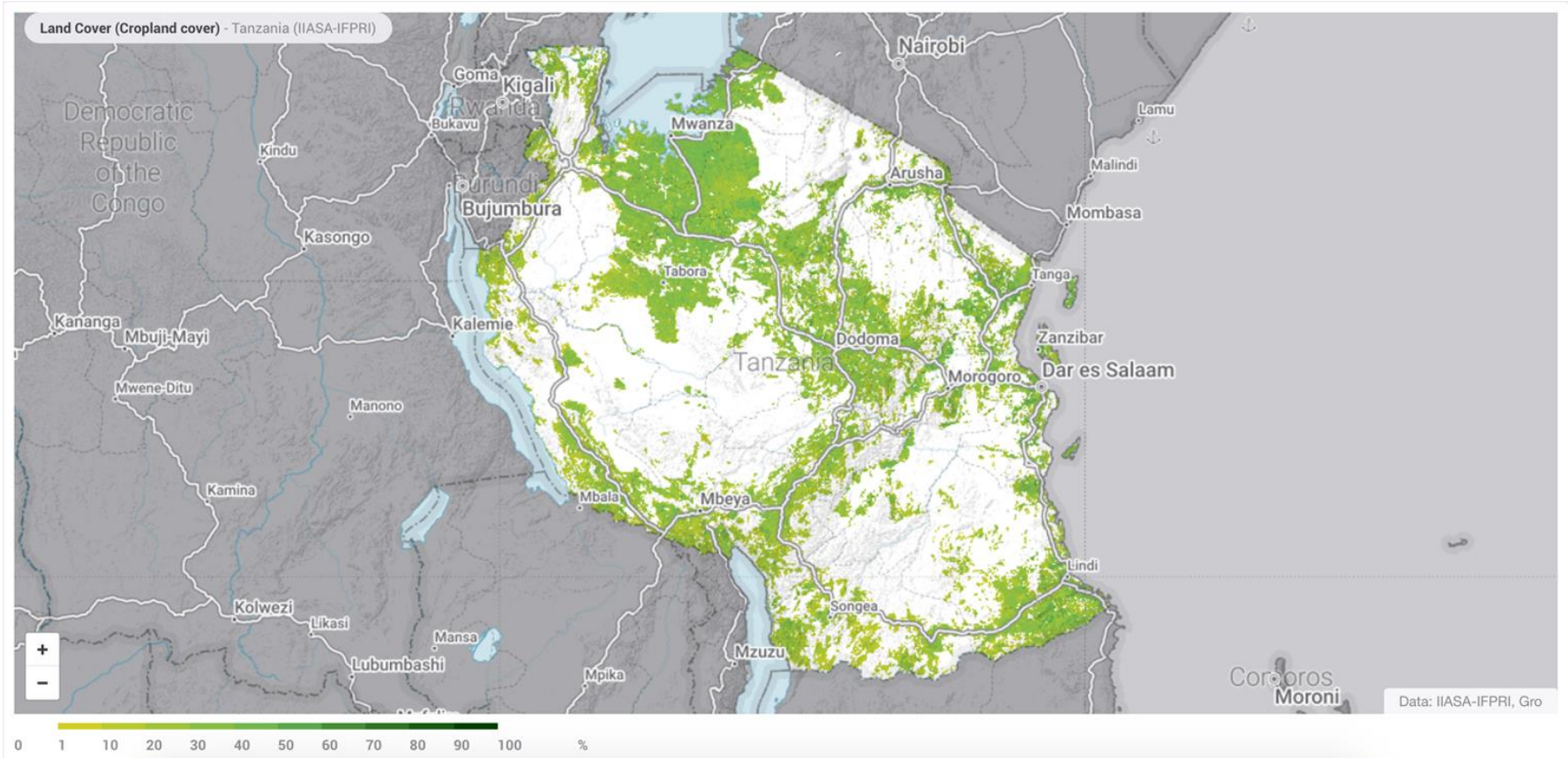
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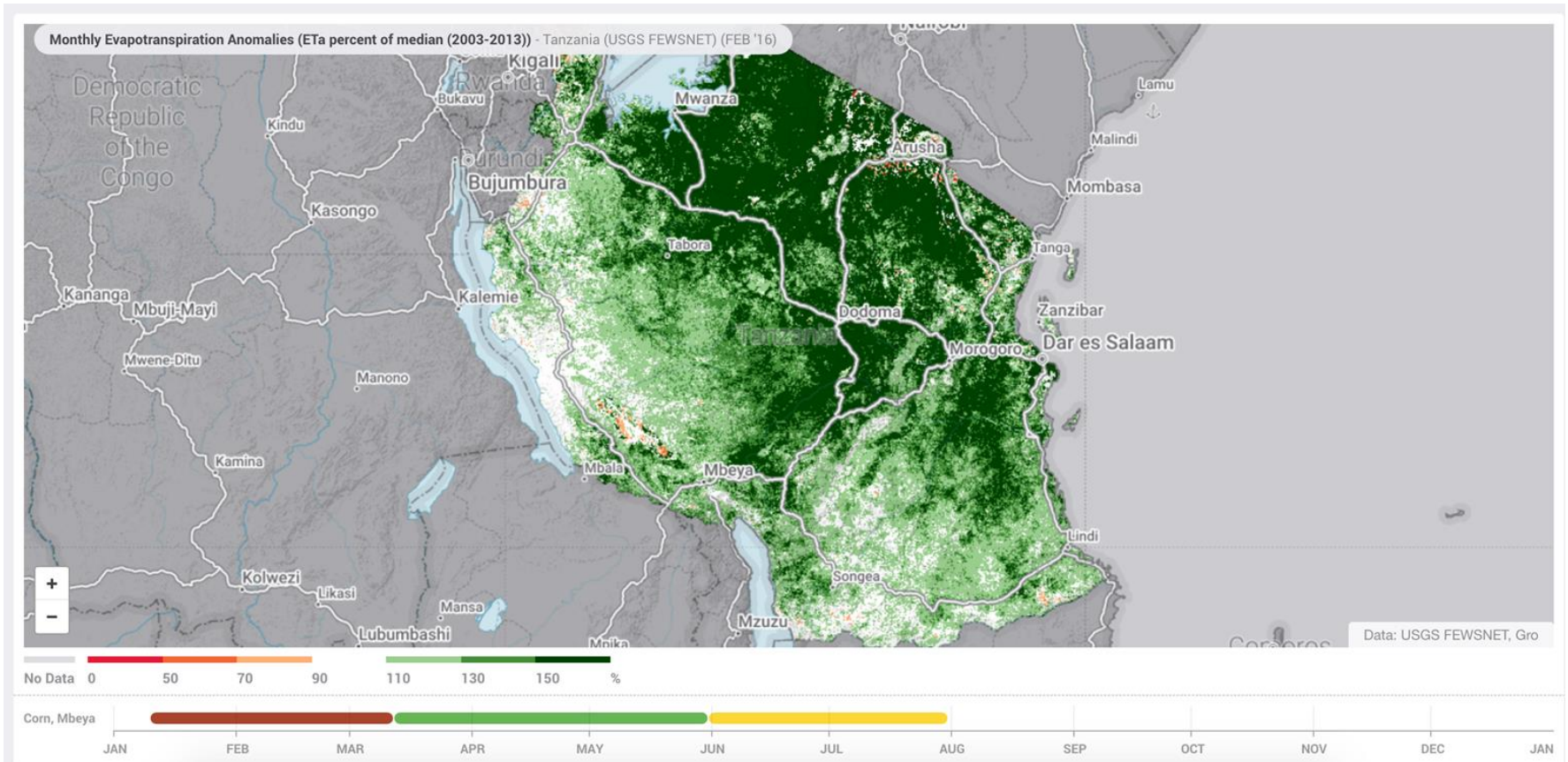
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Tanzania's Corn Production After Its 2016 Drought



Agriculture in the Media

Corruption in Egypt

Egypt's dirty wheat problem

ruption – including graft in
priorities. But officials,
have gone wrong

Egypt's Parliament to Submit Proposals to Reform Wheat Purchases

Is Egyptian government pushing farmers to stop growing wheat?

In November, the [Egyptian government](#) announced that it would start buying wheat from local farmers at the average global price to encourage Egyptian farmers to grow the crop. Egypt is seeking to reduce the gap between domestic production and actual consumption, seeing that the [country consumes](#) about [18 million tons of wheat](#) annually but has a domestic production of less than 9 million tons.

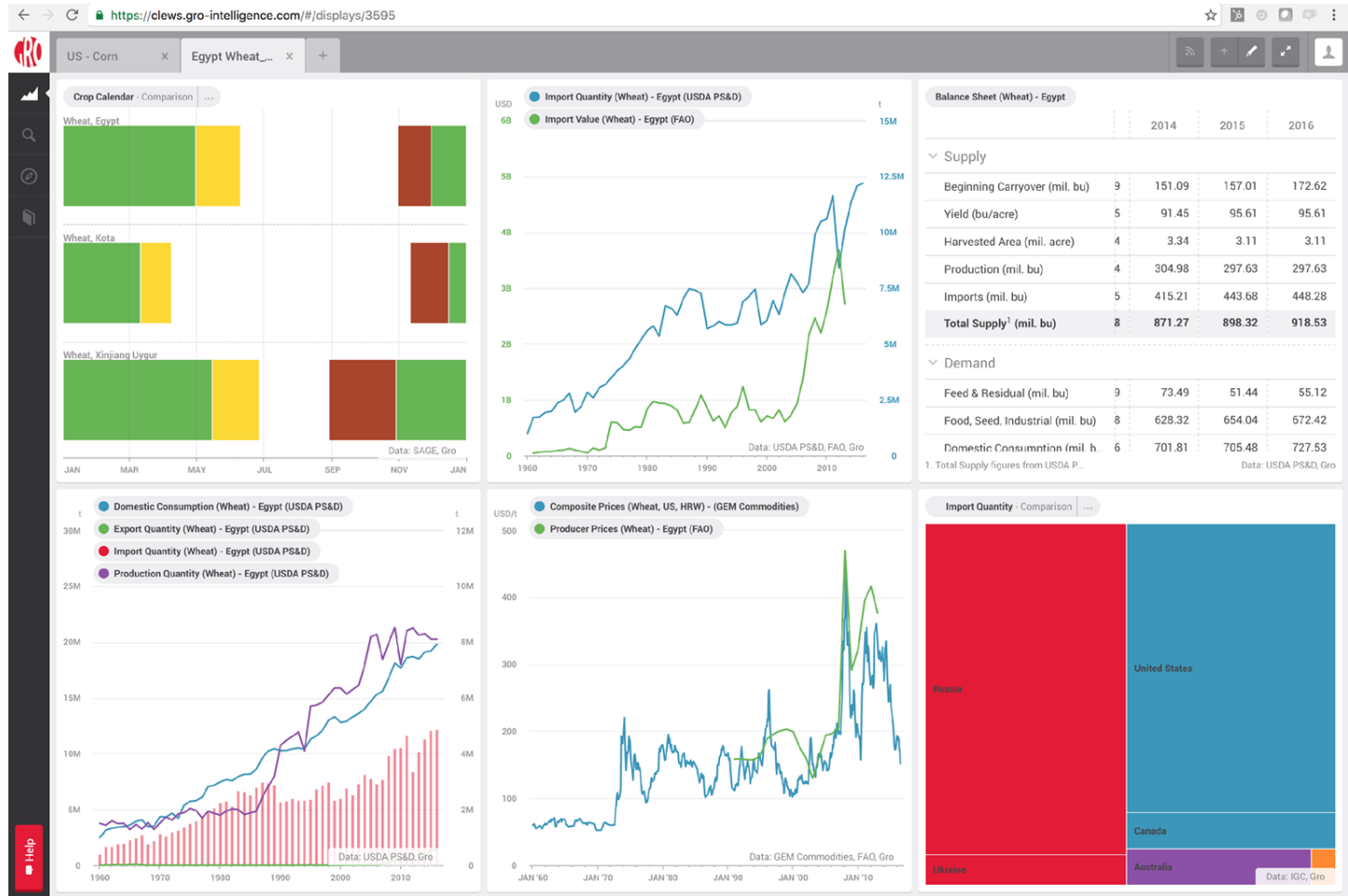
MIDDLE EAST

Military Man Named Supply Minister for Top Wheat Importer Egypt

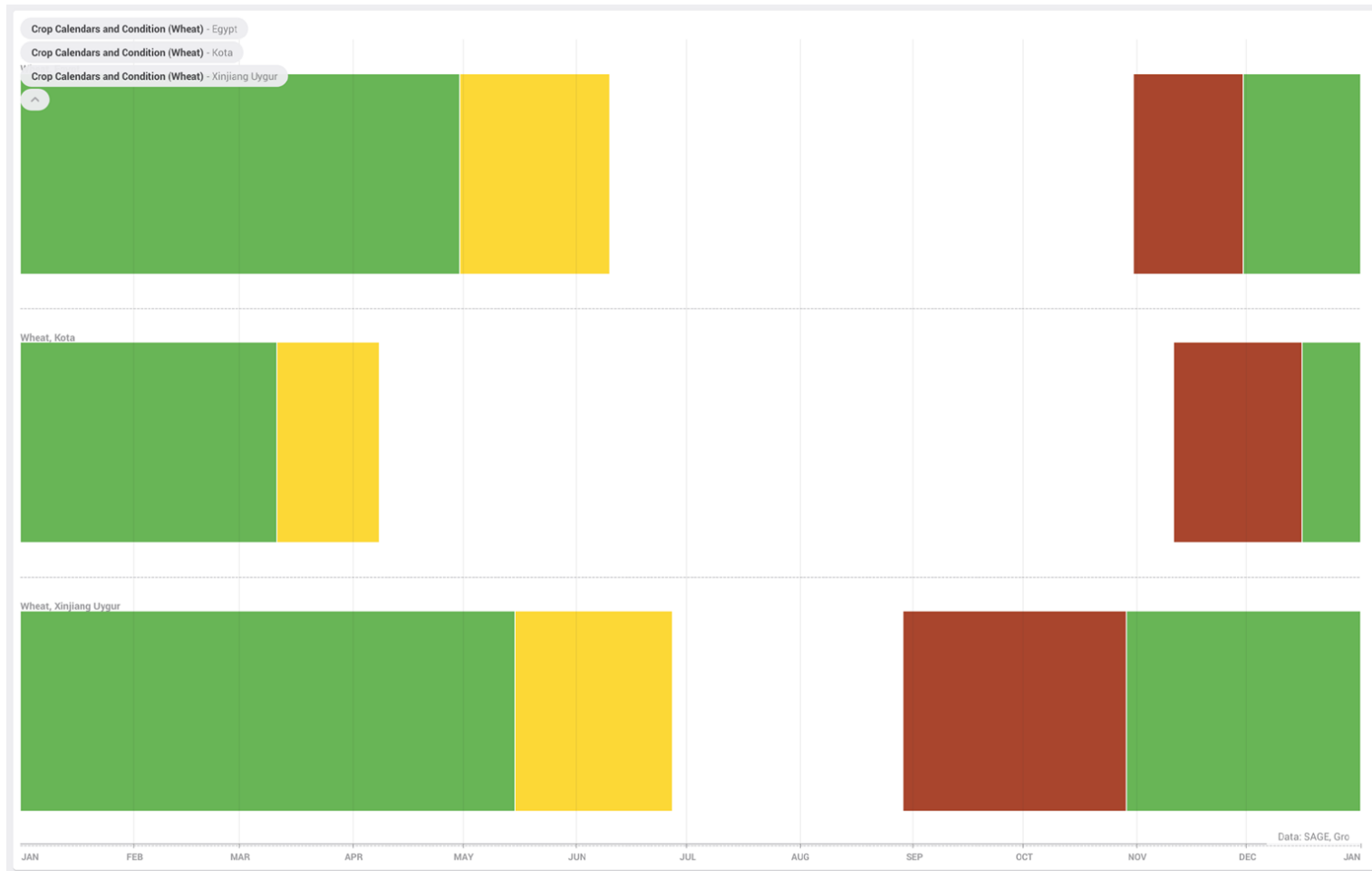
By REUTERS SEPT. 6, 2016, 9:48 A.M. E.D.T.



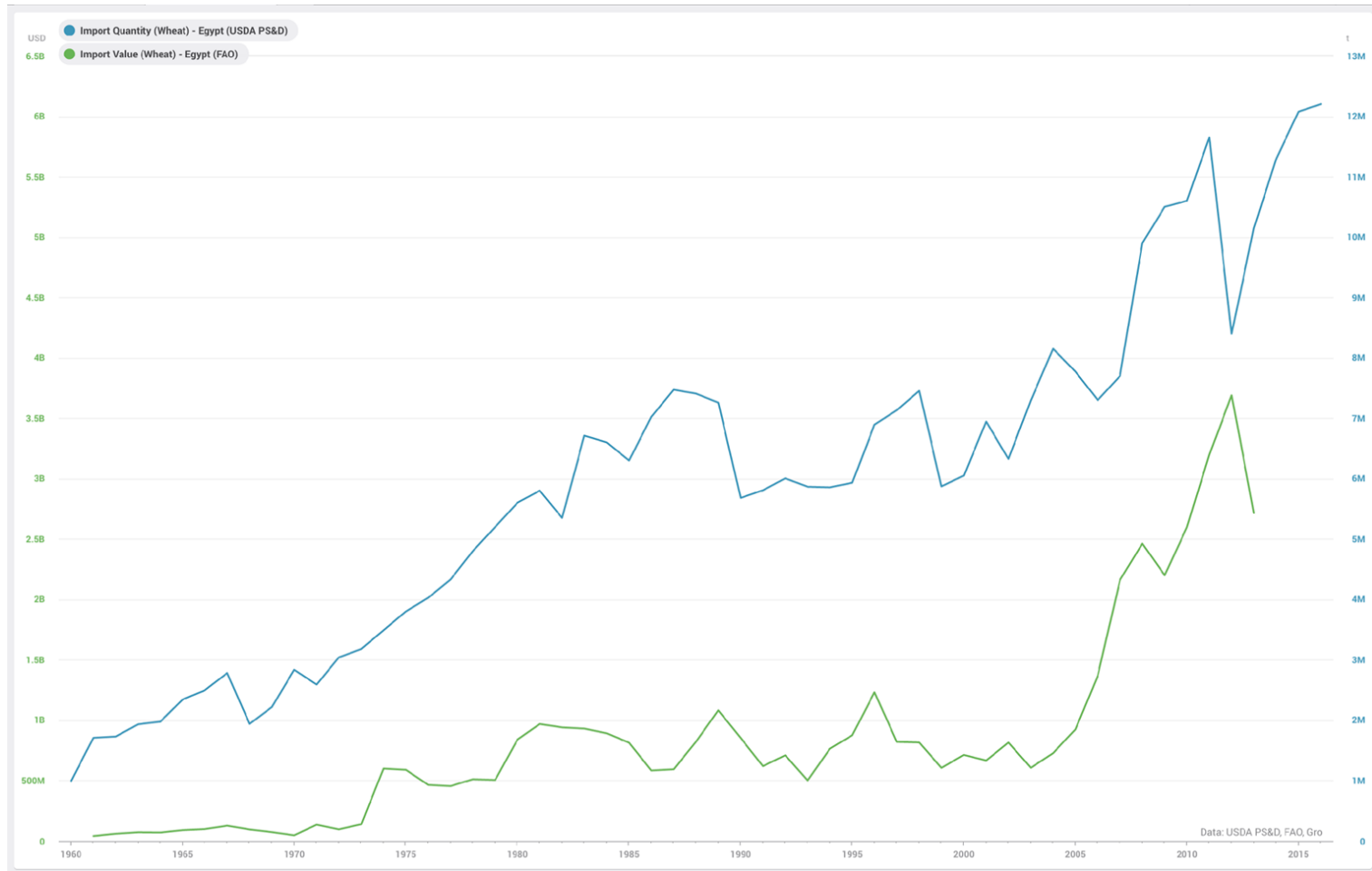
Egyptian Wheat Crisis



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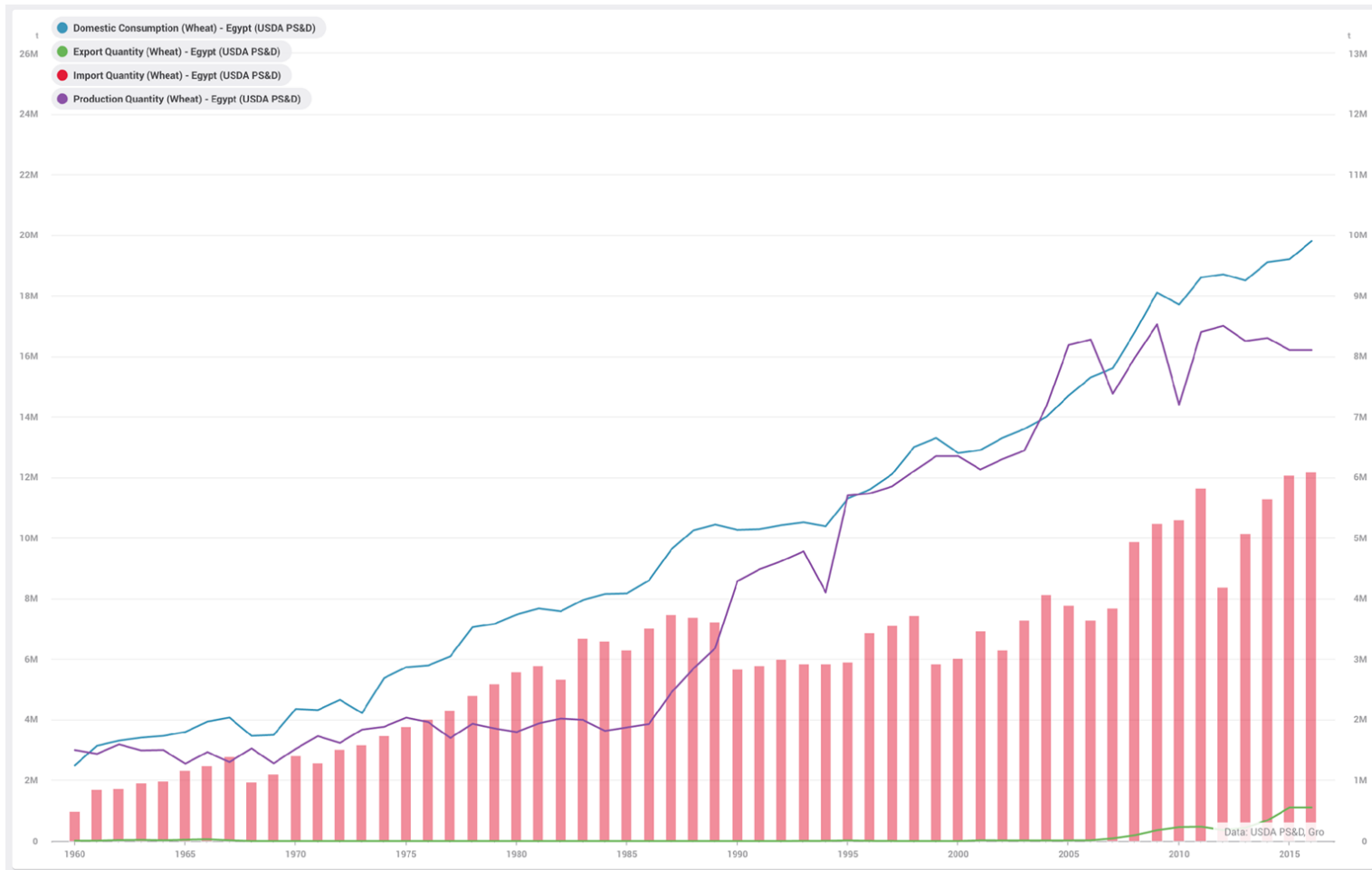
Egyptian Wheat Crisis

Balance Sheet (Wheat) - Egypt																
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
▼ Supply																
Beginning Carryover (mil. bu)	62.83	68.82	43.73	48.43	96.82	142.57	152.19	131.47	167.59	195.07	190.48	235.24	162.59	151.09	157.01	172.62
Yield (bu/acre)	91.00	92.94	93.08	97.55	96.65	95.61	96.21	96.80	95.91	84.91	97.55	93.68	90.85	91.45	95.61	95.61
Harvested Area (mil. acre)	2.48	2.49	2.54	2.70	3.11	3.18	2.82	3.03	3.27	3.11	3.16	3.34	3.34	3.34	3.11	3.11
Production (mil. bu)	225.24	231.49	236.74	263.71	300.71	304.02	271.13	293.11	313.17	264.56	308.65	312.32	303.14	304.98	297.63	297.63
Imports (mil. bu)	255.15	232.48	268.05	299.46	285.54	268.23	282.93	363.77	385.81	389.49	428.07	308.65	372.95	415.21	443.68	448.28
Total Supply¹ (mil. bu)	543.22	532.79	548.51	611.60	683.07	714.82	706.26	788.34	866.57	849.12	927.20	856.21	838.68	871.27	898.32	918.53
▼ Demand																
Feed & Residual (mil. bu)	22.05	29.40	36.74	44.09	66.14	73.49	66.14	80.84	102.88	80.84	95.53	80.84	73.49	73.49	51.44	55.12
Food, Seed, Industrial (mil. bu)	451.95	459.30	462.97	470.32	474.00	488.70	507.07	536.46	562.18	569.53	587.90	606.28	606.28	628.32	654.04	672.42
Domestic Consumption (mil. b...)	474.00	488.70	499.72	514.42	540.14	562.18	573.21	617.30	665.07	650.37	683.44	687.11	679.76	701.81	705.48	727.53
Exports (mil. bu)	0.40	0.37	0.37	0.37	0.37	0.44	1.58	3.45	6.43	8.27	8.52	6.50	7.83	12.46	20.21	20.21
Total Demand² (mil. bu)	474.40	489.06	500.09	514.78	540.50	562.62	574.79	620.75	671.50	658.64	691.96	693.62	687.59	714.27	725.69	747.74
▼ Stocks																
Ending Carryover (mil. bu)	68.82	43.73	48.43	96.82	142.57	152.19	131.47	167.59	195.07	190.48	235.24	162.59	151.09	157.01	172.62	170.79
Carryover, Weeks of Total Use ³	7.54	4.65	5.04	9.78	13.72	14.07	11.89	14.04	15.11	15.04	17.68	12.19	11.43	11.43	12.37	11.88
Ending Stocks-to-Use ⁴ (%)	14.51%	8.94%	9.68%	18.81%	26.38%	27.05%	22.87%	27.00%	29.05%	28.92%	34.00%	23.44%	21.97%	21.98%	23.79%	22.84%

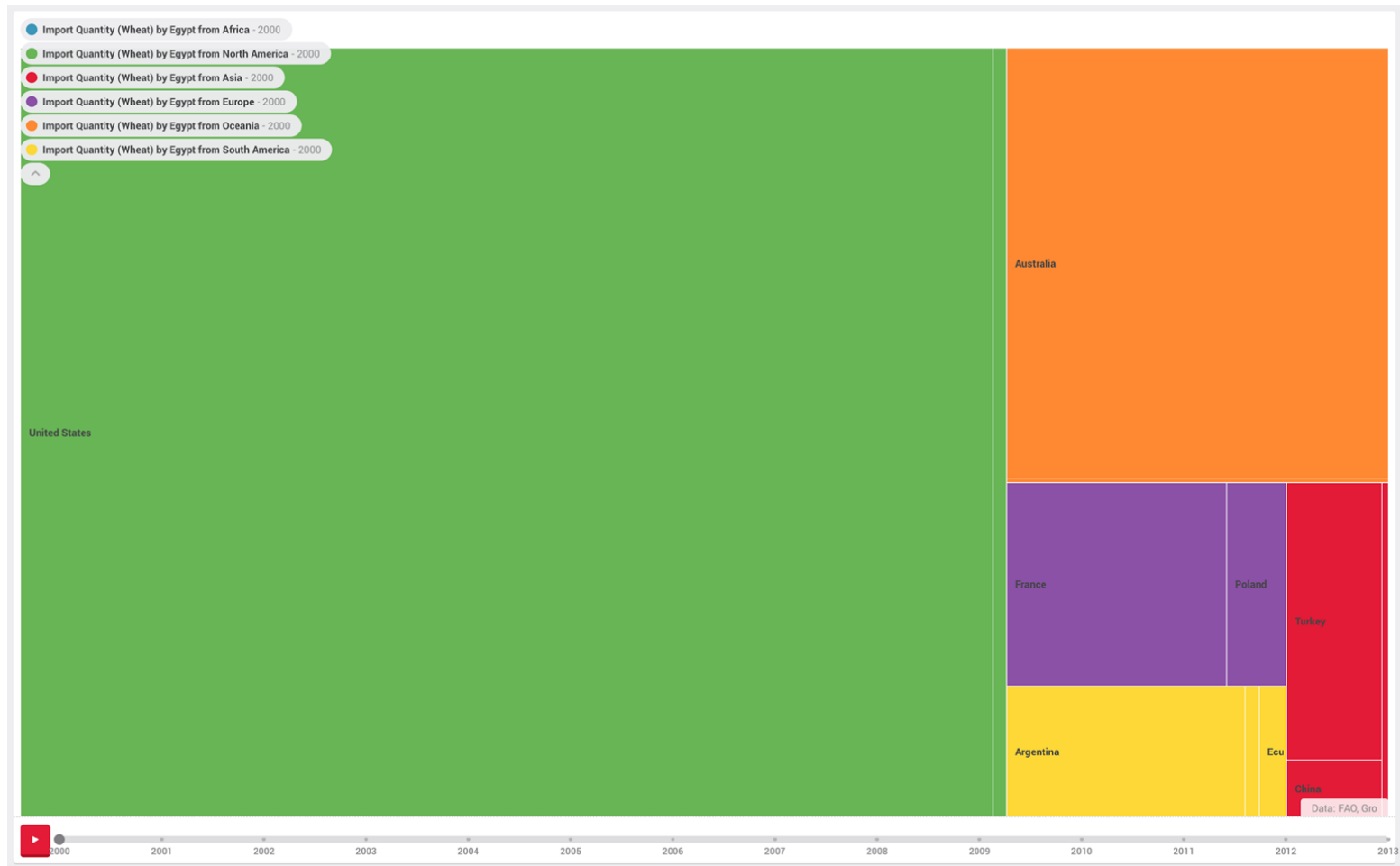
1. Total Supply figures from USDA PS&D. 2. Total Demand = Total Consumption + Exports. 3. Carryover, Weeks of Total Use = Ending Carryover / (Total Demand/52). 4. Ending Stocks-to-Use = Ending Carryover / Total Demand.

Data: USDA PS&D Gro

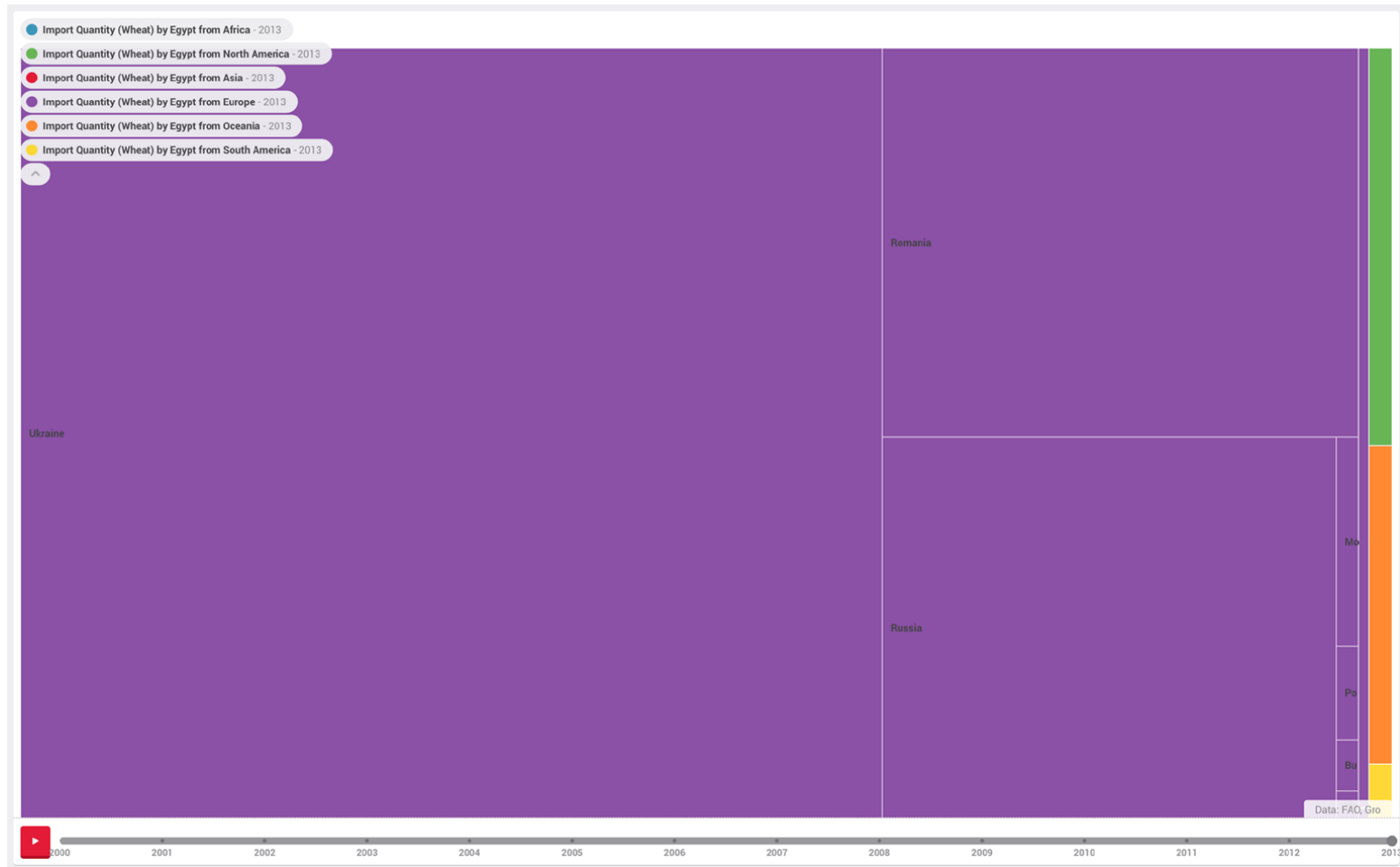
Egyptian Wheat Crisis



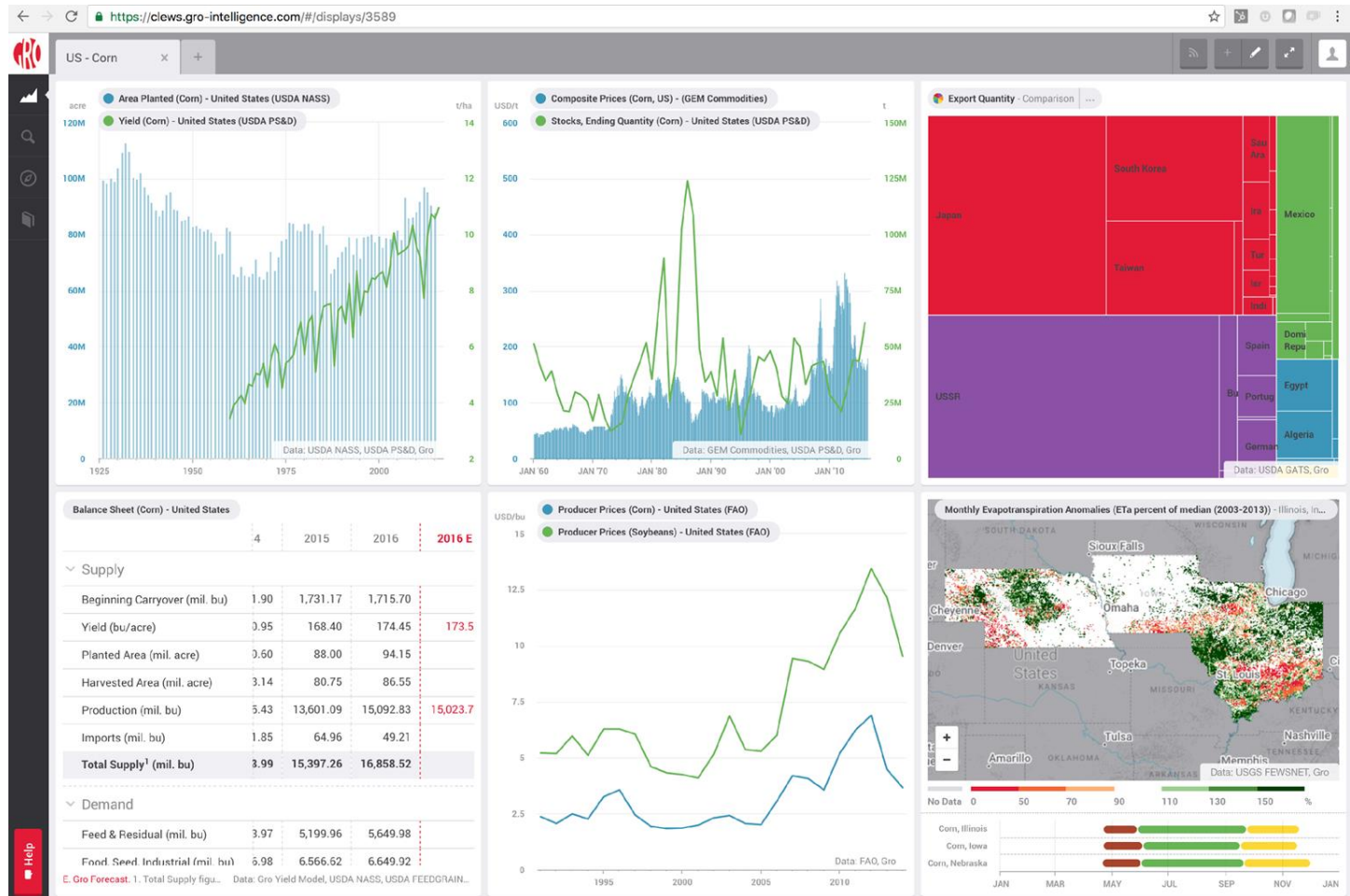
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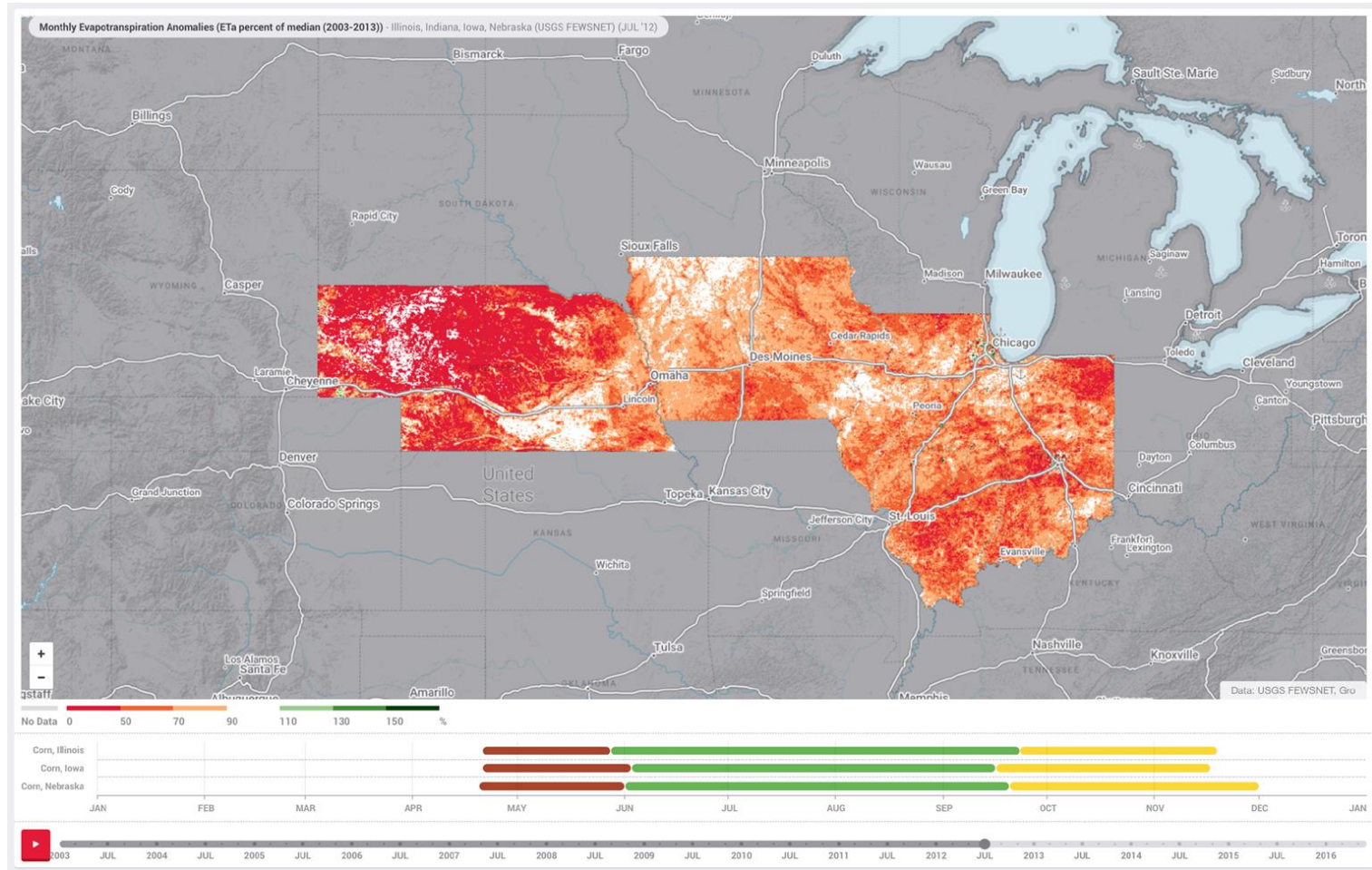
Egyptian Wheat Crisis



How the 2012 Drought the Affected US Corn Market



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Balance Sheet (Corn) - United States																
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 E
Supply																
Beginning Carryover (mil. bu)	1,596.41	1,086.67	958.10	2,113.94	1,967.14	1,303.63	1,624.13	1,673.30	1,707.78	1,127.66	989.00	821.18	1,231.90	1,731.17	1,715.70	
Yield (bu/acre)	129.37	142.11	160.27	148.01	149.12	150.71	153.26	164.41	152.63	146.73	123.15	158.20	170.95	168.40	174.45	173.58
Planted Area (mil. acre)	78.89	78.60	80.93	81.78	78.33	93.53	85.98	86.38	88.19	91.94	97.29	95.37	90.60	88.00	94.15	
Harvested Area (mil. acre)	69.33	70.94	73.63	75.12	70.64	86.52	78.57	79.49	81.45	83.88	87.37	87.45	83.14	80.75	86.55	
Production (mil. bu)	8,966.73	10,087.22	11,805.52	11,112.13	10,531.06	13,037.78	12,043.10	13,067.07	12,425.25	12,313.88	10,755.02	13,828.88	14,215.43	13,601.09	15,092.83	15,023.78
Imports (mil. bu)	14.72	14.02	11.06	8.27	12.56	19.72	13.27	9.33	26.93	30.12	167.90	28.62	31.85	64.96	49.21	
Total Supply¹ (mil. bu)	0,577.59	11,187.99	12,774.44	13,234.89	12,510.17	14,361.45	13,680.77	14,748.71	14,160.71	13,470.90	11,903.98	14,685.84	15,478.99	15,397.26	16,858.52	
Demand																
Feed & Residual (mil. bu)	5,544.51	5,777.61	6,131.61	6,111.25	5,535.30	5,853.00	5,128.08	5,095.56	4,770.10	4,512.05	4,308.59	5,032.92	5,313.97	5,199.96	5,649.98	
Food, Seed, Industrial (mil. bu)	2,358.54	2,552.46	2,710.84	3,022.71	3,545.88	4,446.93	5,030.48	5,966.34	6,432.02	6,430.72	6,044.13	6,500.25	6,566.98	6,566.62	6,649.92	
Ethanol (mil. bu)	995.50	1,167.55	1,323.21	1,603.32	2,119.49	3,049.21	3,708.89	4,591.16	5,018.74	5,000.03	4,641.13	5,123.69	5,200.09	5,200.00	5,275.00	
Domestic Consumption (mil. bu)	7,903.05	8,330.07	8,842.45	9,133.97	9,081.17	10,299.93	10,158.56	11,061.90	11,202.13	10,942.77	10,352.72	11,533.17	11,880.95	11,766.58	12,299.90	
Exports (mil. bu)	1,611.10	1,921.51	1,785.22	2,207.91	2,134.30	2,388.18	1,880.14	1,956.43	1,777.94	1,509.45	718.94	1,995.60	1,843.64	1,948.72	2,165.24	
Total Demand² (mil. bu)	9,514.14	10,251.58	10,627.67	11,341.88	11,215.47	12,688.11	12,038.70	13,018.33	12,980.06	12,452.22	11,071.66	13,528.77	13,724.59	13,715.30	14,465.14	
Stocks																
Ending Carryover (mil. bu)	1,086.67	958.10	2,113.94	1,967.14	1,303.63	1,624.13	1,673.30	1,707.78	1,127.66	989.00	821.18	1,231.90	1,731.17	1,715.70	2,383.61	
Carryover, Weeks of Total Use ³	5.94	4.86	10.34	9.02	6.04	6.66	7.23	6.82	4.52	4.13	3.86	4.74	6.56	6.50	8.57	
Ending Stocks-to-Use ⁴ (%)	11.42%	9.35%	19.89%	17.34%	11.52%	12.80%	13.90%	13.12%	8.69%	7.94%	7.42%	9.11%	12.61%	12.51%	16.48%	
Prices																
US Weighted Avg. Farm Price...	\$2.13	\$2.27	\$2.47	\$1.96	\$2.28	\$3.39	\$4.78	\$3.75	\$3.83	\$6.02	\$6.67	\$6.15	\$4.11	\$3.71	N/A	

E. Gro Forecast. 1. Total Supply figures from USDA PS&D. 2. Total Demand = Total Consumption + Exports. 3. Carryover, Weeks of Total Use = Ending Carryover / (Total Demand/52). 4. Ending Stocks-to-Use = Ending Carryover / Total Dem... Data: Gro Yield Model, USDA NASS, USDA FEEDGRAIN...





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