



Select Ingredients



Ian L. Ward

Barley Crop Report 2015

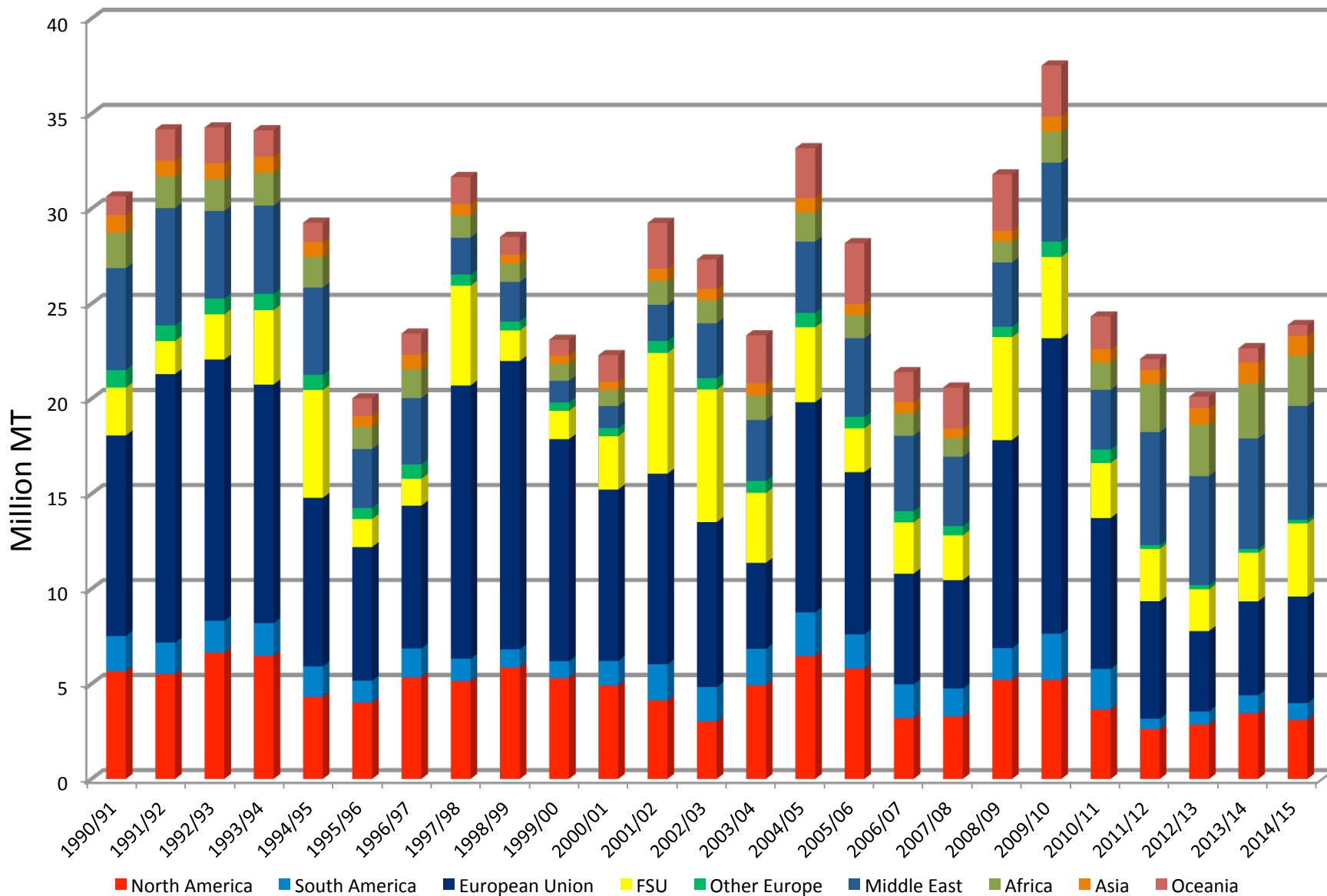


2014 Recap

- Good growing conditions in EU
- EU Ending stocks 47 MMT up from 33MMT
- Quality generally good
- North America crops down 18% in USA and 20% down in Canada
- Malting barley quality poor sprouted, split mold, fusarium
- 70-80,000 MT of barley imported to North America from EU
- Maltsters made good malt out of very poor barley

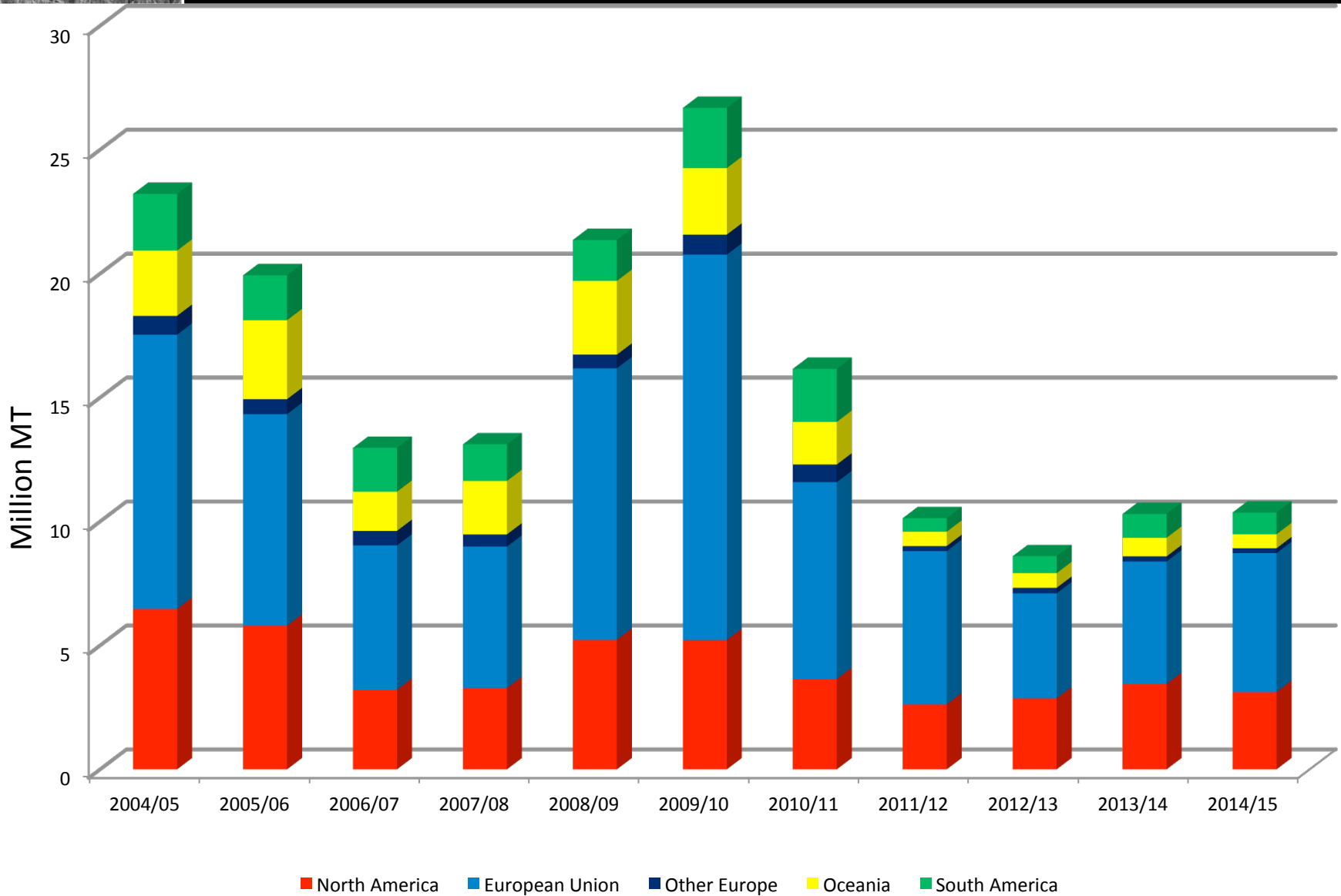


Global Ending Stocks 2014 / 2015





Malt Barley Producing Regions





2015 Highlights

- Modest carry in stocks not replenished last season
- Good growing and harvest conditions in most of EU
- Largely good growing and harvest conditions in USA
- Poor growing conditions in Western Canada
- Quality from EU generally very good low protein
- Challenges expected with Canadian barley



2015 Europe Barley Headlines

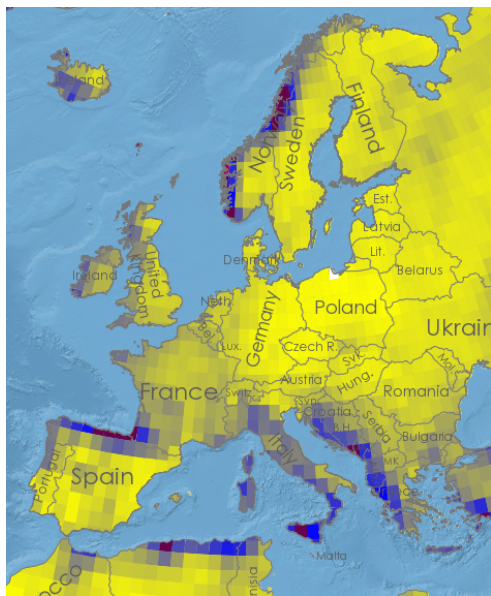
- Seeded area up across Europe except France
- Good starting moisture and benign growing conditions
- Hot conditions in France and Southern Germany give rise to concern in July
- Good harvest conditions throughout Europe for Winter crop
- Good harvest conditions for Spring crop
- Yields similar to last year across the continent
- Quality excellent including European Springs if anything proteins too low 9.5% in some areas



2015 European Growing Conditions

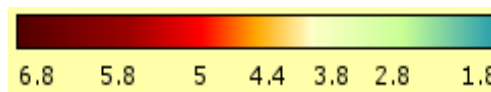
February

Rainfall



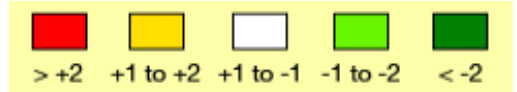
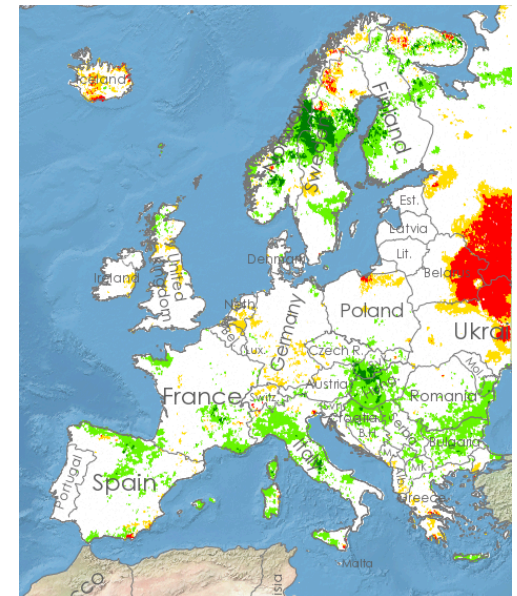
Drier Wetter

Soil Moisture



Drier Wetter

Soil Moisture Anomaly



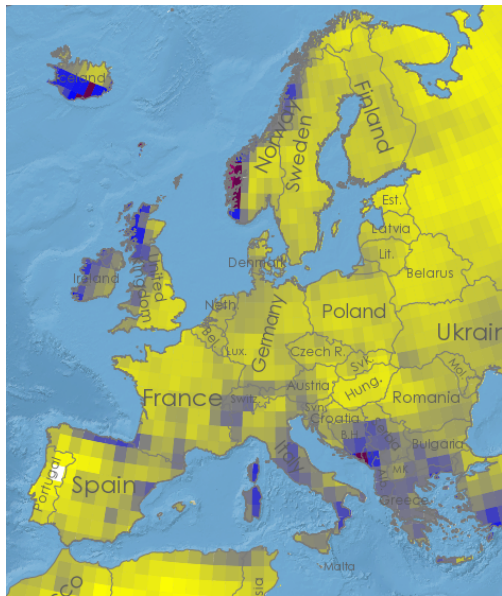
Drier Wetter



2015 European Growing Conditions

March

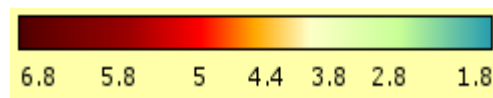
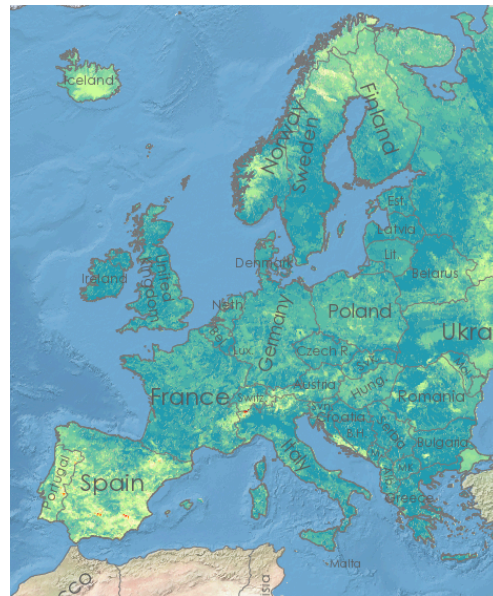
Rainfall



Drier

Wetter

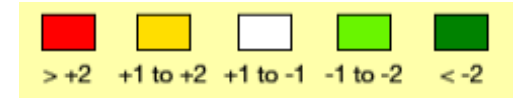
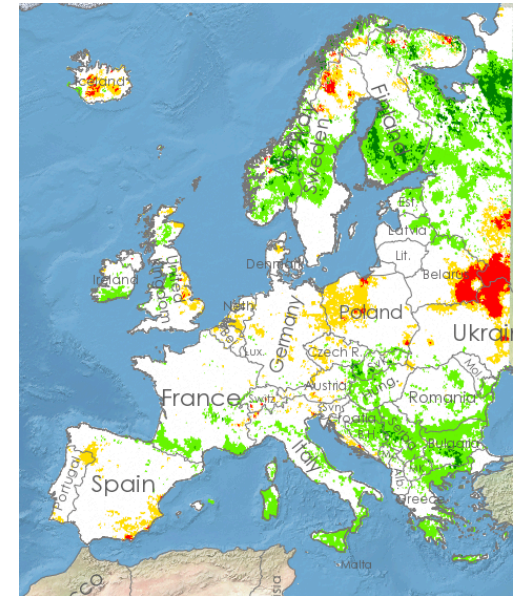
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

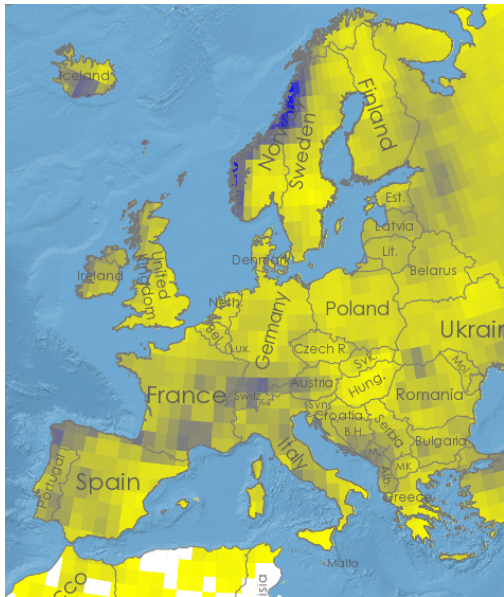
Wetter



2015 European Growing Conditions

April

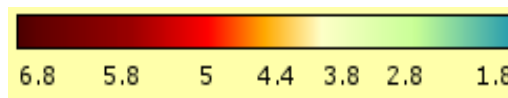
Rainfall



Drier

Wetter

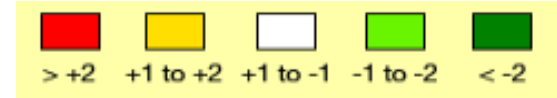
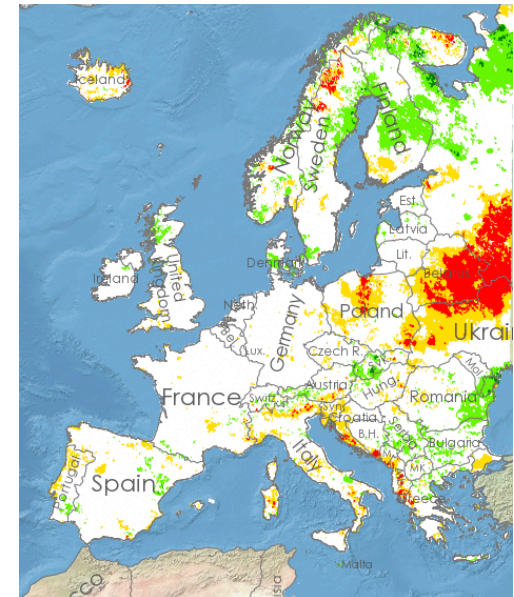
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

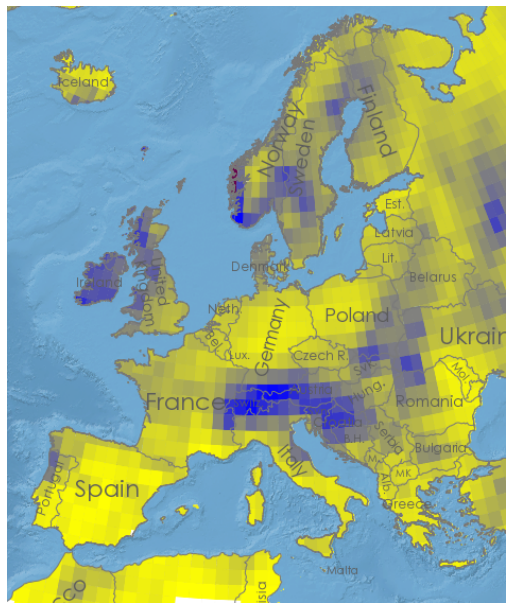
Wetter



2015 European Growing Conditions

May

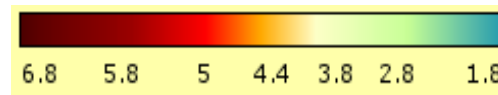
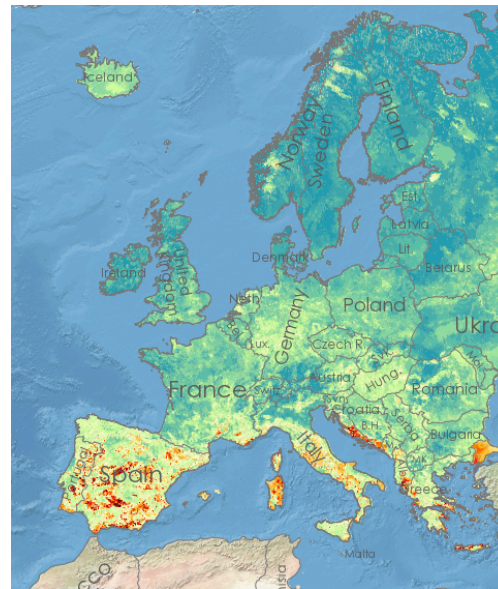
Rainfall



Drier

Wetter

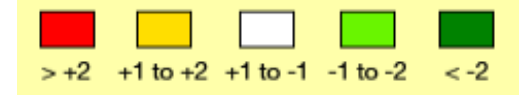
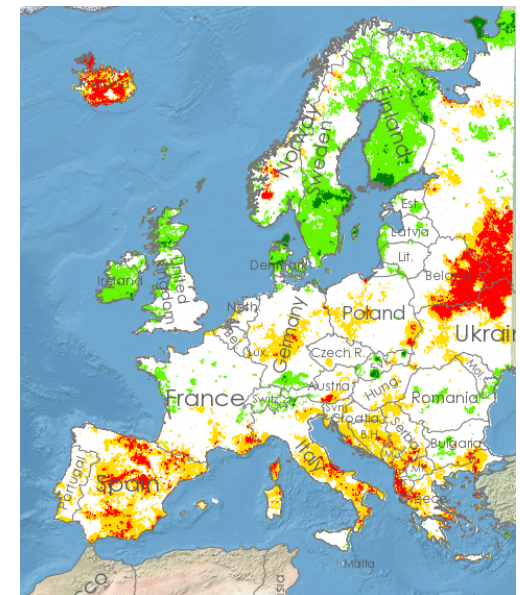
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

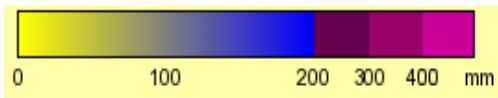
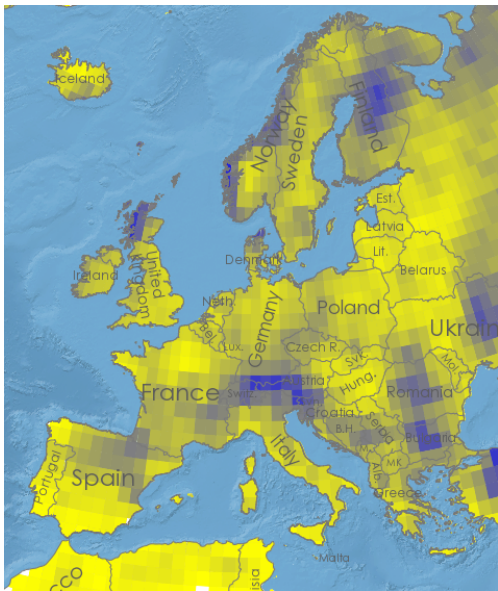
Wetter



2015 European Growing Conditions

June

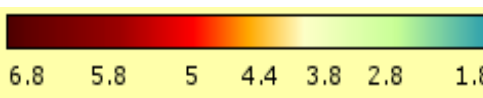
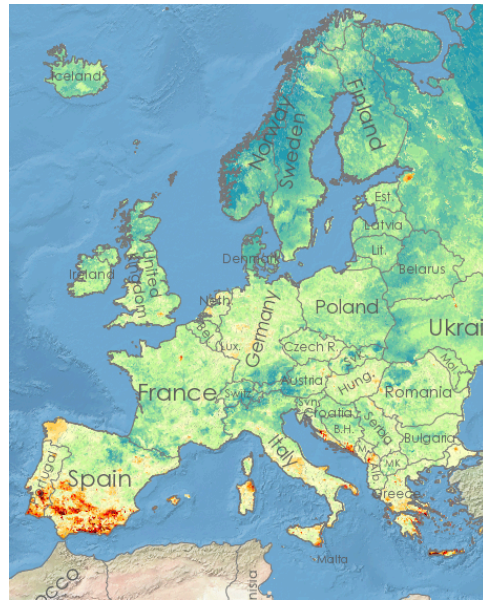
Rainfall



Drier

Wetter

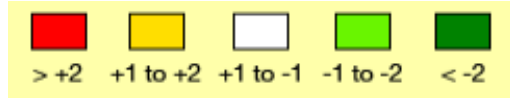
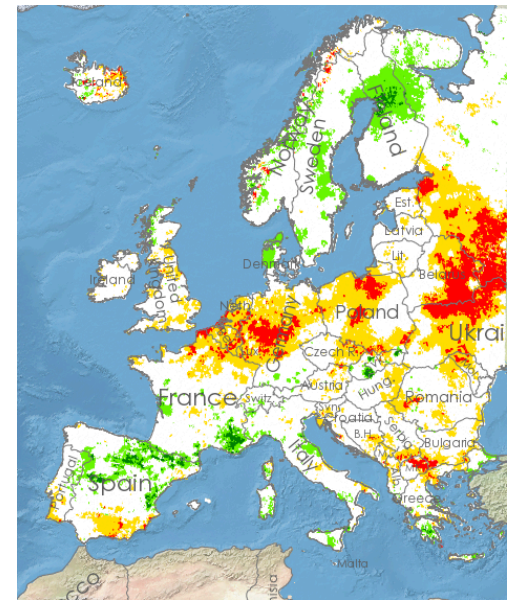
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

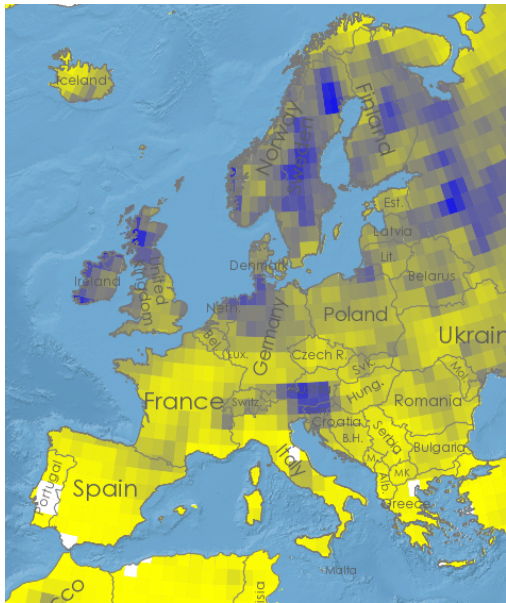
Wetter



2015 European Growing Conditions

July

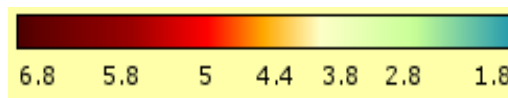
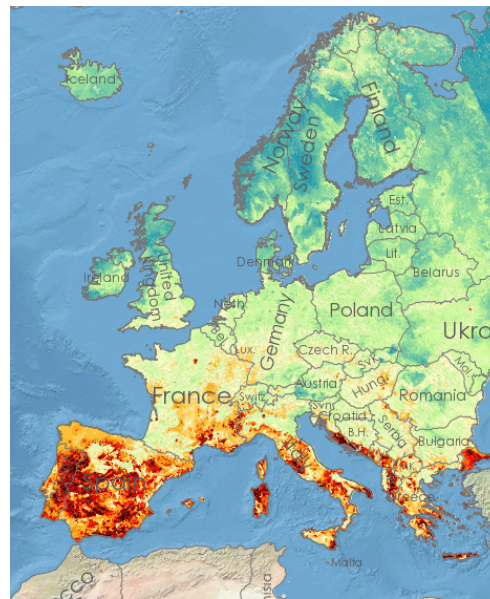
Rainfall



Drier

Wetter

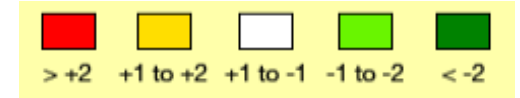
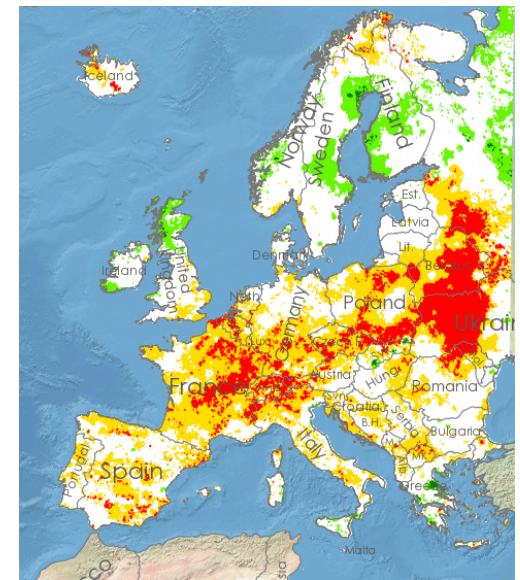
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

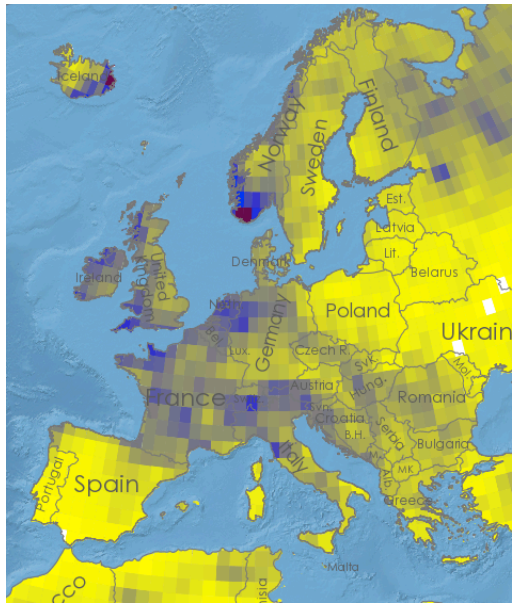
Wetter



2015 European Growing Conditions

August

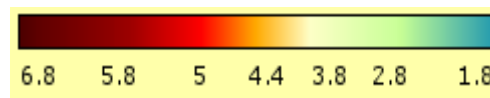
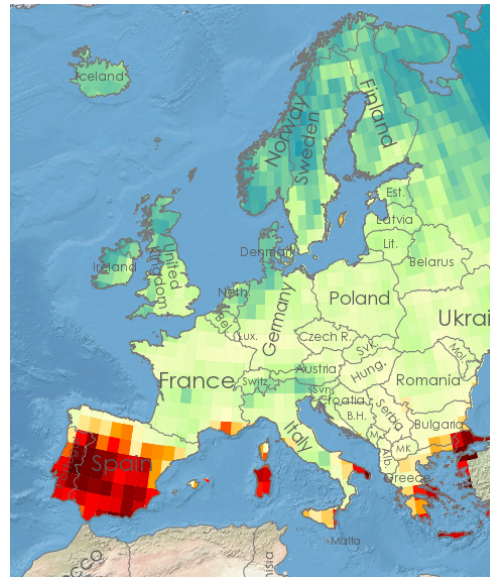
Rainfall



Drier

Wetter

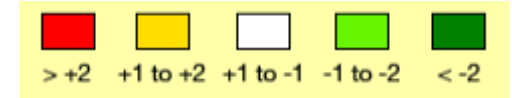
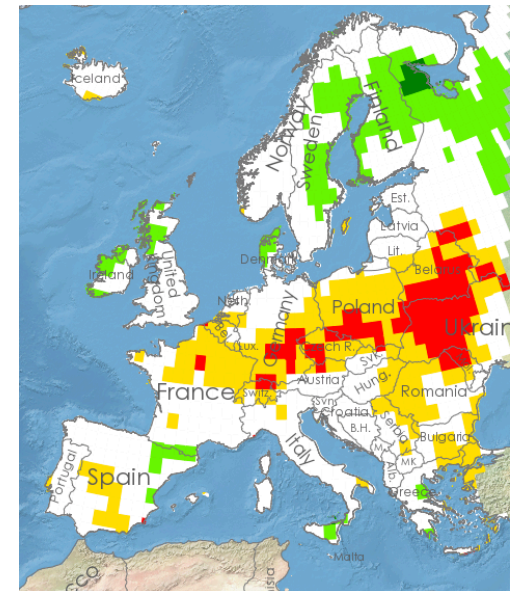
Soil Moisture



Drier

Wetter

Soil Moisture Anomaly



Drier

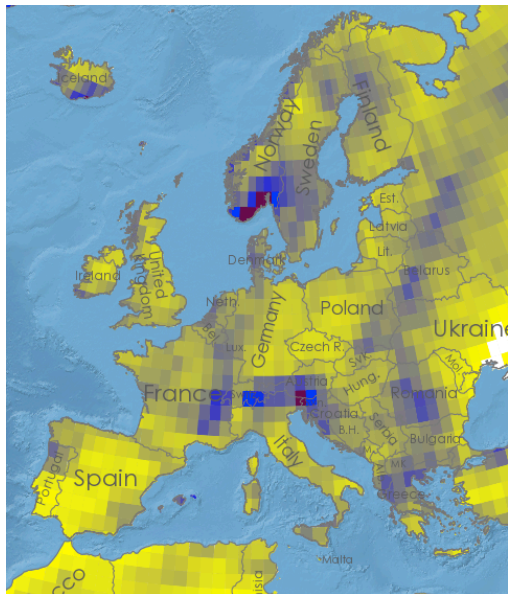
Wetter



2014 European Growing Conditions

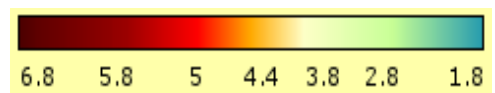
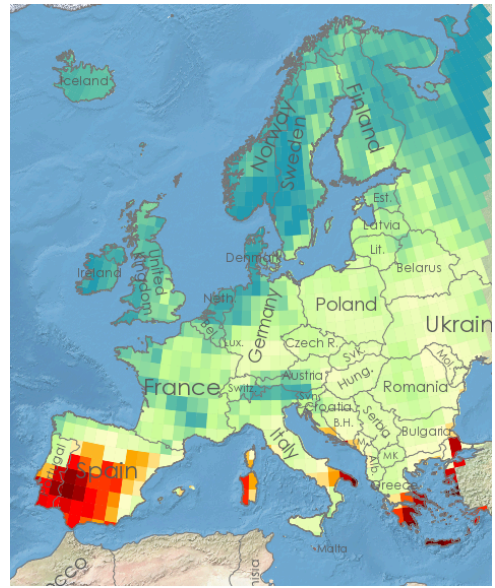
September

Rainfall



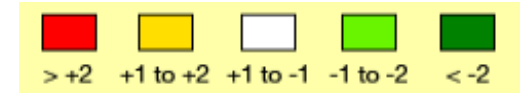
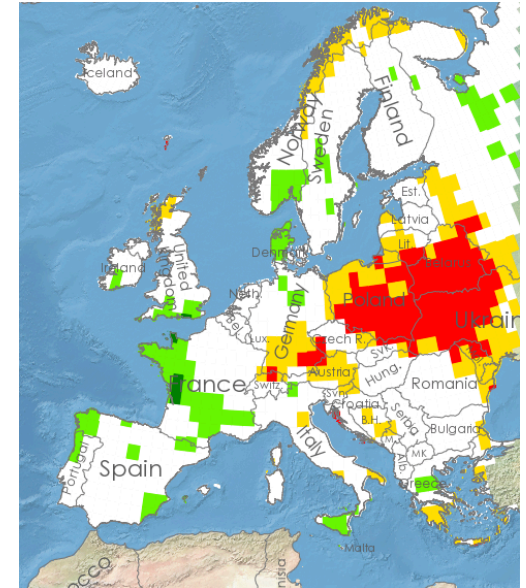
Drier Wetter

Soil Moisture



Drier Wetter

Soil Moisture Anomaly



Drier Wetter

European Harvest 2015

	Winter			Spring			Total		
	Acreage	Yield	Production	Acreage	Yield	Production	Acreage	Yield	Production
France	1,298	7.33	9,513	450	6.40	2,880	1,748	7.09	12,393
Germany	1,258	7.68	9,670	371	5.47	2,031	1,629	7.18	11,701
UK	442	7.60	3,363	671	5.98	4,013	1,113	6.62	7,368
Denmark	110	6.60	726	510	5.70	2,907	620	5.86	3,633
Poland							900	3.65	3,285
Cz Republic	85	6.61	562	281	5.49	1,433	366	5.45	1,995
Total EU-28	4,956	6.20	30,731	7,453	3.97	29,566	12,409	4.86	60,290

Area x 1000 Ha, Production x 1000 MT Source Coceral

European 3 Year Comparison

	Acreage			Yield			Production		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
France	1,636	1,766	1,748	6.3	6.6	7.1	10,316	11,716	12,393
Germany	1,570	1,584	1,629	6.6	7.3	7.2	10,344	11,658	11,701
UK	1,213	1,080	1,113	5.8	6.5	6.6	7,092	7,009	7,368
Denmark	689	604	620	5.7	5.9	5.9	3,979	3,564	3,633
Poland	820	808	900	3.6	4.0	3.6	2,920	3,256	3,285
Cz Rep.	349	357	366	4.6	5.5	5.5	1,594	1,967	1,995
EU 28	12,380	12,383	12,409	4.8	4.8	4.9	59,825	60,188	60,290

Area x 1000 Ha, Production x 1000 MT Source Coceral



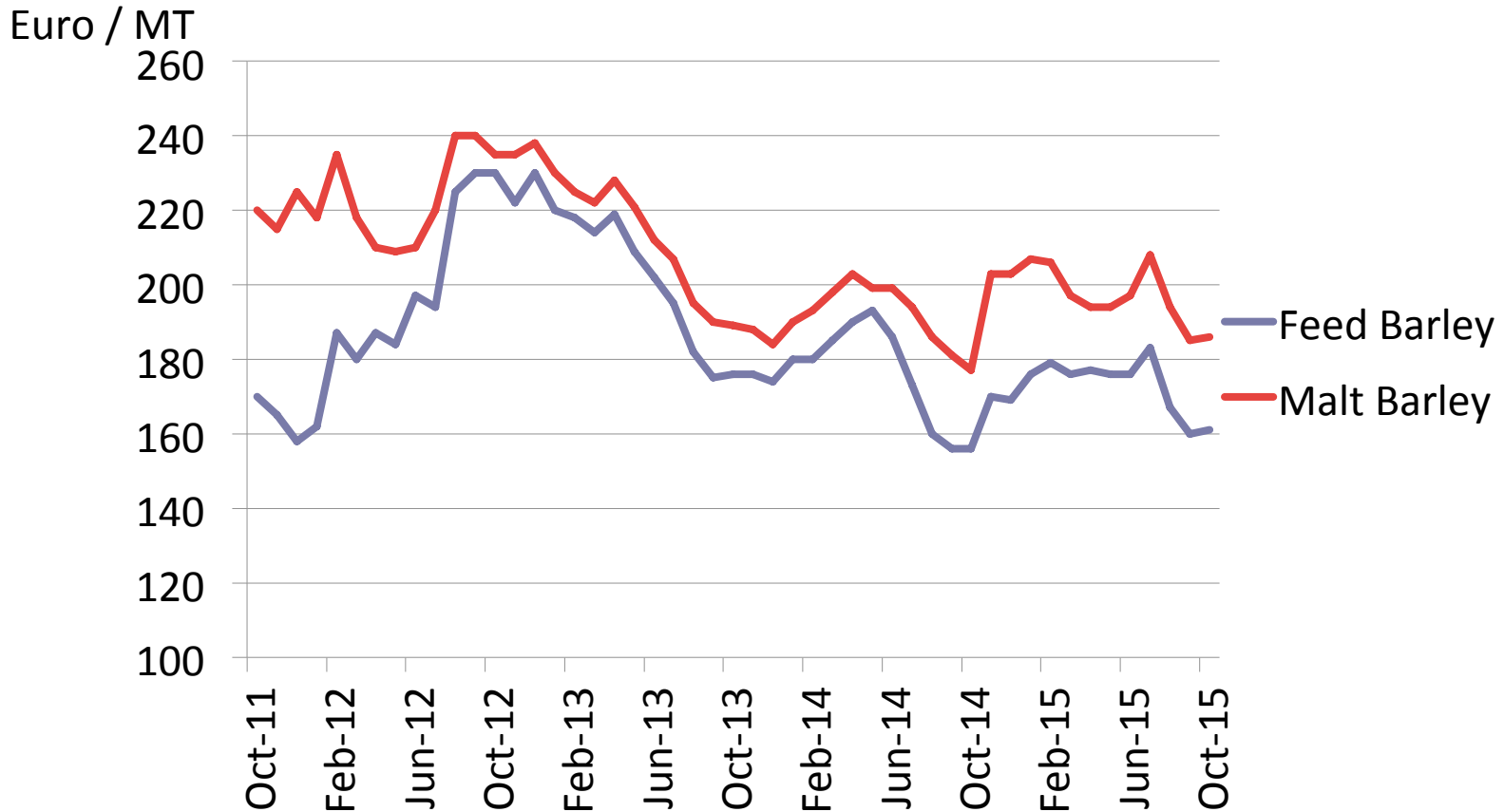
EU Malting S/D Balance 2015/16

	2015 Est. Malt Production	Barley Demand	Spring Supply	Winter Supply	Balance 2015
Belgium	757	900			-900
France	1,461	1,700	1,900	2,800	+3,000
Germany	2,100	2,000	1,200	50	-750
Ireland	120	160	160		0
Netherlands	328	490	100		-300
UK	1,634	1,950	1,950	500	+500
Denmark	275	325	1,225		+900
Total NW EU	6,675	7,525	6,535	3,350	+2,000
Total EU	9,224	10,545	8,095	3,445	2,640

Volume x 1000 MT Source: HM Gauger.



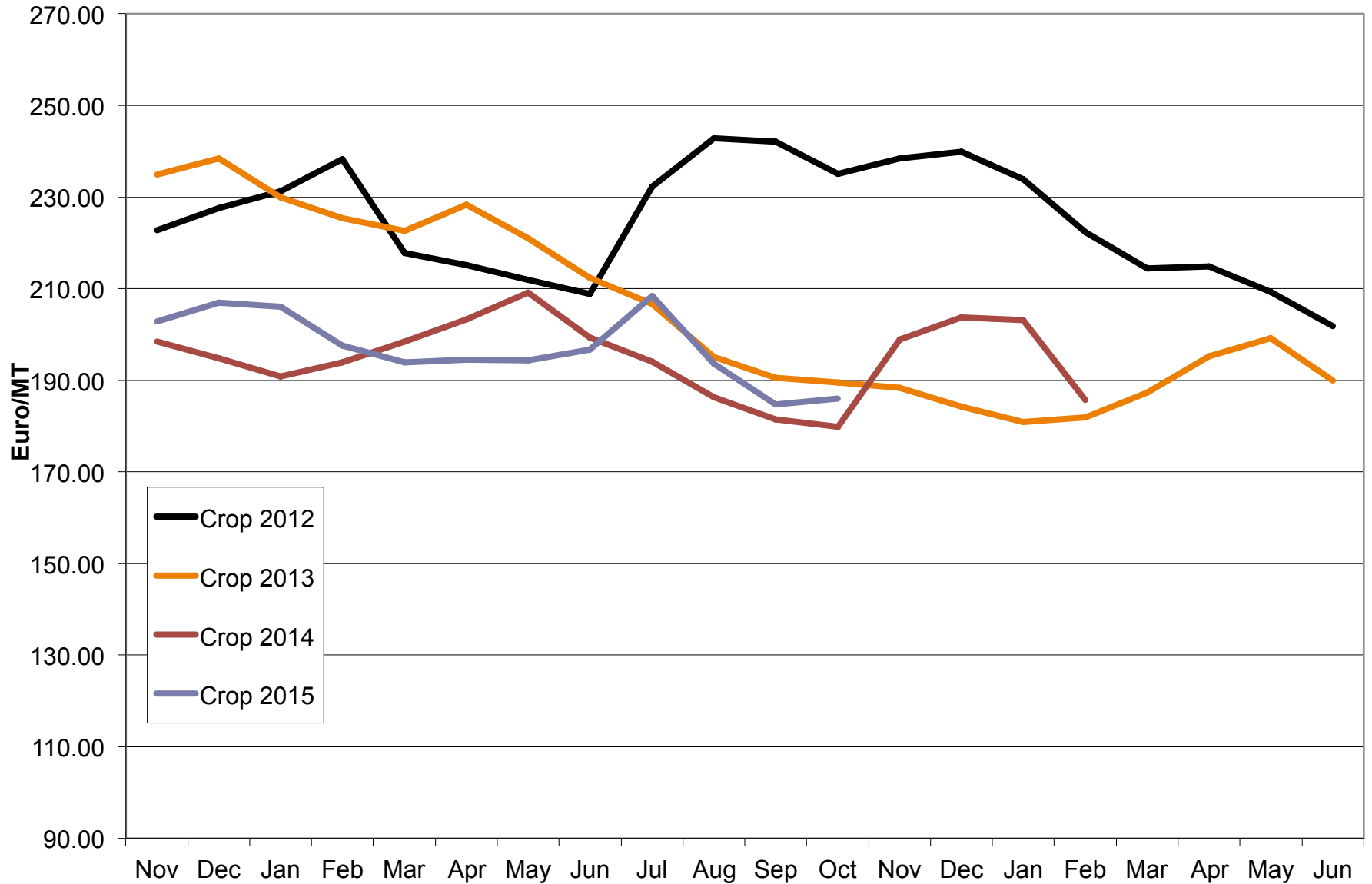
Feed to Malting Price Spread



As expected poor North American 2014 crop caused malting premium to widen. Spread has subsequently normalized somewhat throughout 2015 to €25 /MT
Price spike in July due to concerns of poor yields due to heat which did not materialize at harvest

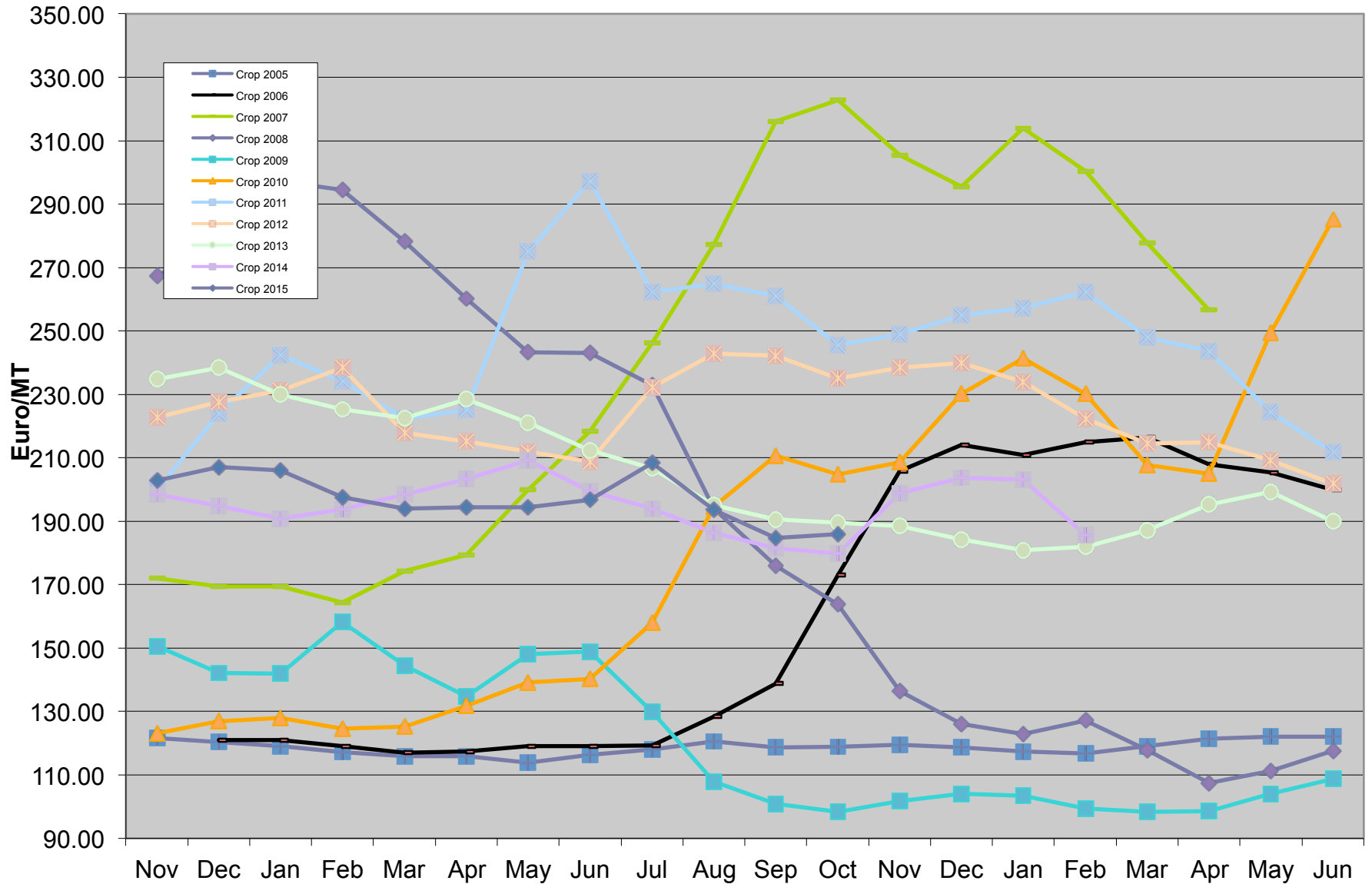


Evolution of Barley Pricing 2012-15





Broader context of Barley prices





US Barley Headlines

- Planting up 17% over 2014
- Harvested Acreage up 24.5%
- Seeding conditions good – ahead of average
- By end of June, 73% of crop was reported excellent
- Hot dry conditions in Northwest dried out soils and lowered quality of 2 row
- Good harvest conditions
- Production volume similar to 2013

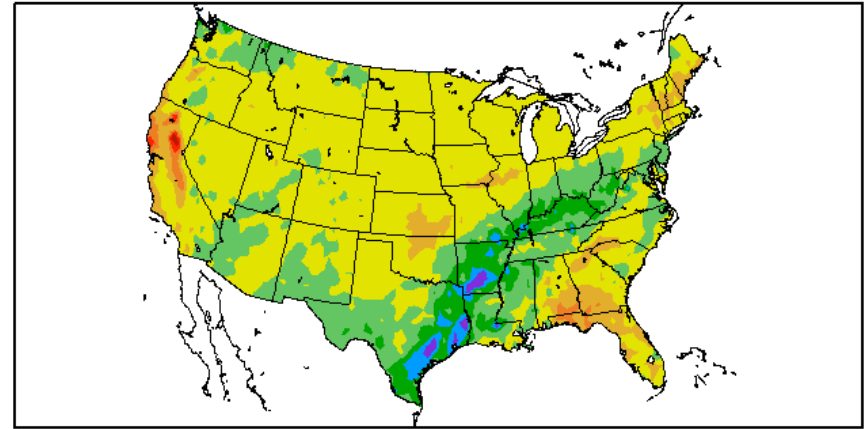


2015 US Growing Conditions

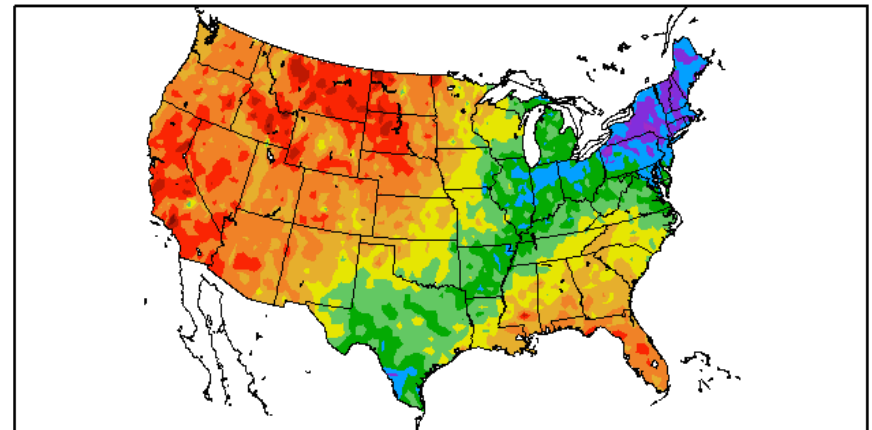
March

Warm and normal soil conditions permitted early planting

Precipitation Anomaly



Temperature Anomaly



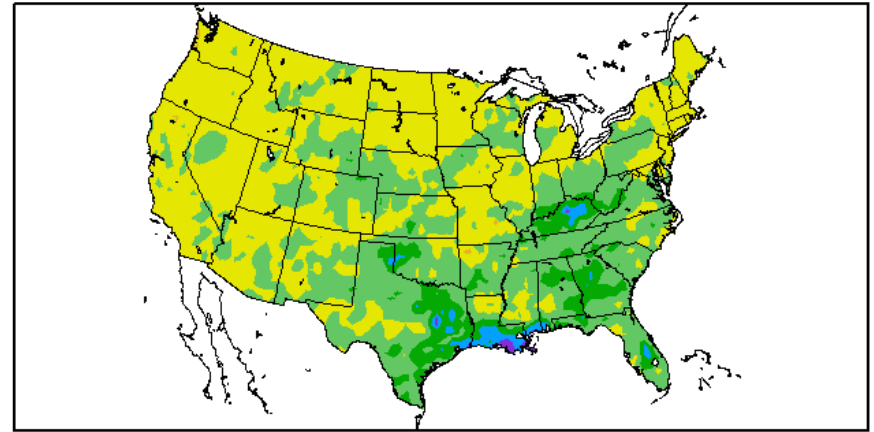


2015 US Growing Conditions

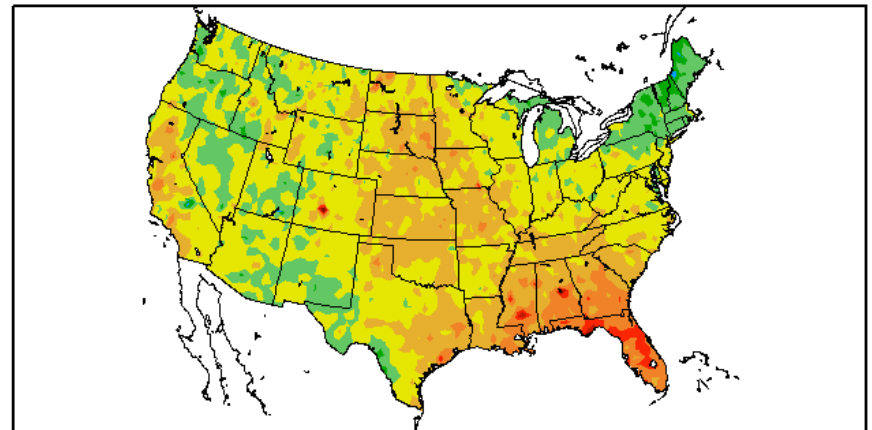
April

Normal conditions prevailed in April promoting emergence and plant development ahead of 5 year average

Precipitation Anomaly



Temperature Anomaly



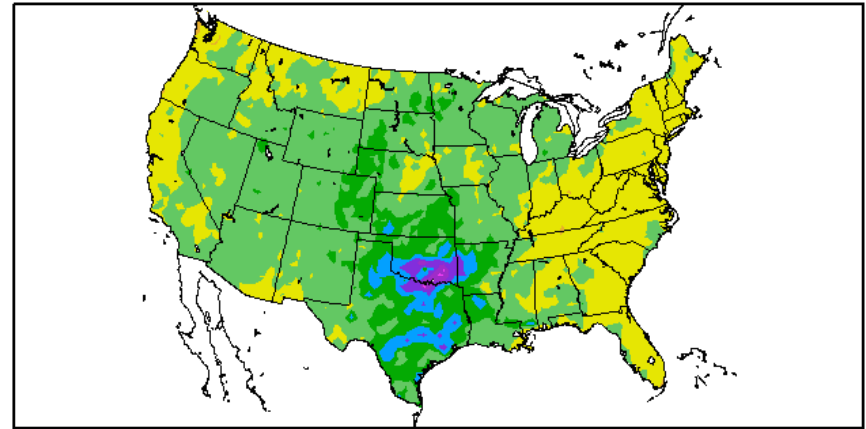


2015 US Growing Conditions

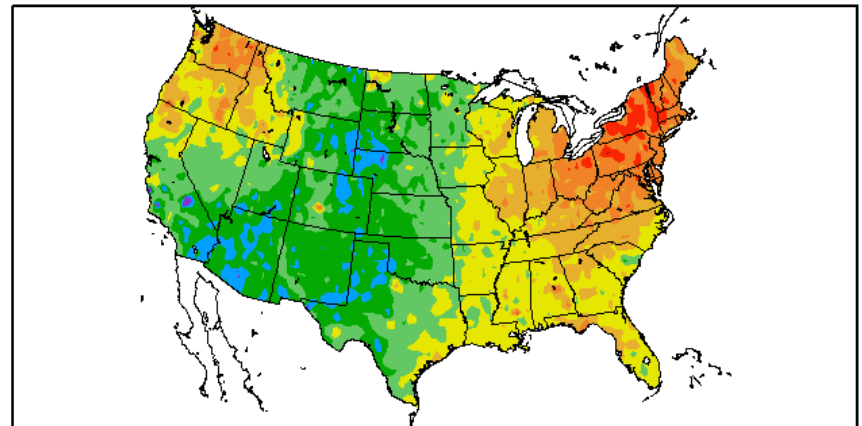
May

Rain in MT reported to be in excess in some areas but largely good conditions across the US growing regions

Precipitation Anomaly



Temperature Anomaly





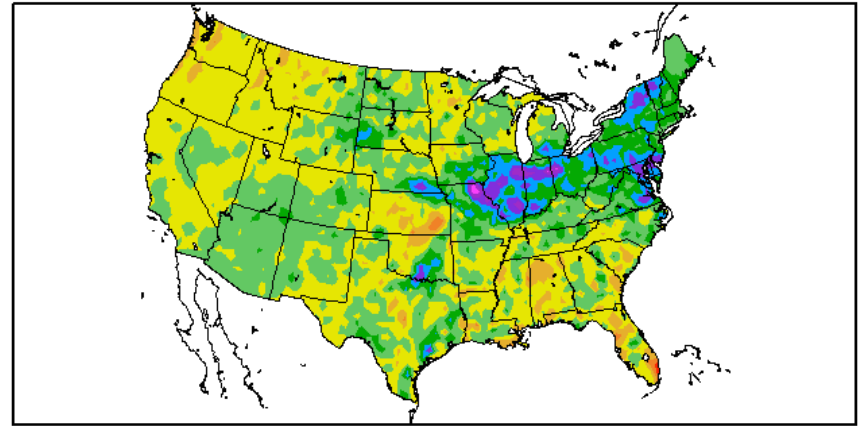
2015 US Growing Conditions

June

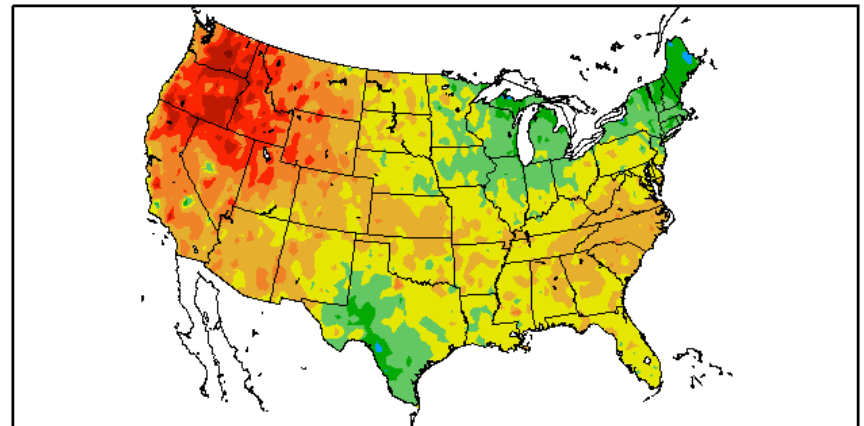
Damaging heat in Pacific Northwest affected barley crops in WA and MT depressing yields and quality.

Heat also suppressed hop yields in Yakima

Precipitation Anomaly



Temperature Anomaly





2015 US Growing Conditions

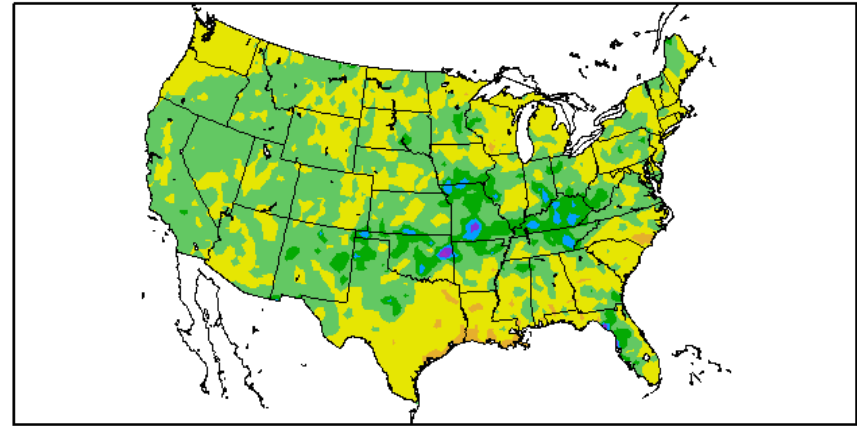
July

A return to more normal temperatures in July helped the situation

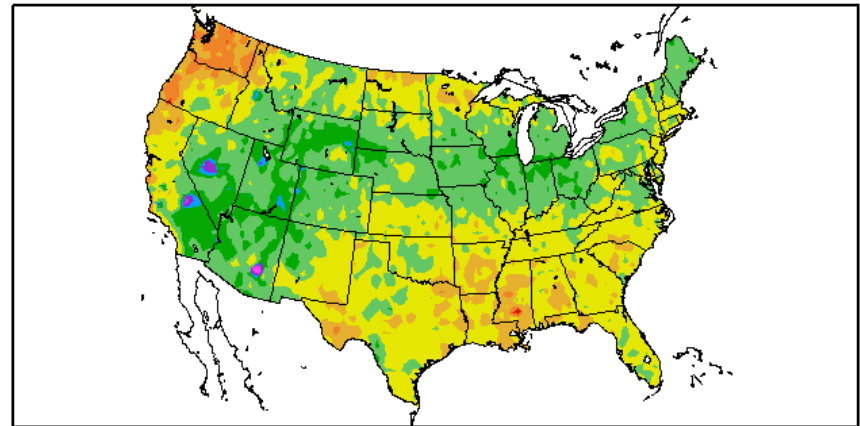
In WA crop reported as only 44% in good condition compared to 73% reported as good to excellent in top production states.

Irrigated acreage fairing better than dry land

Precipitation Anomaly



Temperature Anomaly



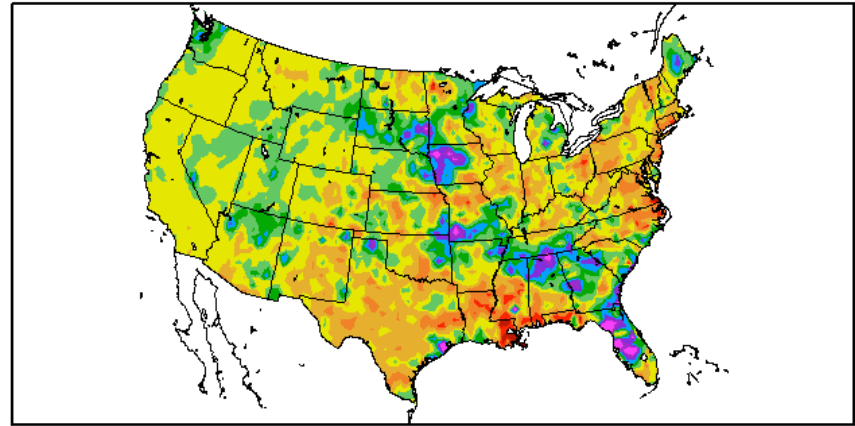


2015 US Growing Conditions

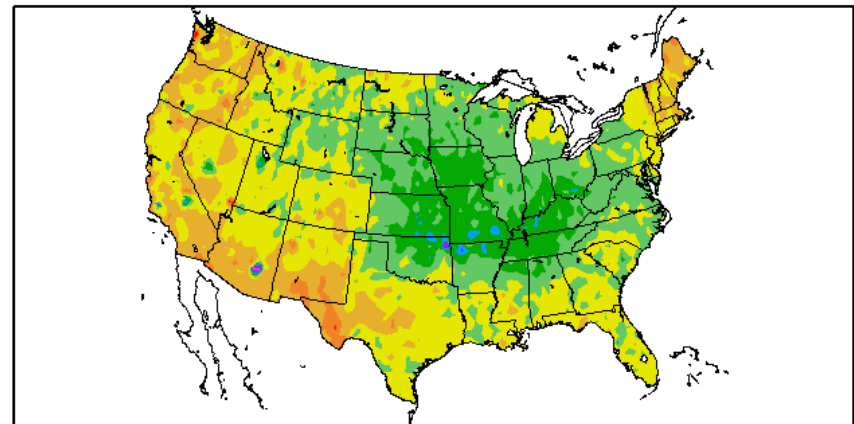
August
Good conditions for barley harvest

Progressed rapidly throughout
August and September

Precipitation Anomaly



Temperature Anomaly



US Barley Production

	Seeded			Harvested			Production		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Minnesota	115	75	135	100	60	120	112	68	201
N Dakota	1,060	620	1,120	1,010	535	1,050	1,003	780	1,463
S. Dakota	34	28	37	22	17	19	22	19	15
Montana	900	920	970	790	770	850	940	972	962
Idaho	610	600	580	590	550	550	1,255	1,126	1,161
Colorado	58	57	65	55	54	63	168	146	178
Wyoming	75	85	100	60	68	86	132	158	178
Washington	185	115	110	175	105	100	306	137	105
California	120	80	70	80	25	25	68	40	30
Oregon	56	50	49	53	38	37	76	41	42
Other	424	401	322	309	275	209	635	465	330
Total	3,637	3,031	3,558	3,244	2,497	3,109	4,720	3,954	4,667

Area x 1000 acres Production x 1000 MT Source USDA
As of Sept 30th 2015



2015 US Crop Assessment

- Sufficient moisture at the right time produced a good crop for the US
- Yields per acre down a touch overall from 2014 but increased planting more than offset. With overall production up 18% over 2014
- Yields in MN up considerably WA down hit by heat wave and dry conditions.
- Good selection rates
- Some pockets of higher protein material
- Compared to last year US will produce good malt from the 2015 crop, better than 2014

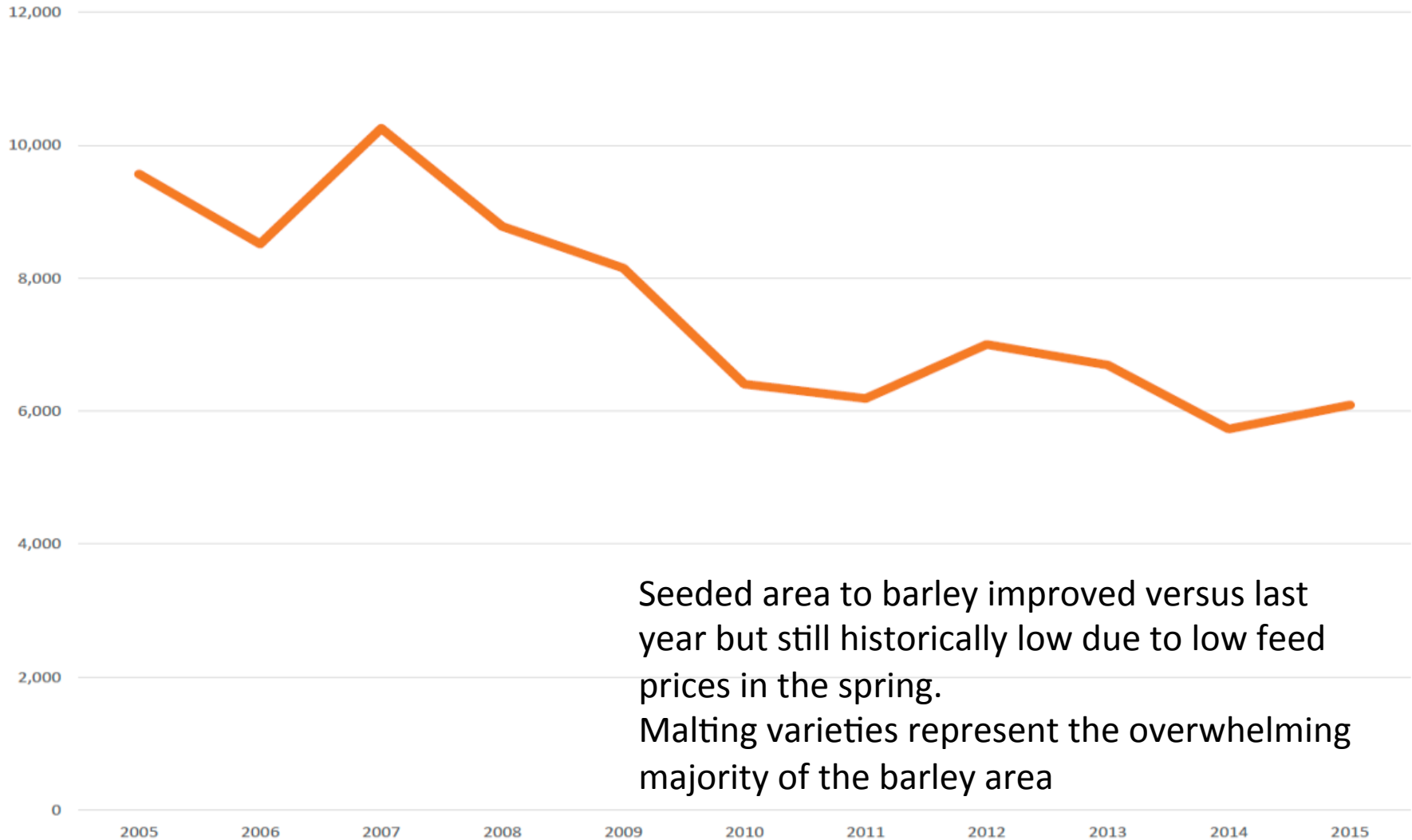


2015 Canadian Barley Headlines

- Seeded Acreage up slightly in 2015
- Wet and cool start to the season – delayed seeding
- Hot weather in June reduced yields and plumps
- Rain in July saved the crop
- Wet harvest conditions
- Expect some pre-sprout damage and staining
- Crop is better quality than 2014



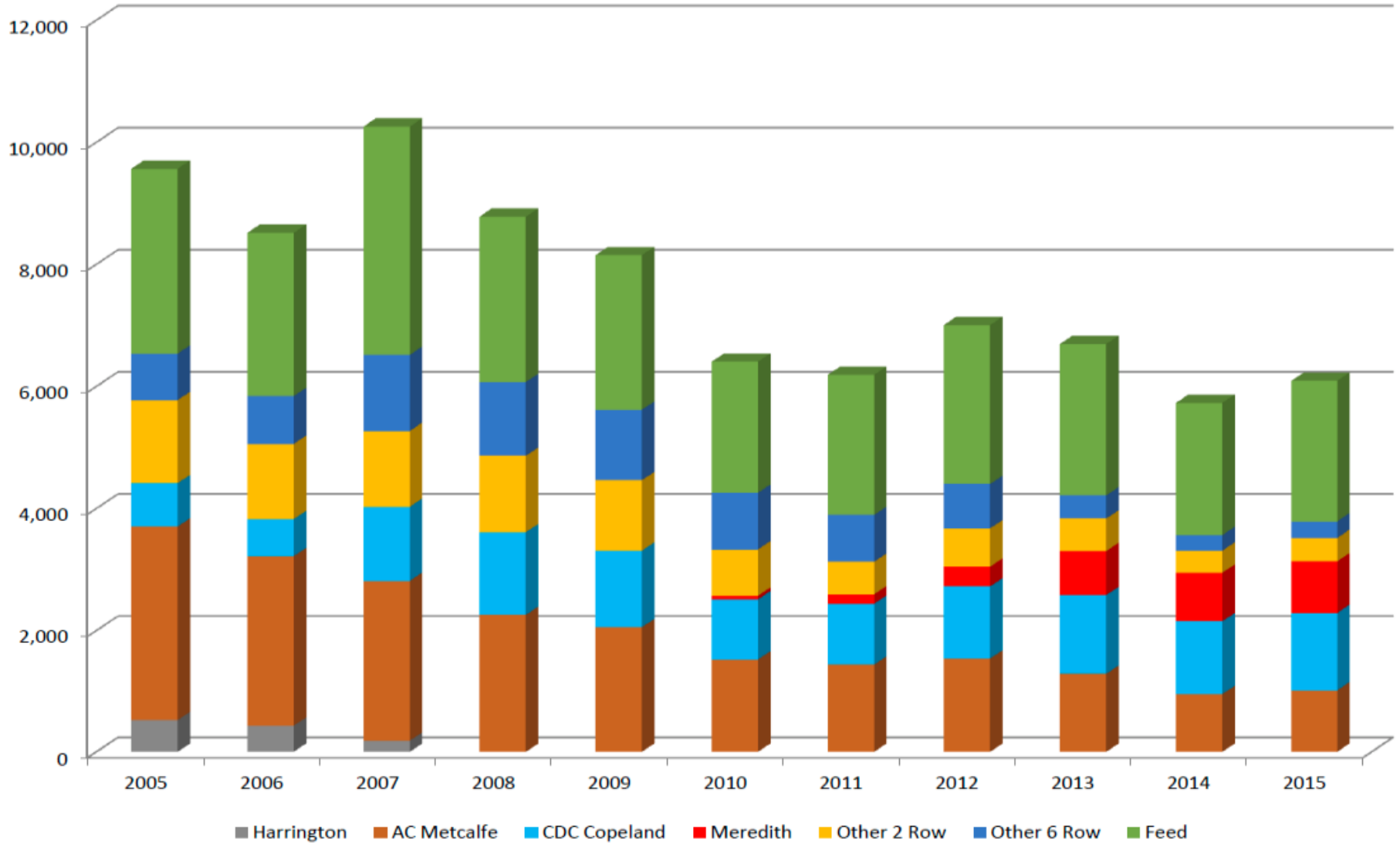
Western Canada Seeded Acreage



Seeded area to barley improved versus last year but still historically low due to low feed prices in the spring.
Malting varieties represent the overwhelming majority of the barley area



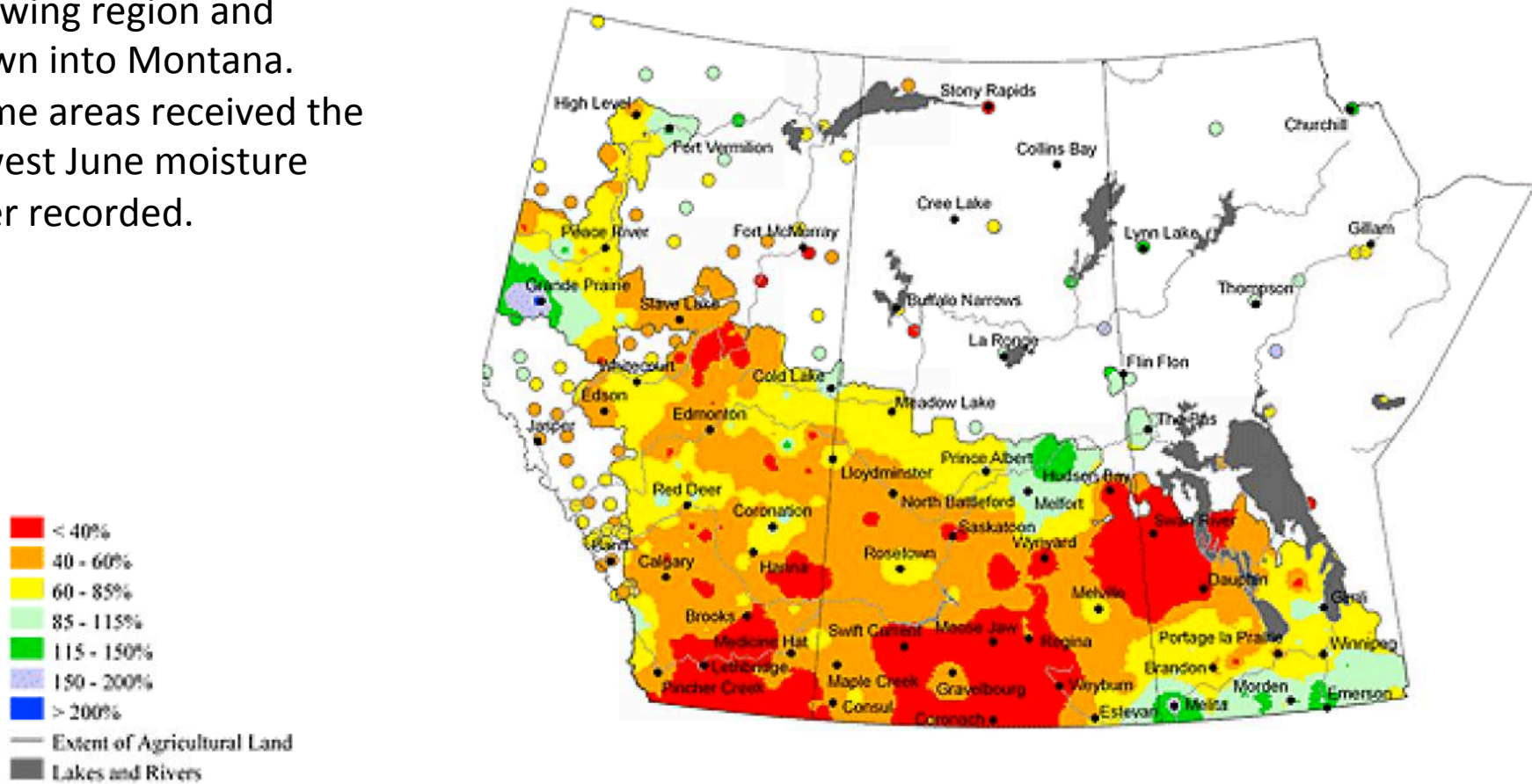
Western Canada Varieties seeded





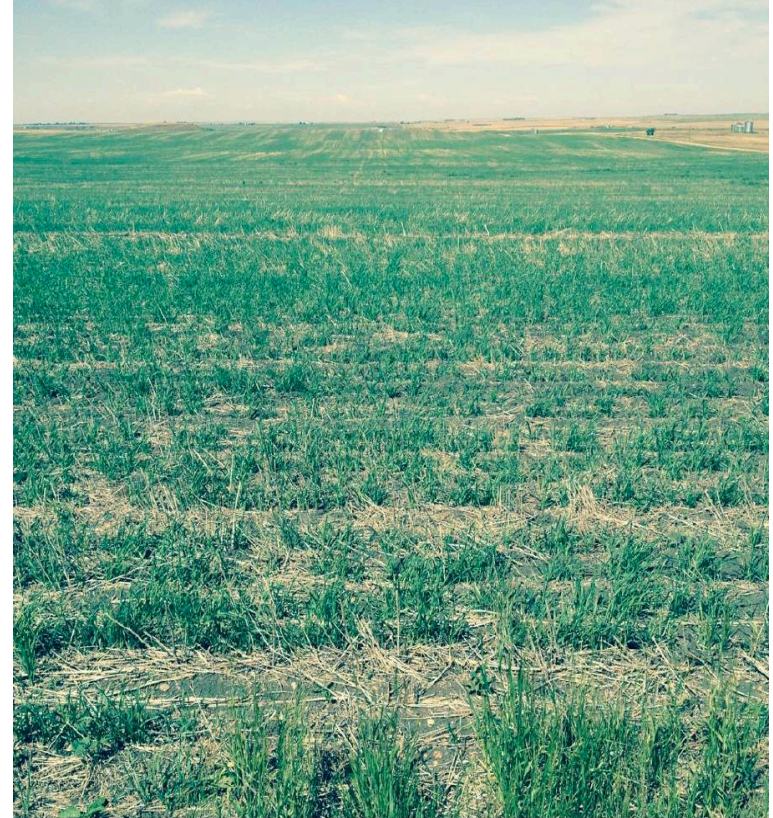
Canadian Prairie Growing Conditions

June was extremely dry across the entire growing region and down into Montana. Some areas received the lowest June moisture ever recorded.



Canadian Crop Development

Dry conditions in May and June combined with lower germination vigor to due the sprout damage of the seed produced in 2014 made for very uneven, poor emergence in many fields.



The dry conditions also caused less tillering than normal which had a negative impact on yield.

Canada Crop Development

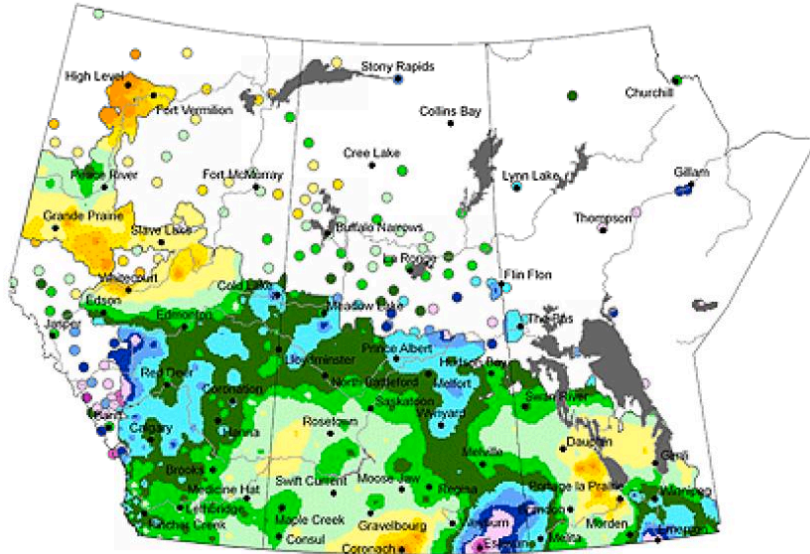
Barley crops in areas that managed to receive a little more moisture were able to build fairly decent crop canopies which held moisture in the fields to a somewhat better degree. While there were periods of above average temperatures, they were not accompanied by wind to any degree so soils protected by some canopy did not dry out nearly as quickly as fields with no canopy as shown in the previous slide.





2015 Canada Crop Development

Unfortunately, the systems that have brought moisture have also brought it in the form of hail and that will impact the total amount of barley available for harvest



Unfortunately, the rains that saved the crop in July continued delaying harvest and causing a great deal of pre-harvest sprout damage to much of the crop.

Canadian Barley Production

Canadian barley areas and production 2013,2024 and 2015									
	Harvested			Production			Yield		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Alberta	1,348	1,141	1,190	5,545	4,131	3,869	4.1	3.6	3.3
Manitoba	170	107	134	705	355	486	4.1	3.3	3.6
Saskatchewan	959	745	902	3,412	2,173	2,787	3.6	2.9	3.1
Total Canada	2,652	2,136	2,363	10,237	7,119	7,610	3.9	3.3	3.2
Area x 1000 Ha Production x 1000MT Source Statcan									

Yields better than 2014 in all provinces apart from AB

Total harvest expectation better than 2014

Stocks will not be rebuilt in 2015



2014 Canadian Crop Assessment

- Protein up on average 0.5% to 1% from 2014 crop. Ave 12.5%
- Plump levels higher than 2014 crop
- Sprout damage will lead to higher beta-glucans than normal
- Variable modification likely
- Processing choices by maltsers critical
- Small carry over from 2014 crop will likely result in sooner crop change over than last year



Global Barley Production 2015

World Barley Production X 1000 MT	2013/2014	2014/2015	2015/2016 Prj. Sep	2015/2016 Prj. Oct
USA	4,719	3,953	4,565	4,666
Australia	9,174	8,014	8,700	8,900
Canada	10,237	7,119	7,300	7,600
EU	59,722	60,470	58,571	59,806
Russia	15,389	20,026	19,500	17,500
Ukraine	7,561	9,450	8,600	8,600
WORLD TOTAL	144,575	141,168	144,752	144,610
Source USDA FAS				



2015 Situation

- Good conditions in malting barley regions of Europe
- Good conditions in most of USA
- Problematic growing and harvest conditions in Canada
- Expect higher proteins and possibly beta glucan from Canadian 2 row crops



Conclusions & Considerations 2015

- European crop good
- US crop good
- Energy markets benign
- Barley prices stable
- Dollar gaining value against major currencies.
- European malt remains attractive for Eastern seaboard or smaller brewers?
- Canadian crop improved over 2014 but not a good harvest
- Prepare for higher proteins & possibly higher beta glucan
- Flexibility in malt specs will be required, similar to 2014
- North American malt house S & D balanced

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