California Wheat
Presented by CLAUDIA CARTER
carter@californiawheat.org
Welcome
About the CWC
California Wheat
California WHEAT COMMISSION
California Market
What's next?

California AG Industry

>76,000
Farms and
Ranches

$54 Billion
>$100 Billion

> 400 crops

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About us

The California Wheat Commission (CWC) was established in 1983, expressly to support research that improves California wheat quality and marketability; and to develop and maintain domestic and international markets for California wheat.

Growers

Research & Marketing

Quality Lab

CA Wheat Growers

Top farm state both in value of production and export

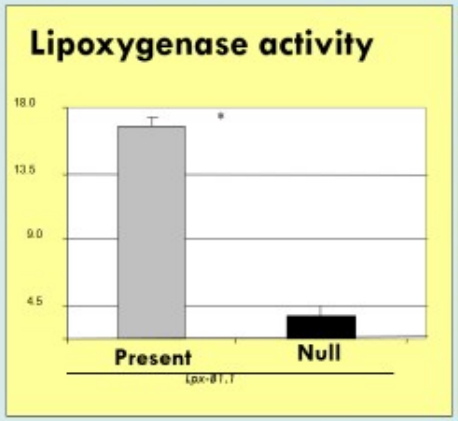
- Wheat is a valuable rotation crop with tomatoes = Improves soil health and breaks disease and weed cycles
- CWC collects $1.50/ton in assessments on wheat produced in CA
- Growers vote, referendum every 5 years on whether to continue CWC
- >40% of our budget supports wheat research

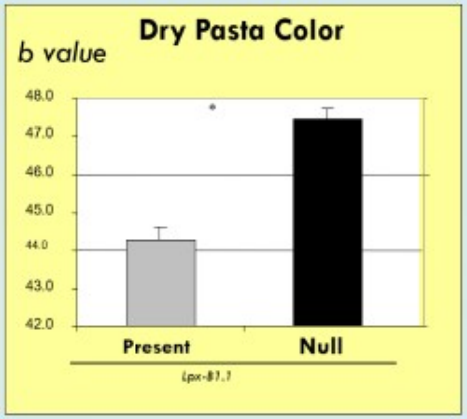
Wheat Research

UC Davis Wheat Breeding - Dr. Jorge Dubcovsky

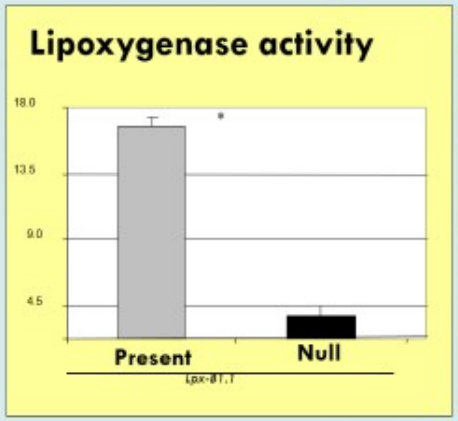
- Stripe Rust Resistance (*Yr5* , *Yr15*)
- Increase Protein Content and Quality - varieties with High Grain Protein genes
- Increase grain size
- Increase grain Resistant Starch
- Durum: reduce cadmium levels, increase yellow pigment and gluten strength.

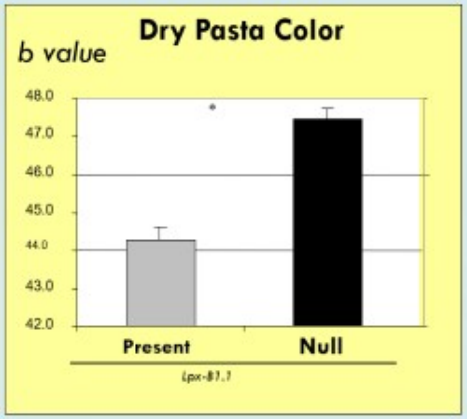
Wheat Research





Wheat Research

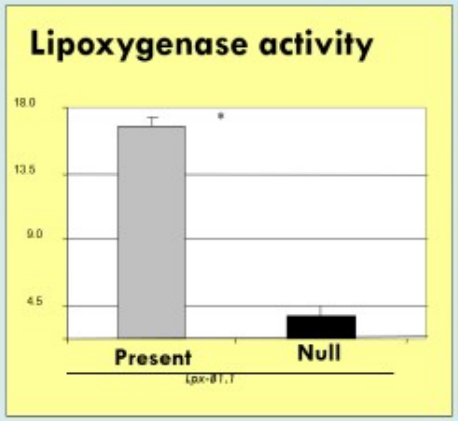


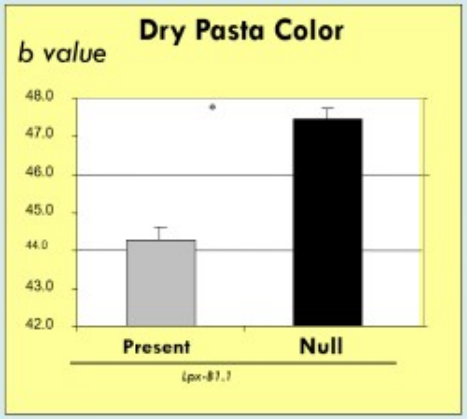


Wheat Research

California WHEAT

UC DAVIS
UNIVERSITY OF CALIFORNIA





Wheat Research

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UNIVERSITY OF CALIFORNIA

DESERT DURUM ®

Marketing our Mark…

Marketing:
High Resistant Starch Wheat

Wheat Quality Lab

Only Wheat Commission with a on-site Quality Lab

- Quality testing for end-use functionality
- Annual crop quality reports
- Testing new varieties for both public and private breeders
- Product development
- Technical training for bakers and millers

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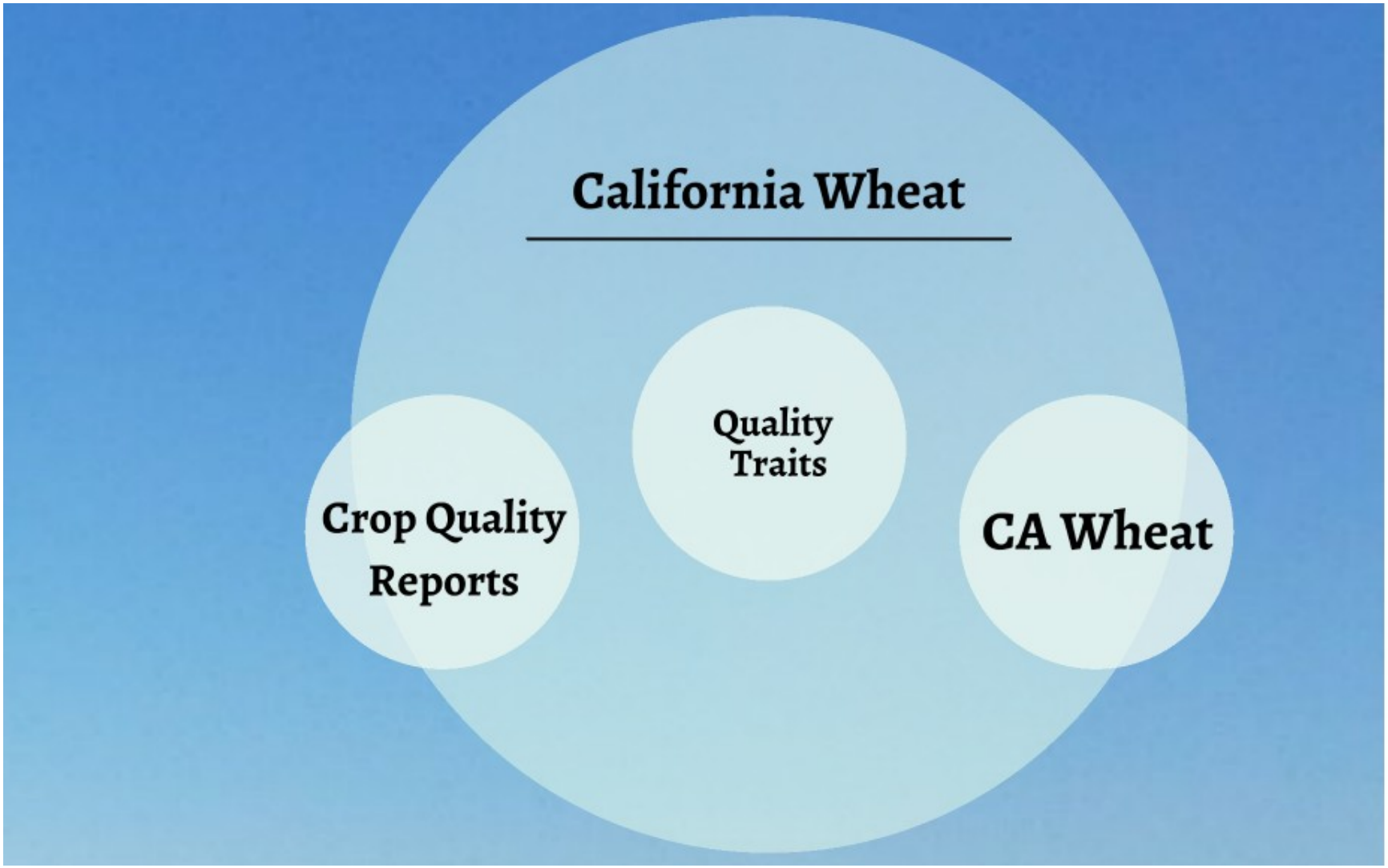
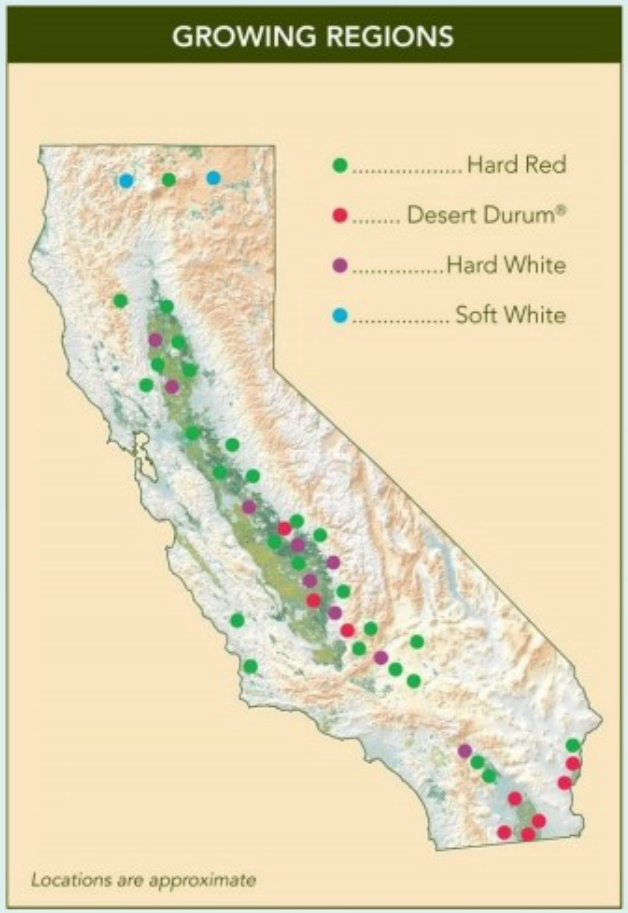

California Wheat
Quality Traits
Crop Quality Reports
CA Wheat



California Wheat

- CA wheat production is centered in the SJ Valley.
- CA grows five of the six wheat classes:
    - Hard Red - 76%
    - Durum - 11%
    - Hard White - 7%
    - Soft White - 6%
- 80% of wheat is "irrigable"
- Low disease pressure
- Yields and protein good > Average
- Production in 2018 ~ **400,000 MT**

California Wheat Quality Traits

Test Weight 5-year Avg. >63 lbs/bu

Grain size with >90% Large kernels

High flour yield

Low grain moisture

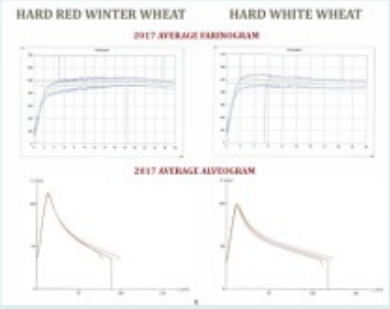
Medium to High Protein Content. **HRW 12.5%**

High Water Absorption > 64% , some varieties >68%

Loaf Volumes > 900 cc

Crumb Color - White (Flour color L-value > 93)

WHEAT	Joaquin Oro San Joaquin Valley	WB-9112 San Joaquin Valley
Protein (12% MB)	13.6	12.7
Ash (12% MB)	1.60	1.53
Moisture (%)	6.4	6.5
Falling Number (sec)	563	546
Micro Sedimentation (CC)	43	46
Test Weight		
lb/bu	63.7	65.0
kg/hl	83.8	85.4
SKCS Hardness Score	64	71
1000 Kernel Weight (g)	44.8	41.5
Kernel Size Distribution		
Large/Medium/Small	93/7/0	89/10/1
FLOUR		
Lab Mill Yield (%)	72.0	71.1
Protein (14% MB)	12.3	11.5
Ash (14% MB)	0.40	0.37
Gluten Index	89.4	85.8
Wet Gluten (14% MB)	36.9	33.3
SRC*: GPI	0.69	0.79
Water/ 50% Sucrose	71/112	73/110
5% Lactic Acid/5% Na_2CO_3	137/88	154/85
ALVEOGRAPH		
P (mm)	132	127
L (mm)	83	81
P/L ratio	1.59	1.57
W (10^{-4} Joules)	369	354.5
MIXOGRAPH		
Absorption (%)	71.0	68.5
Peak Time (min)	4	4
Peak Height (mm)	65	51
M.T. Score (1-8)	4	5
FARINOGRAPH		
Absorption (%)	68.1	67.8
Peak Time (min)	16.4	18.4
Stability (min)	19.6	16.7
M.T.I.	14.8	20.0
BAKING RESULTS		
Baking Absorption (%)	67.2	66.8
Bread Volume (cc)	986	990



ts

h flour yield

grain moisture

%

s >68%

3)

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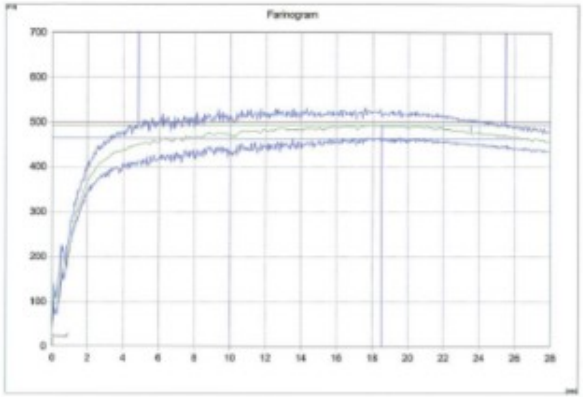
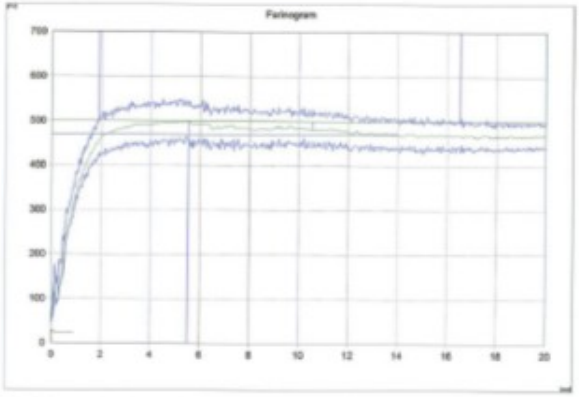
HARD RED WINTER WHEAT

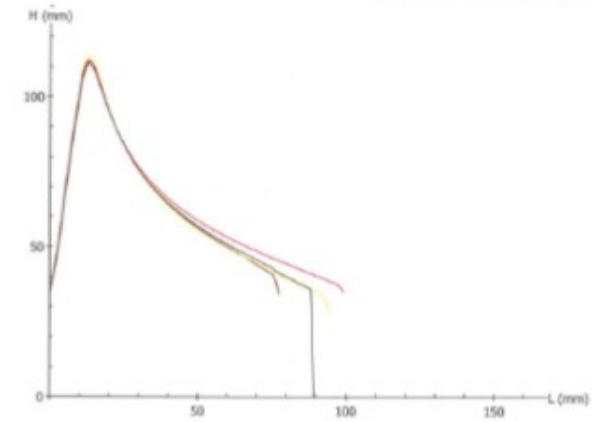
HARD WHITE WHEAT

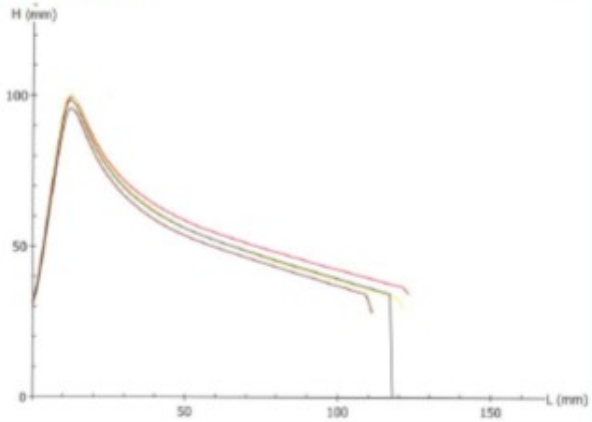
2017 AVERAGE FARINOGRAM





2017 AVERAGE ALVEOGRAM





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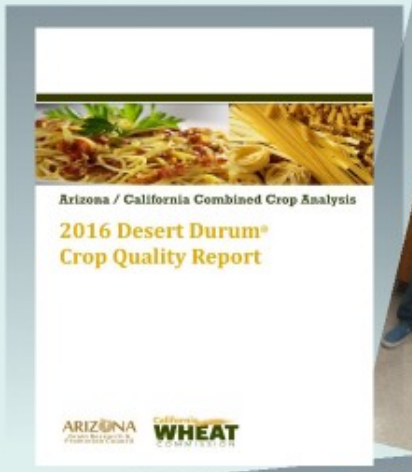

Crop Quality Reports

- Wheat collected from Elevators
- Analyzed by Class, Variety, and Location
    - HRW and HW
    - Soft White - Northern CA
    - San Joaquin Durum
    - Desert Durum®
- Use our **Variety Survey,** major varieties grown in CA for each location Sacramento and SJV
- Check our **Crop Quality Reports**

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California Market

California is the largest wheat milling state by capacity

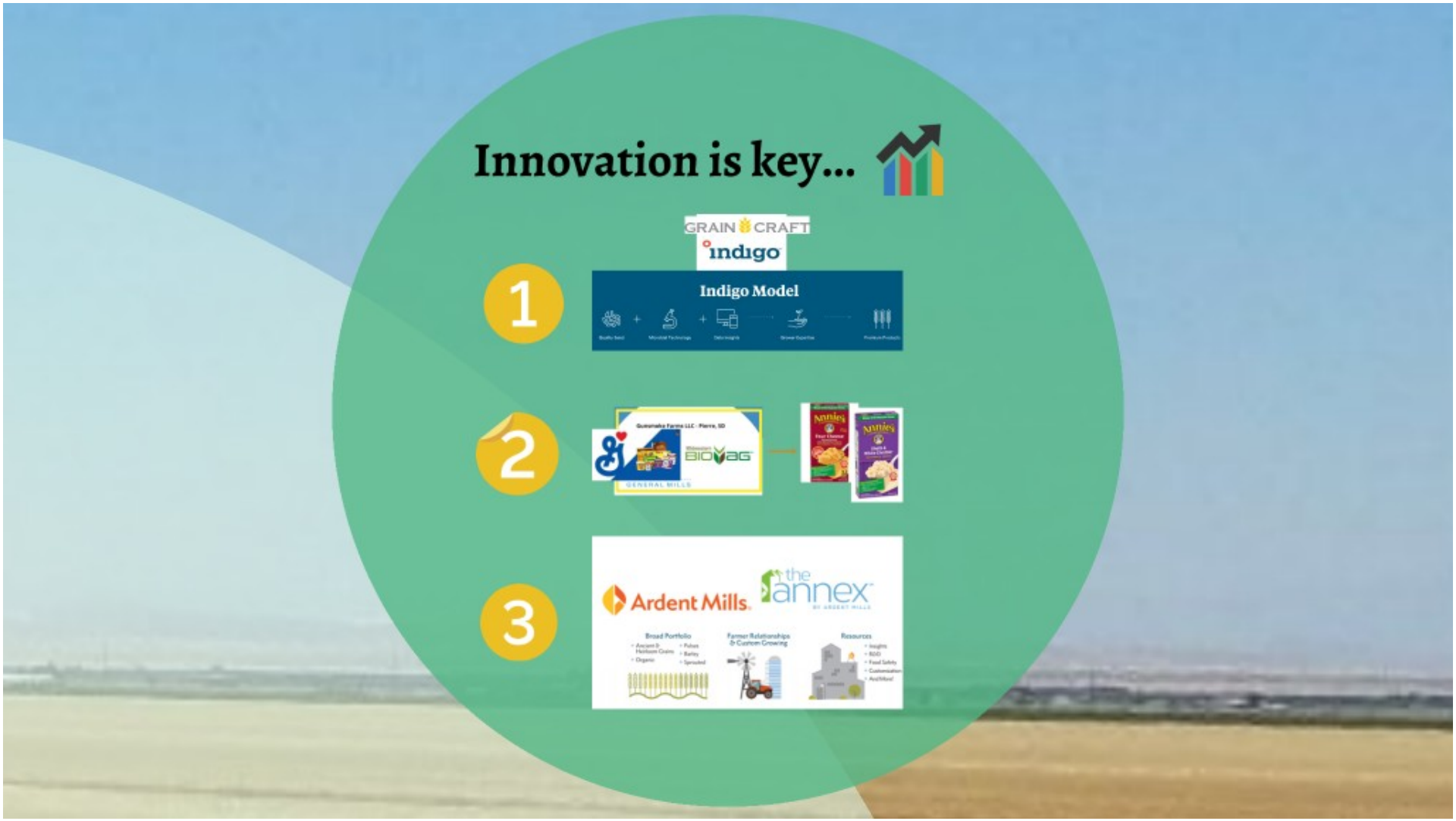
Wheat mills grind~ 1.9 MMT*

*USDA - http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1901

Innovation

Why?

And...


Innovation is key...
GRAIN CRAFT
indigo
1
Indigo Model
2
BIOVAG
GENERAL MILLS
3
Ardent Mills
the annex
Broad Portfolio
Farmer Relationships & Custom Growing
Resources

GRAIN CRAFT

indigo™

Indigo Model

Gunsmoke Farms LLC - Pierre, SD
Midwestern
BIOYAG
GENERAL MILLS

Made with Organic Pasta
Annie's
HOMEGROWN
Four Cheese
Mini Penne Pasta
with a Blend of Four Cheeses
MACARONI & CHEESE
Extra CHEESY
Made with Organic Pasta
Annie's
HOMEGROWN
Shells &
White Cheddar
MACARONI & CHEESE

Ardent Mills®

the annex™ BY ARDENT MILLS

Broad Portfolio

- Ancient & Heirloom Grains
- Organic
- Pulses
- Barley
- Sprouted

Farmer Relationships & Custom Growing

Resources

- Insights
- R&D
- Food Safety
- Customization
- And More!

Consumers are asking a lot of questions...

We are telling them...
Sostenible
Trazabilidad

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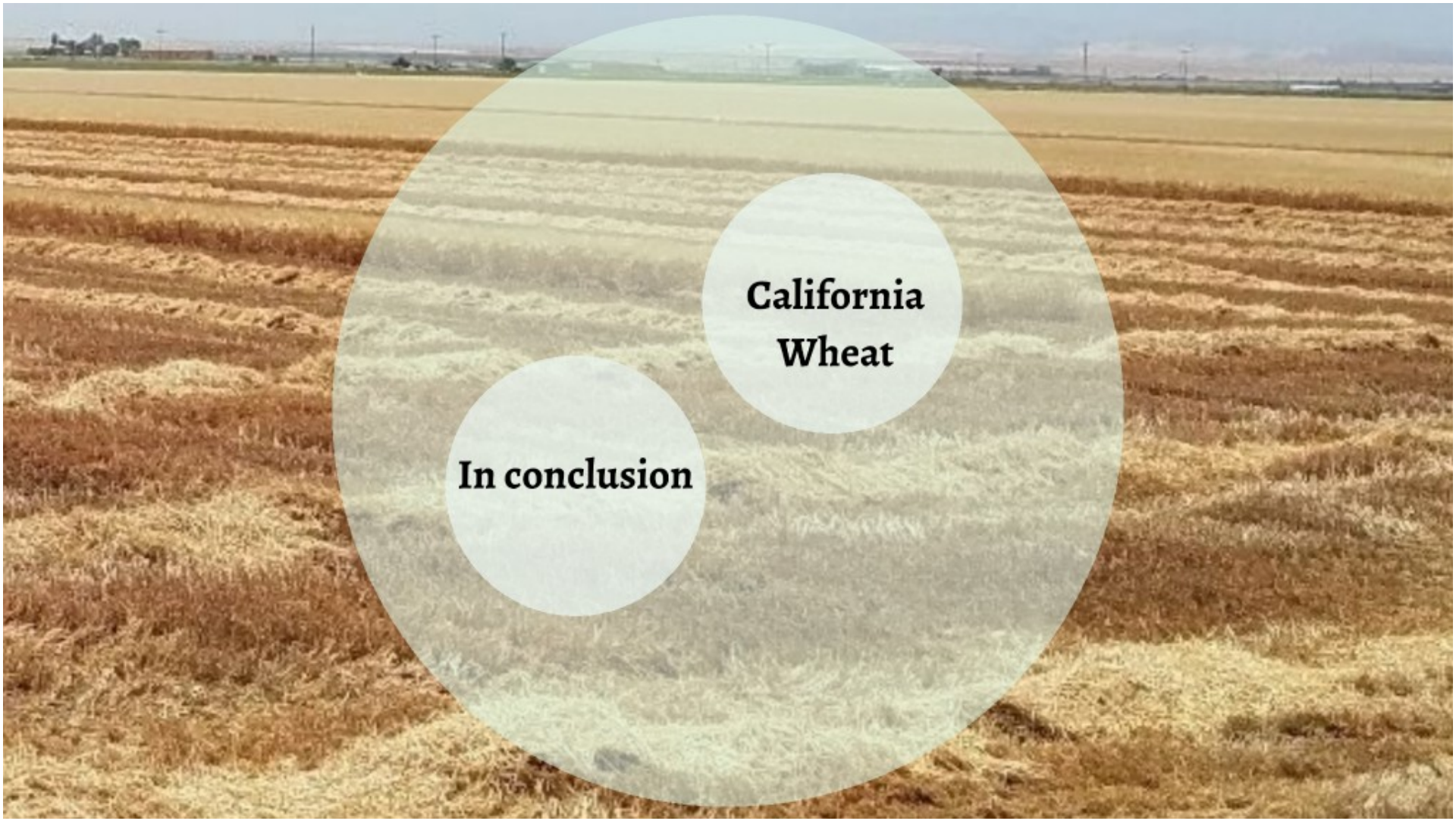
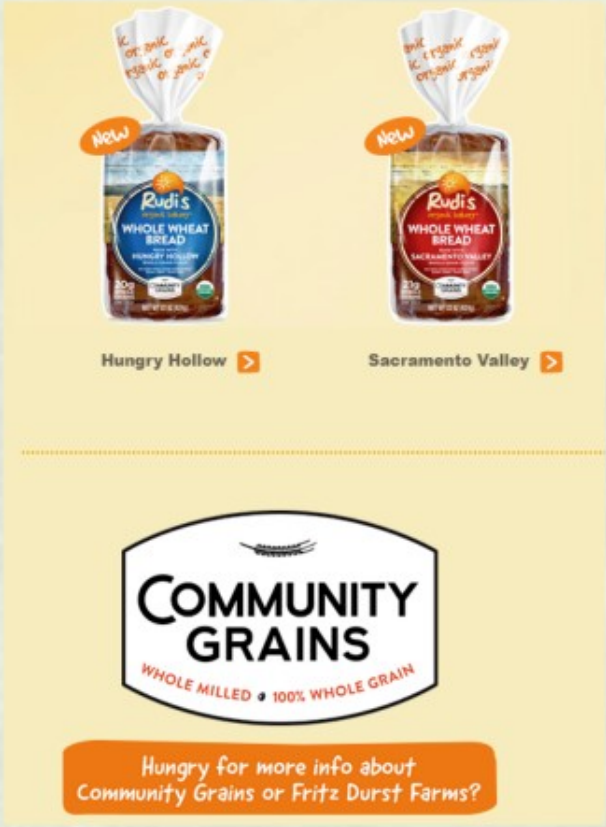

California
Wheat
In conclusion

Our Mark...

California WHEAT

Marketing strategy...

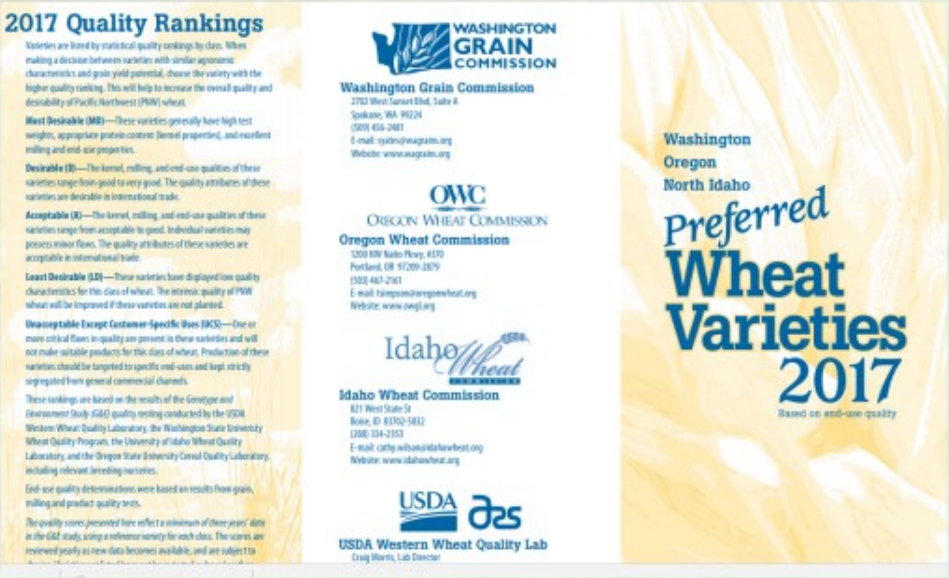


Marketing strategy…

California WHEAT

CALIFORNIA CA GROWN

California Wheat
Preferred Variety List



2017 Quality Rankings

Varieties are listed by statistical quality rankings by class. When making a decision between varieties with similar agronomic characteristics and grain yield potential, choose the variety with the higher quality ranking. This will help to increase the overall quality and desirability of Pacific Northwest (PNW) wheat.

Most Desirable (MD)—These varieties generally have high test weights, appropriate protein content (kernel properties), and excellent milling and end-use properties.

Desirable (D)—The kernel, milling, and end-use qualities of these varieties range from good to very good. The quality attributes of these varieties are desirable in international trade.

Acceptable (A)—The kernel, milling, and end-use qualities of these varieties range from acceptable to good. Individual varieties may possess minor flaws. The quality attributes of these varieties are acceptable in international trade.

Least Desirable (LD)—These varieties have displayed low quality characteristics for this class of wheat. The intrinsic quality of PNW wheat will be improved if these varieties are not planted.

Unacceptable Except Customer-Specific Uses (UCS)—One or more critical flaws in quality are present in these varieties and will not make suitable products for this class of wheat. Production of these varieties should be targeted to specific end-uses and kept strictly segregated from general commercial channels.

These rankings are based on the results of the Genotype and Environment Study (G&E) quality testing conducted by the USDA Western Wheat Quality Laboratory, the Washington State University Wheat Quality Program, the University of Idaho Wheat Quality Laboratory, and the Oregon State University Cereal Quality Laboratory, including relevant breeding nurseries.

End-use quality determinations were based on results from grain, milling and product quality tests.

The quality scores presented here reflect a minimum of three years' data in the G&E study, using a reference variety for each class. The scores are reviewed yearly as new data becomes available, and are subject to

WASHINGTON GRAIN COMMISSION

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Portland, OR 97209-2879
(503) 467-2161
E-mail: trimpson@oregonwheat.org
Website: www.owgf.org

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Idaho Wheat Commission
821 West State St
Boise, ID 83702-5832
(208) 334-2353
E-mail: cathy.wilson@idahowheat.org
Website: www.idahowheat.org

USDA ars

USDA Western Wheat Quality Lab
Craig Morris, Lab Director

Washington
Oregon
North Idaho

Preferred
Wheat Varieties 2017
Based on end-use quality

- Based on Quality - end-product
- Location
- Yield potential

Best Management practices

Sagouspe Farms - Los Banos, CA

Customer Sample ID#	WB 9229
CWC ID#	Sample 2 HR-126
Grain Analysis	
Moisture (%)	8.20
Protein (%) 12% MB	13.53
Test Weight (lb/bu)	65.24
1000 Kernel Weight (g)	43.86
Falling No. (Sec)	403.00
Kernel Sizing	
L/M/S	90/10/0
Farinograph	
Absorption %	66.7
Development Time (min)	29.3
Stability (min)	26.9
Baking Analysis	
Bake Absorption%	67
Mixing time (min:sec)	3:30
Bread Volume c.c	1017.5
*Bake Score (1-10)	9.0

Customer Sample ID#	WB 9229
CWC ID#	Sample 2 HR-126
Grain Analysis	
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Protein (%) 12% MB	13.53
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Planning for the future...

Research
Best management practices
Communication

Partnership
Innovation

Deliver quality

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