Texas High Plains Winter Canola… …and Coleman Area Thoughts

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TEXAS A&M AGRILIFE EXTENSION

Why Winter Canola, Why Now?

- Highly valuable oil in food market, but also a premium oil for biodiesel
- Winter canola heavily researched in Oklahoma due to weed pressure in wheat
- Roundup Ready winter canola available
  - Also hybrid winter canola
- USDA is funding winter canola work in Texas & New Mexico High Plains

Dryland

← *Curry Co., NM*

Irrigated
Hale Co., TX

Typical appearance after as winter is concluding. Key is the viability of the growing point, that is has survived.


Roundup Ready Seed block
Dumas, TX—2008

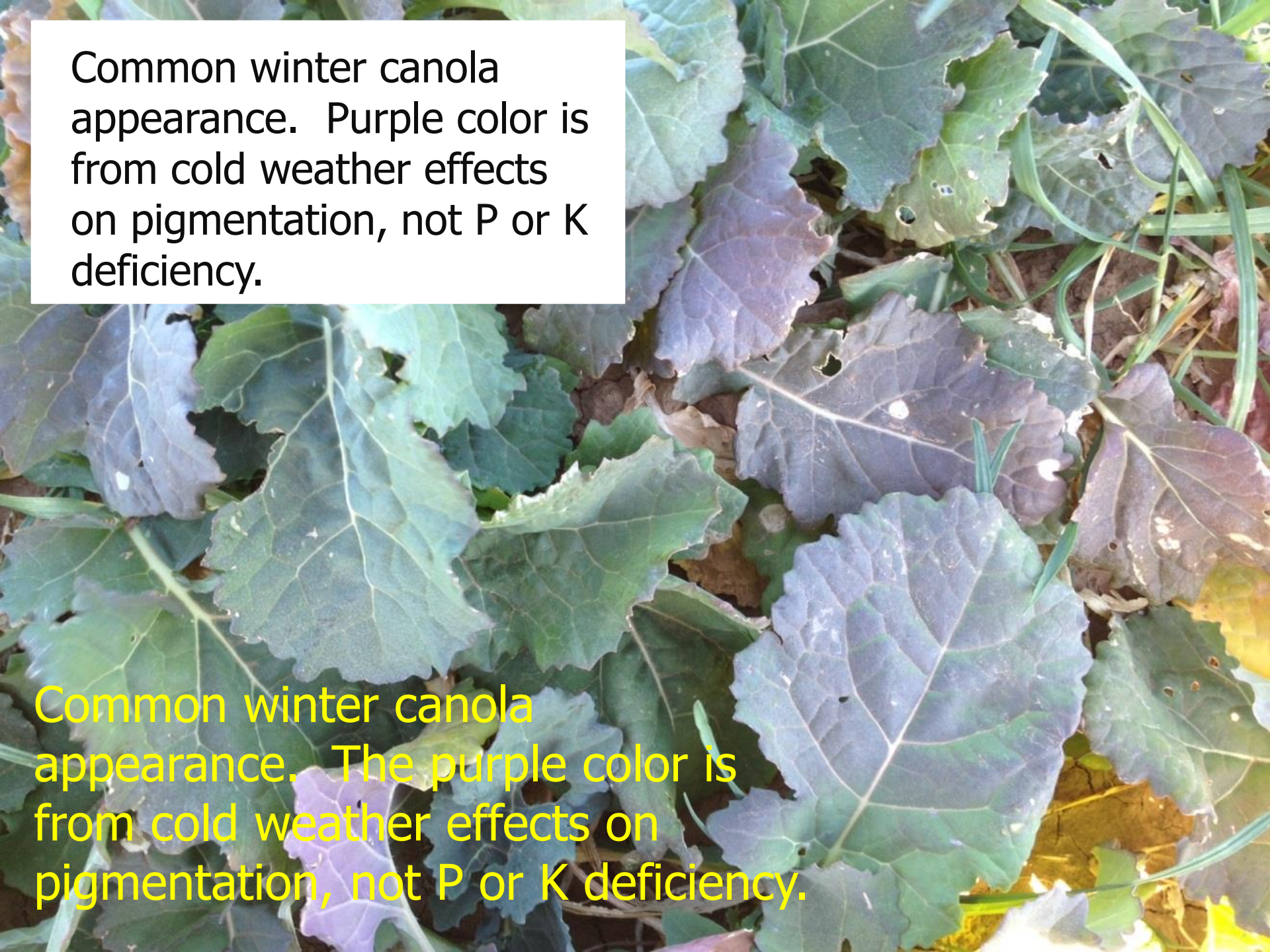
Canola Issues & Questions

- Where is the market? (ADM, Lubbock)
- Rotation issues & canola volunteer in other crops?
- Shattering losses and how to harvest?
- Can I graze canola? Otherwise producers are giving up the forage potential of small grains.
- Varieties:
  - Roundup Ready varieties: may have yield drag
  - Sulfonyl urea (SU) tolerant
  - Hybrids
- How does canola compare with wheat?
  - Similar production conditions: ~80% of bushels (wheat is 60 lbs./bu, winter canola is 50 lbs./bu)

Is lack of grazing in winter canola a limitation?

- If you graze wheat a lot, then will going to canola may leave a gap in your grazing needs?
- Most advice from Oklahoma State Univ. and especially the seed companies suggests no grazing
  - Also, seed treatments are not labeled for grazing
- Can achieve some grazing benefit, but must be lightly grazed and probably stop a couple of weeks prior to wheat jointing (~mid-Feb.)

Moore Co., 2013



Common winter canola appearance. The purple color is from cold weather effects on pigmentation, not P or K deficiency.

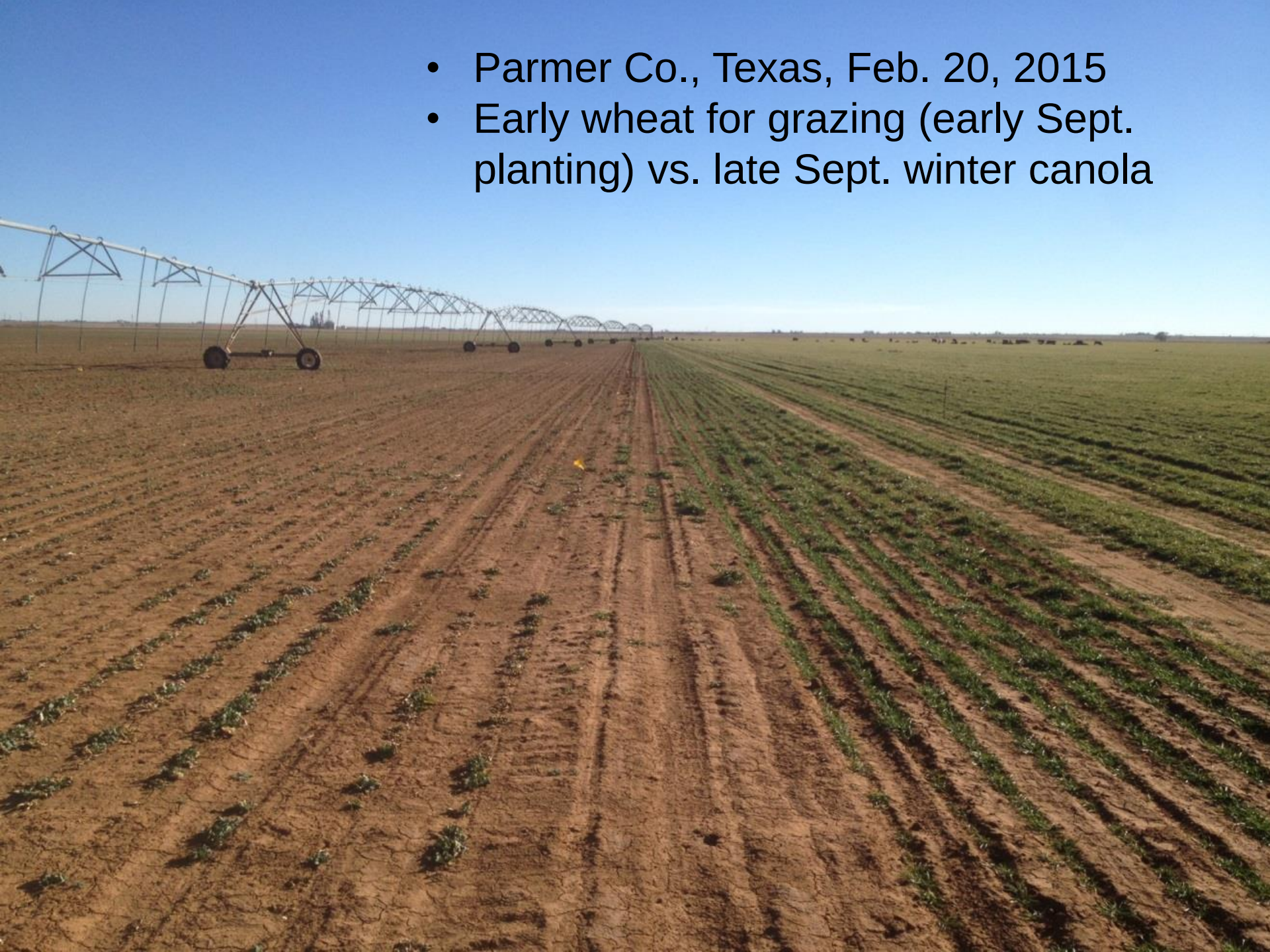
Mid-December, 2012; Sherman Co., TX


Picture Series, Sherman Co., TX
Feb. 2013—after beautiful 6-8” tall foliage, Dec. 2012

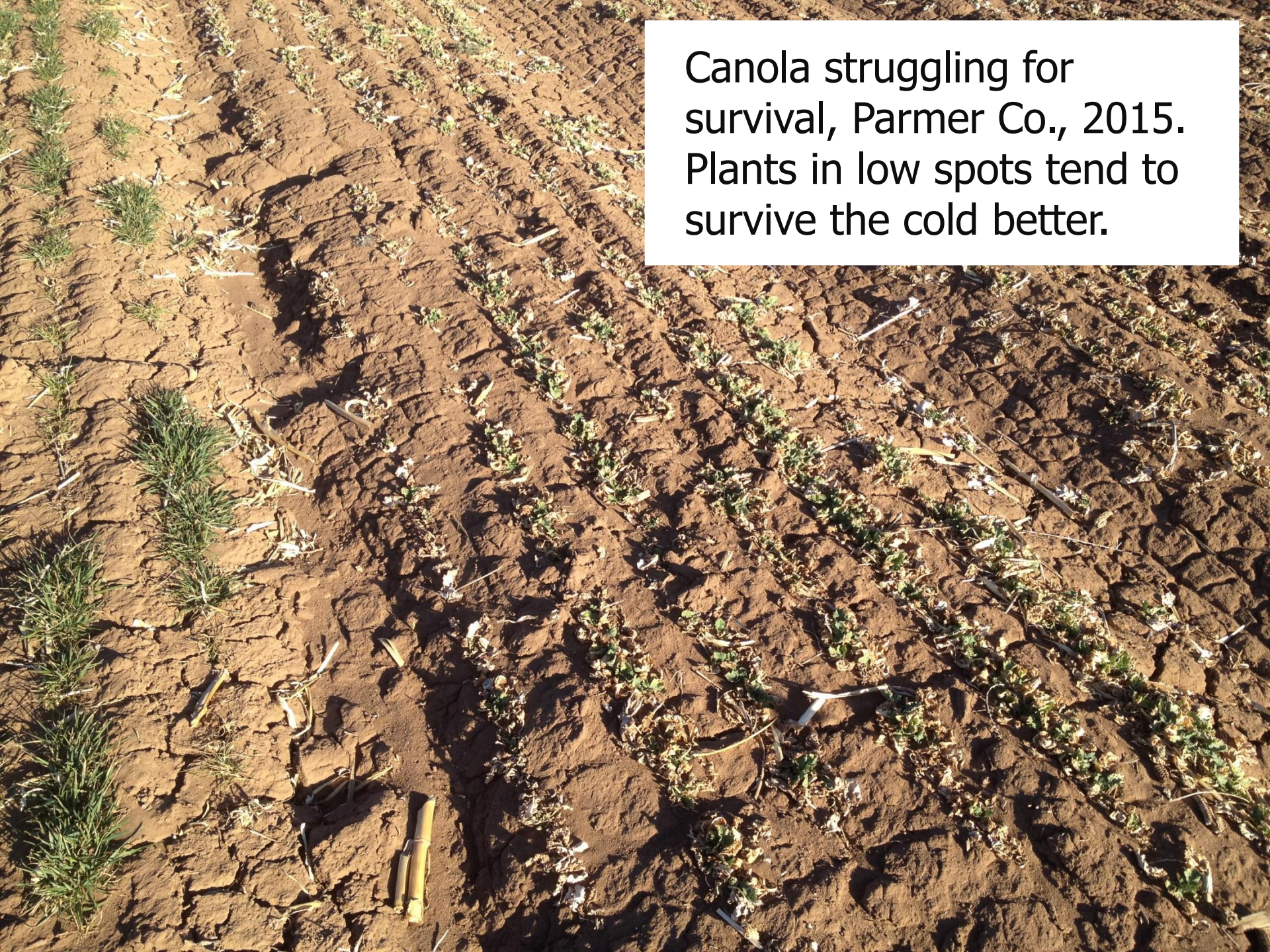

You start to notice a little green…

The key is the crowns have survived. This crop will be OK.

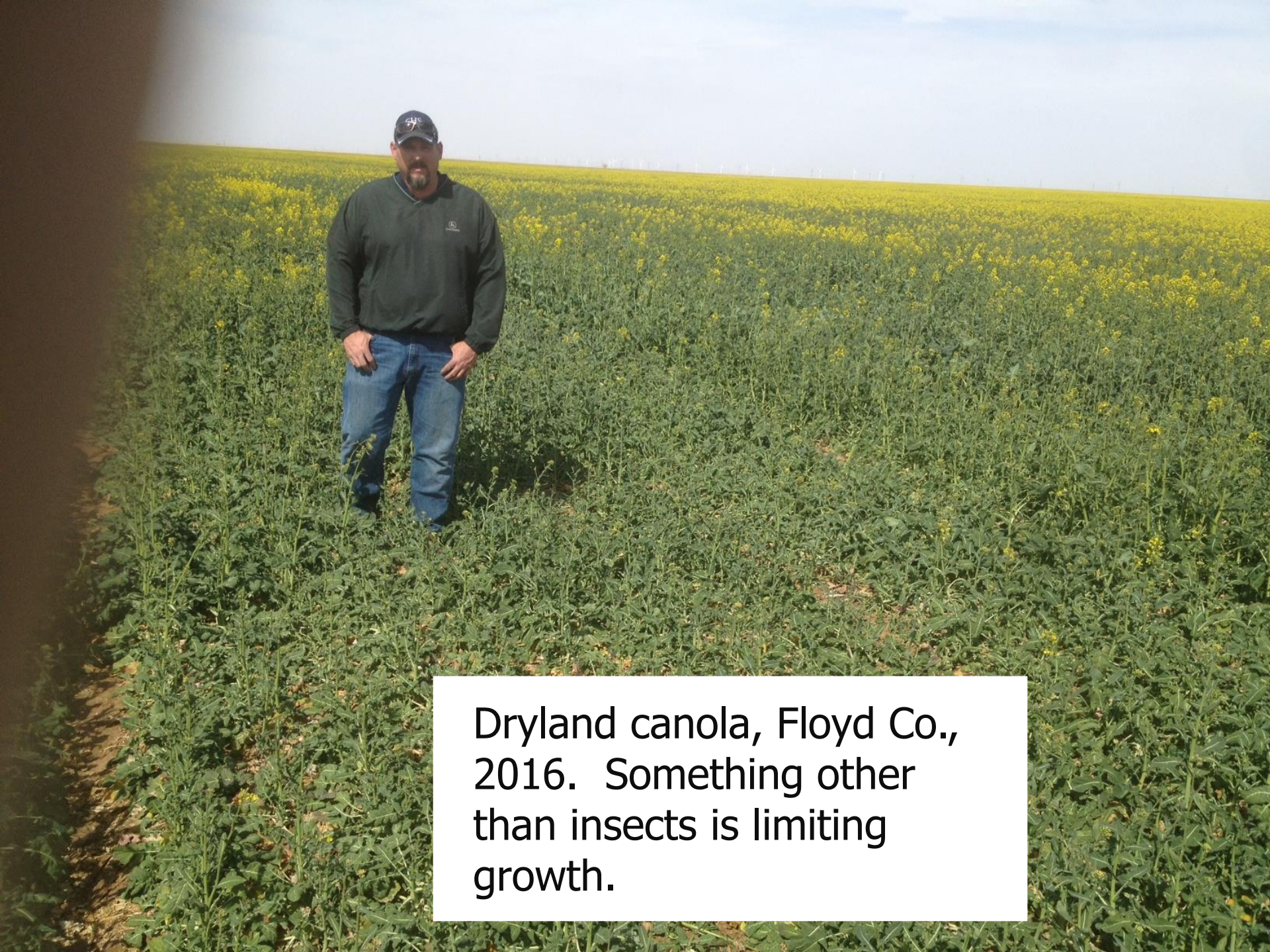
Crown survival from cold that froze back all foliage. These plants are OK.


• Parmer Co., Texas, Feb. 20, 2015
• Early wheat for grazing (early Sept. planting) vs. late Sept. winter canola

Canola rows to right of hat and two rows to the left are a slightly elevated ridge of soil—almost no survival. Canola in low spot is better (left row, 2nd row to the right).


Canola struggling for survival, Parmer Co., 2015. Plants in low spots tend to survive the cold better.

Canola seedlings, 2016.



Dryland canola, Floyd Co., 2016. Something other than insects is limiting growth.


Crown has barely survived the winter. May not be very productive. Other plants are dead

Date of Planting

- OKANola production guide suggests 9/12-10/6 for TX Panhandle & 9/15-10/10 for TX South Plains
- Guideline—6 weeks before killing freeze @ 25°F
- TOO LATE!! AgriLife Extension suggests last planting date of 9/10 at Dumas, 9/25 at Lubbock
  - Relative to wheat, producers are not ready to plant this early; **Coleman, October 7?**
- Planting Date Study, 2007-2009, Hale Co., TX—
  - 9/20, stands good through the winter
  - 10/5, mediocre-poor stand, only fair survival
  - 10/18, poor stand & <10% winter stand survival

Canola surviving win wheat cover.

Other Canola Points

- Aphids, aphids, aphids… these can be massive, will devastate crop by feeding on floral parts.
- Aphids are the most important insect pest of canola in the southern Great Plains. The green peach aphid and turnip aphid frequently colonize fields during fall, survive mild winters, and increase to damaging levels in early spring. These aphids feed on the underside of canola leaves.
- **Cabbage aphid** usually colonizes the terminal buds late in the season—causes most damage

Other Canola Points

- Also diamondback moth larvae and other feeding worms
- Compared to wheat: for wheat if you have a “Pick” variety, a good planting date, and topdress at the right time you can be a successful wheat grower
- **Canola not so simple…**


Cabbage aphid on canola pods (some damage potential), but feeding on floral structure at and prior to flowering will lead to no pods at all.

Direct Harvesting

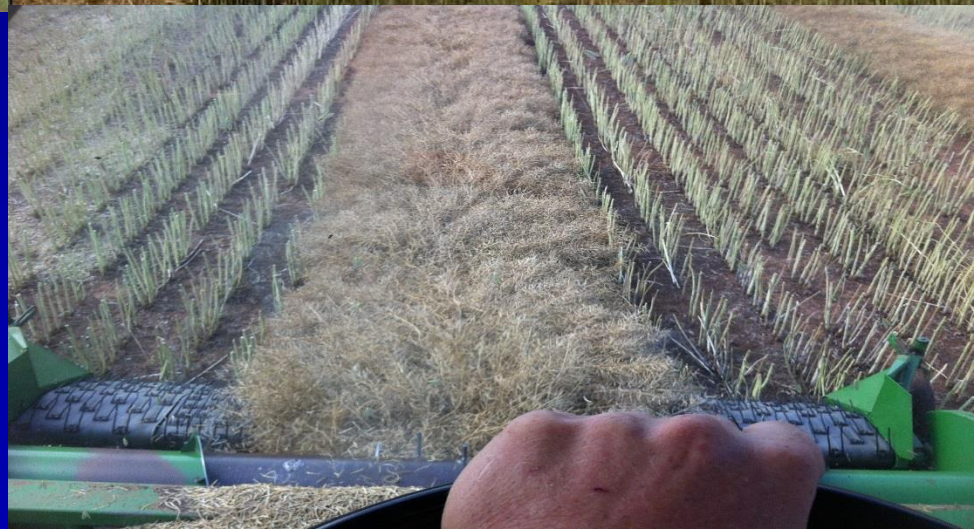
- Must harvest when ready or moisture below 10%
- Will still have some green pods
- Stalks are green, canola is dry
- Un-even maturity
- Most risky
- Performs well when crop conditions are good and even

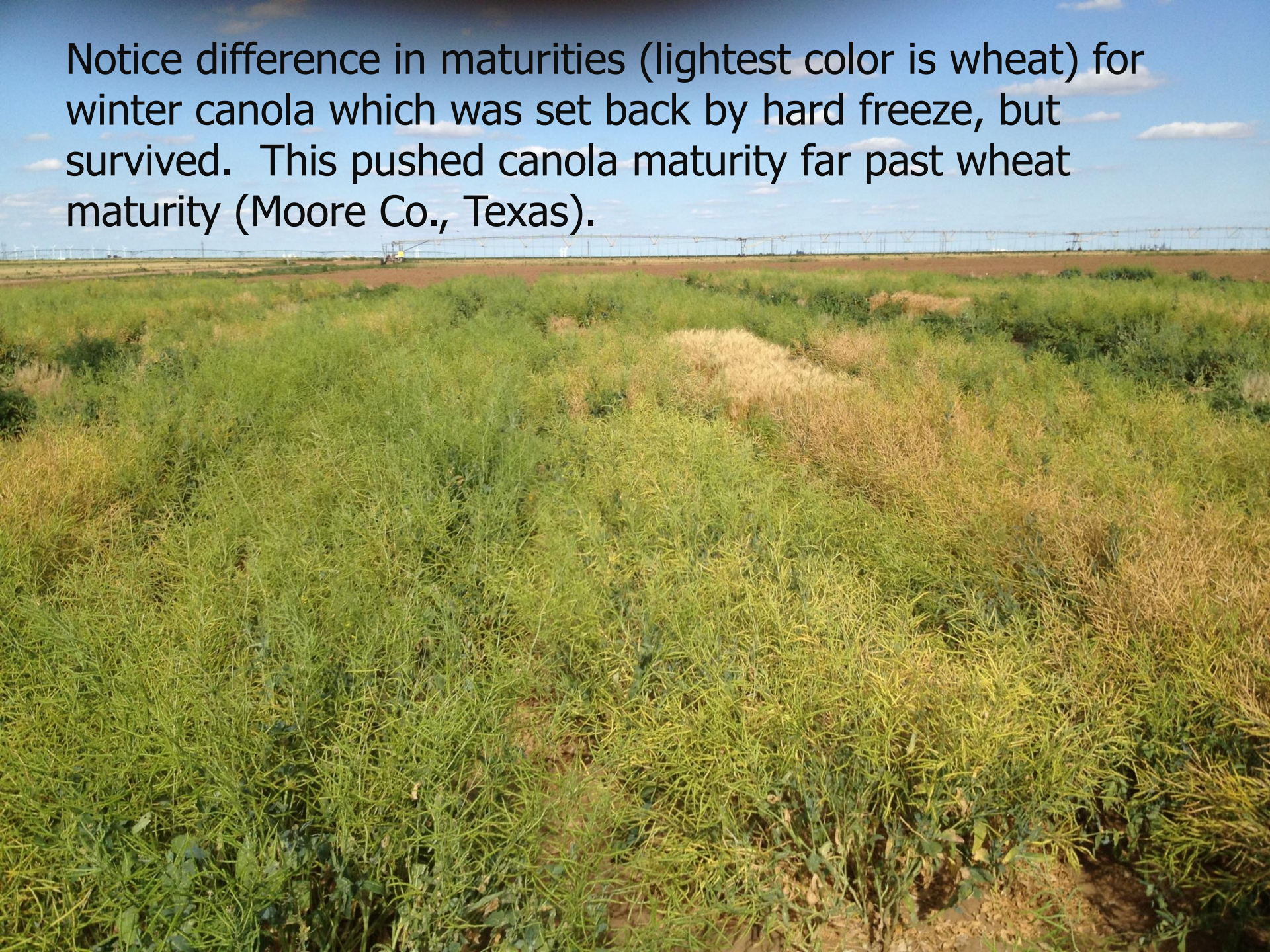
Swathing

- Evens maturity faster
- Plants should be swathed when 40-60% seed color change occurs on the main raceme
- Must use draper header
- Packer or Roller
- Stubble height, anchor
- Time management, header width
- Swathing direction

Picking-up Swath

- Swath is placed on stubble ~ 5-10 days/until seed moisture <10%.
- Match pick-up belt speed with ground speed
- Some prefer to harvest in the evenings to decrease header loss
- Windrow direction N/S




Notice difference in maturities (lightest color is wheat) for winter canola which was set back by hard freeze, but survived. This pushed canola maturity far past wheat maturity (Moore Co., Texas).

Some green pods due to late flowering on individual plants. There will often be some green left in the field when it is time to harvest (but using a harvest aid will dry it out OK & simplify harvest).

Desiccants

- Reglone/Diquat
- Generic Diquat by Nufarm
  - Apply at 80-85% seed color
  - 1.5-2 pts/ac
  - 15 gpa by ground & 5 by air
  - Surfactant
  - 7 day Pre-harvest Interval
  - Do I want to spray all my acres on the same day? (No.)

Canola & Weed Control

- Grasses in Oklahoma wheat drove investigation of winter canola
- West Texas—broadleaves are more a concern, e.g. London rocket, especially tansy mustard.
- Without Roundup Ready there is no means of control

Sources of Label Information

- Labels for herbicides, insecticides, fungicides, seed treatments, growth regulators, etc.—access through http://www.cdms.net, click 'Label Database' then 'Search' then conduct either of two searches:
  - A) Enter product name then choose the specific product then its label or supplemental label (most common use)
  - B) Click "Other Search Options" (register for free password) to search by active ingredient (looking for a generic?), find a class of chemicals (herbicides, fungicides, insecticides) labeled for a particular crop.

Irrig. Winter Canola Variety Trials

Etter & Lubbock, 2011-2012

W. Canola Type	Etter	Lubbock
	Yield (Lbs./A)	(Yield (Lbs./A)
2-Year Trial Avg.	1,617	1,940
Conventional	1,792 (+33%)	2,086 (+33%)
Roundup Ready	1,349	1,667
Open-pollinated	1,361	1,690
Hybrid	1,840 (+35%)	2,223 (+32%)

2011: 18 entries per site
2012: 25 entries at Etter, 45 entries at Lubbock

Canola & Yields

- Roundup Ready winter canola made the difference in Oklahoma in providing producers over-the-top, season-long weed control.
- However, Roundup Ready varieties are not essential to provide weed control as most weedy species in Oklahoma that affect winter canola are the grassy weed species that are damaging wheat ground.
- Grass herbicides can still be used in conventional canola.
- West Texas weed concerns are mostly broadleaves so Glyphosate may more critical (kochia, tansy mustard, etc. is the concern).

Canola & Yields

- This two-year data suggests that there are some varietal (or hybrid choices) that appear to have a significant bearing on yield potential in the Texas High Plains.
- Hybrid winter canolas as a group are performing very well, but Roundup Ready lines (it appears to be often Dekalb lines, which may be shorter maturity) have not caught up with conventional winter canola varieties.

Delivery ADM, Lubbock

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- **As of 3/6/2017, 50-lb. bushel = $7.81/bu**
- **Canola bushels 80-85% of wheat yield?—this is based on bushels/A which is more favorable than on lbs.**
  - Thus 50 bu/A wheat equates to 40 bu/A canola in the same production system
  - Gross Return: 1,000 lbs. of canola (20 bu. = $156) equates to same crop value of wheat = ~39 bu/A wheat @$4.00/bu.
  - Canola will cost more to grow.

Oklahoma Info. on Winter Canola

- http://canola.okstate.edu

- "Great Plains Canola Production Handbook" has great background info.; we use much of this info. in Texas and adapt it when needed.