

Cover Crop Strategies for Complying with Ag Order 4.0

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Fall terminated versus Winter Cover Crops to Reduce Nitrate Leaching in California - Part 1 (Click [here](#) to watch on Youtube)

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Cover Cropping Quiz!



Which Rye Cover Crop has the highest risk of seed set?



Planted in Aug, grown for 60 days

Planted in Aug, grown for 90 days

Planted in Oct, grown for 90 days

Planted in Oct, grown for 120 days



Merced rye seed at **soft dough stage** (Feekes 11.2) on November (90 days after planting in August).

CAUTION:Rye seed **mature fast** when the weather is **warm**.

DON'T let cover crops get past Feekes 10.5.4 (Watery ripe stage) to Feekes 11.1 (Milk stage)





Merced rye volunteer plants **January 9, 2024** (58 days after cover crop termination & . after Lilliston cultivation).

Average of 292 plants per m²



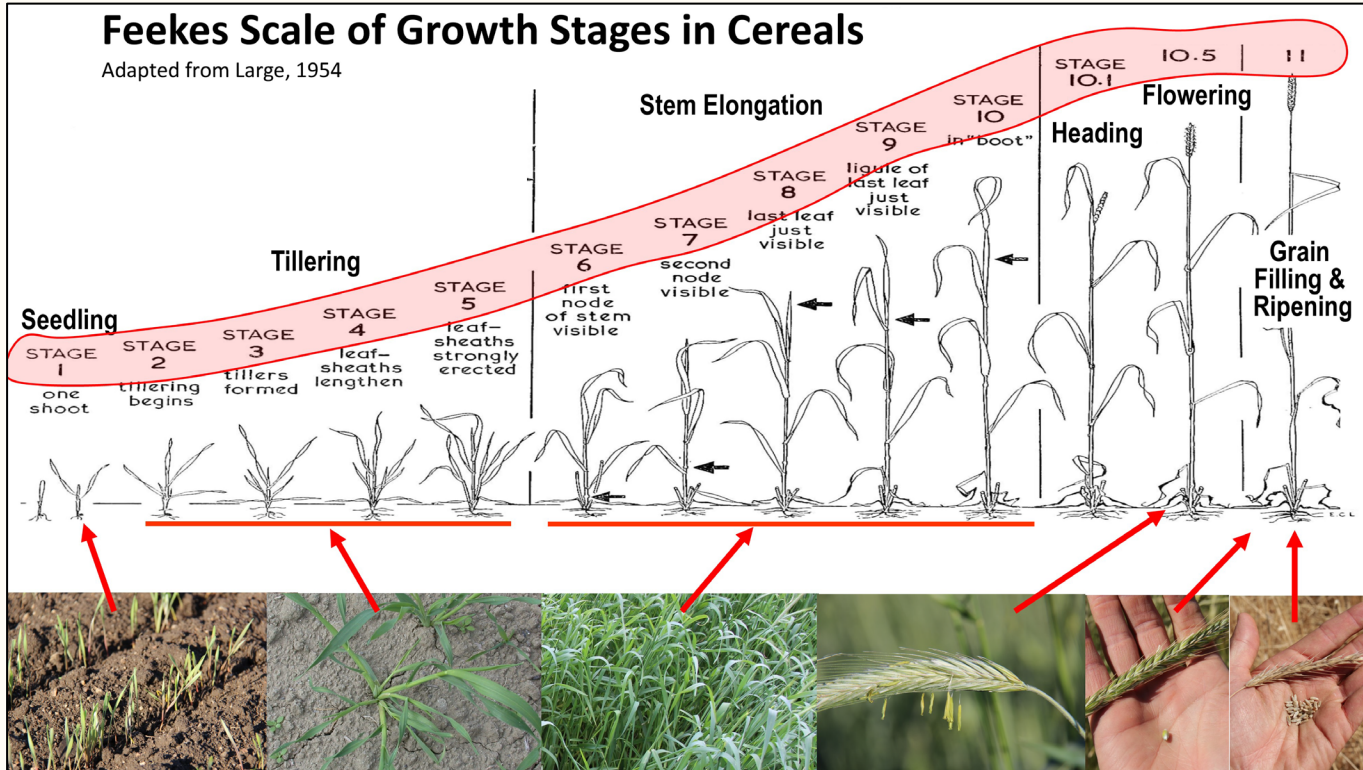


Merced rye volunteer plants **February 6, 2024**
(86 days after cover crop termination)

Know Feekes = No Freaking Out

Feekes Scale of Growth Stages in Cereals

Adapted from Large, 1954

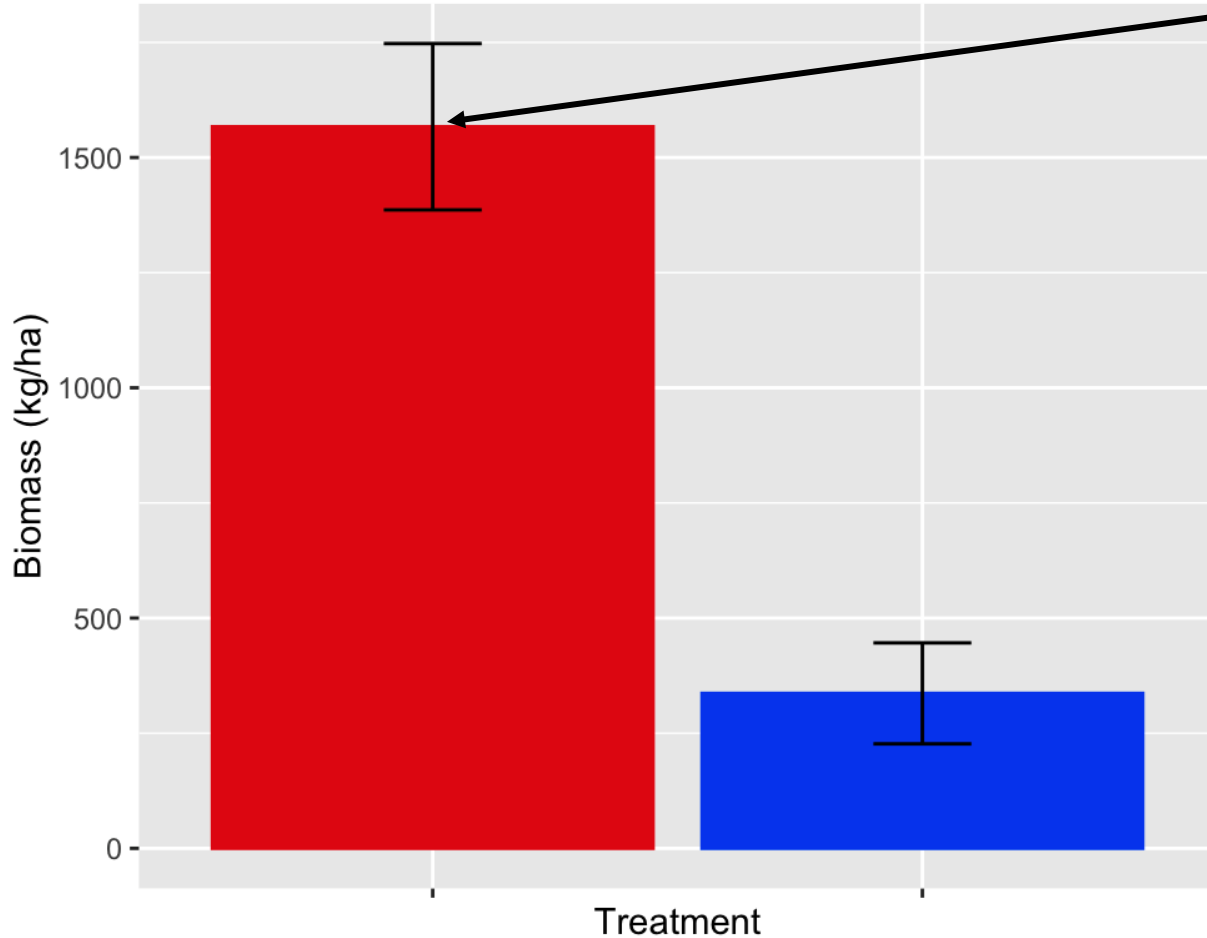


My web site has publications to learn Feekes (See Ag. Order section)

Which Rye Cover Crop would produce the most biomass after the first 30 days of growth?



Rye Cover Crop Oven Dry Shoot Biomass Accumulation after approx. 30 days of Growth



Equivalent to
~1400 lbs/acre!

Treatment

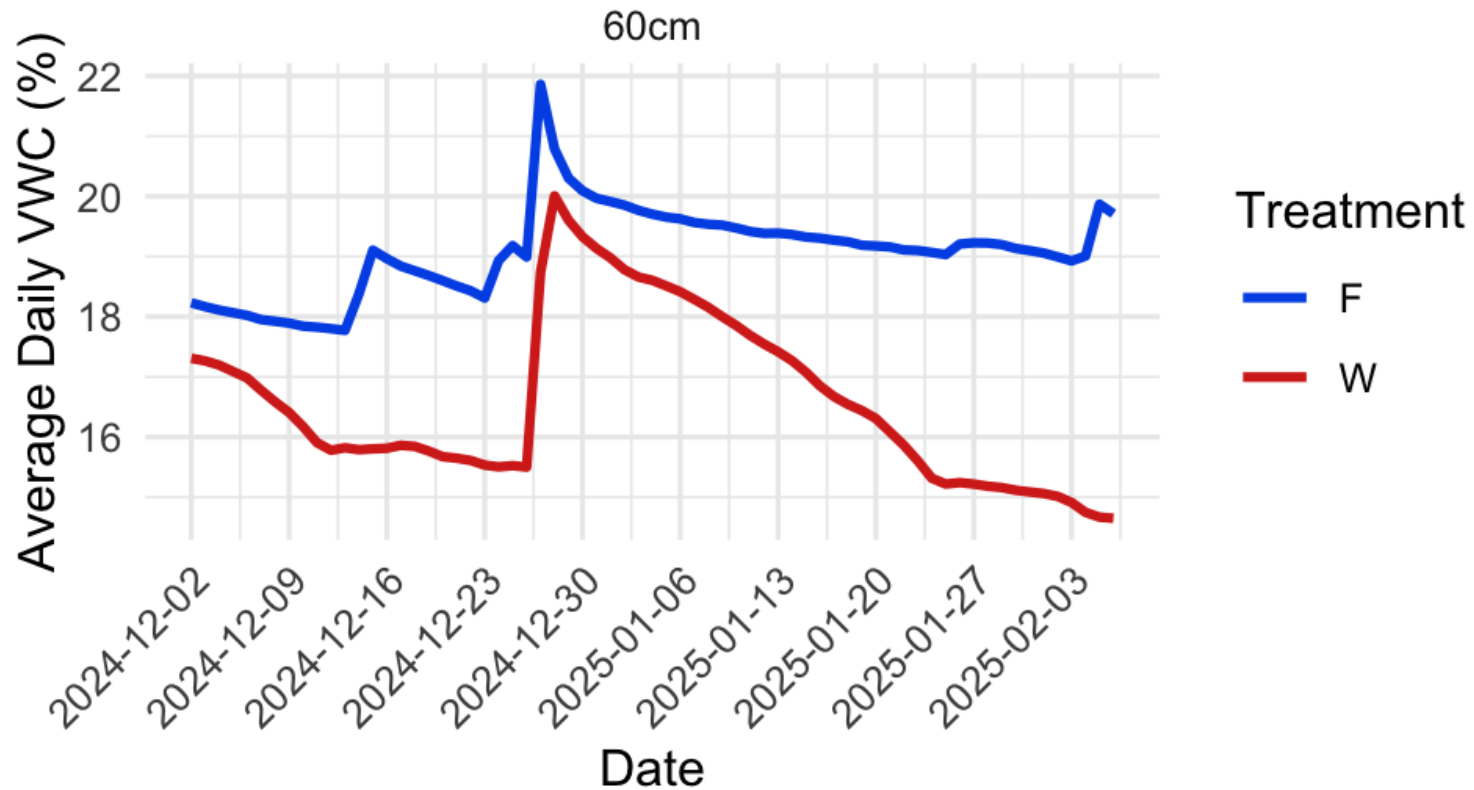
- Fall CC planted 8/12/24
- Winter CC planted 10/15/24

Cover crops planted in the Fall produced almost 5x as much biomass as cover crops planted in the Winter in the first 30 days of growth

Which field would have higher moisture over the winter?

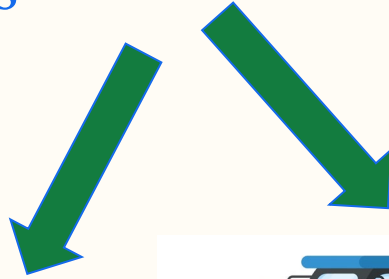


Avg Soil Moisture Over Time

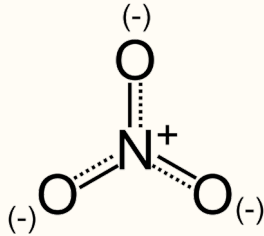




Less soil moisture in
winter cover cropped
systems



Reduce
Nitrate
Leaching &
Runoff
Risk



Ability to
get into the
field sooner



Come to our Field!

Today -> 1:30-3pm

Bonus: Runoff Nitrate
Recovery
Technology!

Thanks to:

Our Funders

- USDA-ARS (“the people’s department”)
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Our Research Team & Helpers

Jim Leap, Richard Smith, Diego Gutierrez, Jack Lamb, Dean Miller, Scott Fendorf, Rob Jackson, Heracleo Perez, Rogelio Fuentes, & numerous interns

Our On-Farm & Ag. Industry Collaborators

- Mark Mason (Huntington Farms)
- Nathan Dorn, Andrea Tinajero, (Farm-ng)
- Dynasty Farms (Pacific International Marketing)



QR code to my web site to learn more about cover crops, Ag. Order & other aspects of my research