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2018's weather was 'near normal,' but averages hide record-setting events

Do the math on temperatures and rainfall for all of 2018. On average, you get "near normal," says Pat Guinan, MU Extension climatologist. "Weather was anything but that," Guinan adds. Record-setting numbers hide in an average.

For starters, look at the "non-spring" of 2018. April was the second coldest on record going back to 1895. That was followed by the hottest May on record. That reaches back 124 years. There's more. June was eighth hottest. June heat built on top of the May record to become the hottest May-June combination on record.

Hang on for more extremes. The record-setting early blizzard warnings in November came later.

Late spring extremes came from a stubborn high-pressure ridge over the Midwest. It was persistent and warm. Many locations were above normal every day of May. This beat the prior record set in 1962. Farmers faced many problems all year from planting to harvest. What started as too cold to plant and then too warm and dry became too wet to harvest. Soybeans were stranded in snow-covered fields.

A spring planting season also needs rainfall. The 2018 spring continued from an abnormally dry ending to 2017. Those previous September rains were 3 inches below normal. September-to-January rains were 57 percent of normal. That was the driest similar period in more than 40 years, Guinan said. The shortage of rain, and lack of subsoil moisture, led right into that hot 2018 heat. Heat made water shortages worse. Lack of water and high heat hit grass farmers hard. That stopped forage growth of grass and hay for livestock herds. Missouri is No. 2 in cow numbers in the nation. Cows normally grazing fall pastures were fed winter hay early.

Unlike many droughts, this one seemed to make Missouri the bull's-eye. "The largest precipitation deficits in the central United States built up in Missouri," Guinan said. Not only soil moisture suffered, stock water ran short. Farmers were hauling water, a decades-old memory. For crop farmers the cold April delayed planting. Early-planted corn and soybeans emerged late. But warm weather hastened crop maturity, leading to an early start at harvest. Then another flip came. November became the fourth coldest on record. Go back to 1976 for comparison. This year, many locations across northern Missouri recorded single-digit minimum temperatures.

When precipitation returned, it included unfamiliar early snow. That became one of the snowiest Novembers in decades. Five separate snow events hit the state. Snow accumulations of 5 to 10 inches were common in the northern two-thirds of the state. The biggest snow event was a highly unusual blizzard after Thanksgiving. Heavy snows came with high winds. Kansas City International Airport recorded a wind gust of 55 mph.

The bright report is less drought as subsoil moisture gains.

Writer: *Duane Dailey*

Harvest and Planning for the Next Growing Season

Harvest is always an exciting time of the year, to reap the workings of an entire growing season and begin evaluating decisions to make for the coming season and year. Knowing how trials, varieties/ hybrids, and management practices influenced final yield at harvest is critical to understanding what the best decision is to make for the next year, and continually improve.

Pre-Season Planning

Yield data is a great way of validating what happened throughout the season, and how the decisions made in years past will pay off in the future. Although the environment will dictate many final reports, using yield data for pre-season

planning can help identify opportunities in input decisions, zone management, and marketing the crop. One should always remember the yield map from this season is just an indication of what happened this year. Areas that performed poorly may just be an area of low fertility, and getting a full picture of the "Why?" behind those areas helps greatly in planning. Understanding hybrid differences across soil types and fertility timing/placement can all be ways of using yield data to make efficient decisions at the beginning of the year.

In-Season Decisions

Yield and harvest data can also be used to make in-season decisions when paired with precision ag technologies giving insight across a farm. Understanding variability in the field from one season to the next can help determine whether to make that next fungicide pass, or put on extra fertility. Exciting advances are being made in yield prediction. Predictive analytics can help provide information on what decisions to make and when a potential pest or environmental condition may affect yield.

Post-Harvest Analysis

Post-harvest analysis is one of the most exciting things that is continually evolving in precision agriculture. Analysis shows how decisions made during the planning and in-season parts of the year performed, and give a look into how to capture opportunity with data for next year.

How did planting a week later due to weather impact yields? Did those yields vary based on soil type or fertility? What did that fungicide pass return? Was it really that "bad hybrid" or was it over watered in the bottoms? Those questions may be answered with data analysis at the end of the season, reducing the guesswork of making decisions for next year.

As harvest is completed, the question of "What to do with the data?" comes down to understanding how to capture opportunity. Raw yield data is only as good as the calibration, which can never be constant throughout the day with changes and erroneous points coming from speeds, moisture, and swath widths, starts and stops, multiple machines, and different crops. Using processed data to get an accurate report enables a producer to use a validated layer for decision-making. However the yield data is used, a processed layer is key to removing those points that can give a false report, and give the clearest picture for the process to start again in 2019.

Source: *Kent Shannon, Ag Engineer*

Just what kind of hay did you buy this year?

Yes, 2018 was the year road ditches and low quality, weedy pastures were baled in hopes of making a profit on tonnage. As most of us know the lack of hay greatly increased the price forcing many to face two choices; buy overpriced hay and hold cows (not a good choice) or sell down the herd to make do with what you have (not a good choice either). Many of us relying on purchased hay to cover our needs were at a loss; there just wasn't a lot out there to buy. Broomsedge, low quality fescue, brambles, and other types of weeds have been easily seen in many of the bales I have inspected thus far.

So, just how much damage to your operation will occur this year due to our current situation?

As we look at what is going on three things come to mind.

First, the quality issue. If you are not testing your hay you do not know if your cows are getting what they need to do what you want. Cows in second period or later are growing/ developing your next year's calf crop, they may need help. Not only that they are trying to cope with the cold weather and the winter conditions we are now facing. If you are fall calving and short on winter pasture, will the low quality hay have enough in it to keep you cows milk production where it needs to be, allowing you to wean off large calves in the spring?

Second is the purity issue. Just what kind of and how many weed seeds are you bringing into your operation? Unrolling hay all over you place, having the cattle sort thru it looking for the good and laying on the rest, opens up an opportunity for seeds to be walked in by your cattle. What happens if the weed seeds are perennials? What about Johnsongrass ??

Third, killer cow prices. I read an article recently stating there just isn't enough hooks available to hang them on thus reducing prices. Another hit.

So now what?? We cannot do much about the market but we can improve on our management. Sharpen your pencil and look for solutions. Feeding a reasonably priced grain/ by-product mix to offset quality and often quantity issues. Purchasing feed in bulk will help lower the cost as well. Test your hay and create a least cost ration meeting the needs of your cattle in their proper stage of development. Do not over feed to meet your needs. Feed your hay in one location/paddock to confine the weed seeds to a smaller area, which in turn, will make it easier to clean up in the future. Look at early weaning of calves to reduce the needs of your cows. Use your stockpiled pasture carefully as to not waste precious forage. Fence off smaller areas, areas large enough feed for 2 to 3 days at a time, and then move the electric wire again.

Just don't panic. Think it through, plan your next step, and look for a good spring next year.

Source: *Terry Halleran, Agronomy Specialist*

The Missouri Department of Agriculture announced it will not pursue Special Local Needs (24c) labels for the use of these three products for the 2019 growing season.

The two-year registration is valid through Dec. 20, 2020, and includes the following:

- Only certified applicators may apply Dicamba over-the-top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of Dicamba on soybeans 45 days after planting or up until the R1 growth stage (first bloom), whichever comes first
- For soybeans, the number of over-the-top applications remains at two
- Applications will be allowed only from one hour after sunrise to two hours before sunset
- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a new 57-foot buffer around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)
- Enhanced tank clean-out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH on the potential volatility of Dicamba
- Label clean up and consistency to improve compliance and enforceability

MDA link https://agriculture.mo.gov/plants/pesticides/dicamba-facts.php

NOVEL TALL FESCUE RENOVATION WORKSHOP

Monday, March 18, 2019

8:30 am – 5:00 pm

MU Southwest Research Center, 14548 Hwy H, Mt. Vernon, MO

Kentucky 31 toxic tall fescue: * reduces livestock weight gains * lowers reproductive performance

This one-day workshop will give you the tools and information needed to remove toxic tall fescue and replace it with novel tall fescue varieties. Speakers include local producers, company representatives, extension and researchers.

Advance registration due by Friday, March 8, 2019: $70.00 individual or $100 couple / two from same farm Late/Door Registration: $85 individual or $120 couple / two from same farm Includes: Meal, Refreshments & Proceedings Enrollment limited to first 50 registrants.

For more information: Jendel Wolfe at (417) 466-2148 ext. 21 or wolfejl@missouri.edu
http://grasslandrenewal.org/education.htm

Extension
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