Get Ready! Farmers & Ranchers Are Now Eligible For Economic Injury Disaster Loans

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On Friday, President Trump signed the new COVID-19 relief bill, the Paycheck Protection Program and Health Care Enhancement Act, 116 Pub Law 139 (April 24, 2020) ("Enhancement Act"). In addition to replenishing funds for the Paycheck Protection Program (PPP), the Enhancement Act directs the Small Business Administration (SBA) to make all agricultural producers with 500 or fewer employees who were operating as of January 31, 2020, who have suffered substantial economic injury as a result of the COVID-19 pandemic, eligible for the Emergency Injury Loan Disaster (EIDL) programs. This includes non-profit organizations, farmers markets, LLC’s, sole proprietorships, and other small business entities. And, farmers and ranchers, as eligible entities, can also get a forgivable emergency advance on their EIDL loan of up to $10,000, which, like a grant, they don’t have to pay back. The advances are known as “EIDL Emergency Advances” or “Emergency EIDL Grants.”

What Does “Substantial Economic Injury as a result of the COVID-19 pandemic” Mean?

When you apply for an EIDL COVID-19 loan, you will be certifying that your business suffered substantial economic injury due to the COVID-19 pandemic. What that means for you is going to depend on your business. For example, if before the pandemic you sold primarily to farmers markets or restaurants and now as a result of the stay-at-home orders and other measures put in place by government officials those markets are closed or significantly reduced, your are likely going to be able to show that your business suffered substantial economic injury due to the pandemic. Even if you’re shifting your markets to sell direct to consumers online,
you are likely still eligible because there are necessarily delays in establishing that change in business model and you might still only be able to resume selling at a significant loss. Other examples are dairy farmers who have lost their markets or grain farmers who are experiencing historic low prices as a result of sharp declines in market demands.

EIDL Loans

You can apply for an EIDL loan for as little or as much as you need up to $2 million. That means that if you only need $10,000, you could request a loan of $10,000 and then apply to receive all of the money in advance as an Emergency EIDL Grant.

Remember that any loan amount above the $10,000 in EIDL Emergency Advances is not forgiven. Interest rates on the loan amount above the $10,000 in Emergency EIDL Grants are 3.75% for small businesses, and 2.75% for non-profit organizations.

The loan terms can be up to 30 years with the first payment not due for 12 months after the funds are issued.

No personal guarantee is required for loans of $200,000 or less. No collateral is needed for loans of less than $25,000, and there is no need to have applied for credit and been denied elsewhere in order to apply.

Emergency EIDL Grants

Eligible entities, which now include all agricultural enterprises, can request that the SBA give them an advance on the loan. The advance can be up to $10,000. (CARES Act § 1110(e)(3); Enhancement Act, § 101(c)). Once approved, the money is supposed to arrive within three days. (CARES Act § 1110(e)(1)-(3)). The Emergency EIDL Grants are completely forgivable. You do not ever have to pay them back.

What Can The Money Be Used For?

EIDL loans are considered working capital loans. They’re meant to help you carry on your business until you can resume normal operations. They can be used for things like (1) to pay fixed debts, (2) to pay sick leave for employees who are unable to work due to COVID-19; (3) to maintain payroll, (4) to pay accounts payable including increased costs of materials due to COVID-19’s supply chain disruptions, and (5) to pay rent or mortgages.

They are not meant to be used for expanding your business, and you can’t spend the money on refinancing debt that you incurred prior to the disaster declaration. You also can’t spend the money to make payments on loans made to other Federal agencies (e.g., FSA loans); pay tax penalties; pay penalties for noncompliance with laws; or pay dividends to shareholders.

You can, however, pay reasonable remuneration for services that are performed for the business. So, if you have a record of making payments to yourself for the work that you do for the business, that is allowed just like covering payroll or spending the money for accounts payable is an approved use of the funds. But, if you don’t have a record of making those payments before the disaster, you might be challenged on making those payments with the loan money.

Can I Participate In Other Federal Relief Programs If I Get An EIDL Loan?

The COVID-19 EIDL programs are meant to compliment the other Federal COVID-19 relief programs like the PPP and the Pandemic Unemployment Assistance program (PUA). (For more information about the PPP, read this post and watch this video. For more information about the PUA, read this article.) You will need to do some calculating to determine whether and which relief programs make the most sense for your business. For example, an EIDL loan might be easier for a new farmer who doesn’t have 2019 income tax returns but who was operating on January 31, 2020, and who does have a few months of sales information. You can participate in all of the programs, but, for example, the portion of the PPP loan amount that is forgiven will be reduced by the EIDL loan amount you receive. And, the government will know that you are participating in more than one program.

When And Where Do I Apply?

Once the site becomes available, you will need to apply for the EIDL program funds online through the SBA’s website. The SBA stopped accepting new EIDL applications when the original CARES Act funding ran out. We don’t know yet when the SBA will resume accepting applications now that the additional funding has been approved under the Enhancement Act, so you will need to check the SBA’s website. Also check the agrisk.umd.edu/ blog. We will post an update once the SBA re-opens the portal for submitting applications.

The deadline to apply for COVID-19 EIDL assistance is December 31, 2020.

What Information Will I Need To Apply?

This is a revenue-protection program. To apply, you will self-certify that you need to borrow the amount of money that you would have used to pay normal expenses during the time of the declared crisis. The SBA
will consider your ability to repay the loan amount based on your sales history and existing obligations along with your credit history. You will need your sales history records, then.

Keep in mind that you might not be approved for the full amount you requested, and understand that it may actually take a few weeks to get the EIDL Emergency Advance money and it might not all arrive at once. These are simply the realities of a large, cumbersome bureaucracy trying to quickly implement these measures.

**Tips For Submitting Your Application**

The SBA advises applicants to register as new users, and then download and/or print out the application forms so that you can prepare your application offline before going back online to complete and submit your packet. That’s because the site is overwhelmed and there is a good chance that the site will crash while you’re in the middle of completing your application.

Also, once you are entering the data online, be sure to finish and submit your completed application. Incomplete applications will be sent to the back of the line, so your application may not be received before the funds run out again.

Once you’ve submitted your application, be sure to check the status of your application online as well as checking your bank account. The SBA has said that it isn’t able to send timely notices out about deposits of funds, but you’ll see the money appear in your bank account shortly after your application has been approved.

**More Information**

To view slides from the Small Business Administration’s Baltimore District Office’s March 26, 2020, webinar on how to apply for EIDL Loans and Emergency Grants, click here. Remember, the information in the slides and the webinar does not include the Enhancement Act’s updates.

You can find more Maryland-specific information and resources about COVID-19 issues on the Maryland Agriculture Law Education Initiative’s website at umaglaw.org.

An excellent resource for information about all of the federal relief programs available for farmers, including the EIDL programs, is the Farmers’ Legal Action Group’s Farmers’ Guide to COVID-19 Relief (2nd Edition).

**Update: Applications are now open!**

Click here to start

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**H-2A Visas & COVID-19 Webinar**

On May 14, 2020, at 12:00 p.m., EST, the Agriculture Law Education Initiative (ALEI) will host a webinar for farm employers on recent COVID-19 related changes to the H-2A visa worker program. State and federal experts will explain recent adaptations to the H-2A visa worker program and how employers can prepare for having foreign workers on the farm this summer.

Examples of topics that will be covered include:

- paid sick leave for H-2A workers
- worker housing requirements
- COVID-19 and the 3/4 guarantee
- keeping proper records.

Speakers will include:

- Carlos Turcios, MD Department of Labor and Licensing Regulation
- Nicholas Fiorello, U.S. Department of Labor, Wage and Hour Division
- Sarah Everhart, Managing Director, Agriculture Law Education Initiative, Maryland Carey Law.

Register today for the webinar!

Employers are encouraged to submit questions in advance of the webinar to Sarah Everhart via email at severhart@law.umd.edu or by phone at (410) 458-2475.
The Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO) has established the Pandemic Adjustment Loan Fund Program to help Maryland’s food and fiber producers, harvesters and primary processors adjust to the business disruptions caused by the COVID-19 pandemic. The program offers low cost loans with flexible terms for working capital or equipment purchases. The maximum individual loan amount is $10,000, and no collateral security is required to be pledged to receive a loan.

“Many Maryland farmers and other rural businesses are rapidly altering their operations to adjust to changing market conditions in response to the coronavirus pandemic, and some are pivoting to serve new customers and markets almost on the fly,” said Steve McHenry, MARBIDCO's Executive Director. “This new loan program is designed to get money very quickly into the hands of rural business owners for the purchase of materials and equipment via an easy-to-complete application process.” MARBIDCO has available $1.2 million to lend through this program.

Applicants for this program must currently be operating their qualifying business enterprises in a substantial manner (e.g., as farmers, loggers, seafood harvesters, or as primary food/fiber processors). Spin-off activities of the existing main business enterprise are eligible and encouraged, but purely start-up enterprises are not eligible. Eligible farms and rural businesses can apply for loans up to $3,000 in working capital and up to $10,000 for equipment purchases at a low interest rate with flexible terms. Loan repayments will be made interest-only for five months beginning in August, followed by amortizing payments for 12 to 36 months with a fixed rate of 3.75% starting next year. Borrowers who make all their payments will receive a 10% grant back (of the original amount borrowed) at the end of the loan term.

Working capital includes (but is not limited to): planting materials such as seeds, fertilizers and plastic covers, hand tools, advertising and marketing expenses, and hired labor. Tangible equipment includes equipment with 7 years or more usual lifespan such as: motorized equipment, vehicles, commercial kitchen facilities, engine replacement, refrigeration units, etc.

To further assist Maryland’s farm and rural businesses during this time, MARBIDCO is also reducing the interest rates on its core loan programs by 100 basis points for borrowers that may be looking for more traditional term loan financing. These programs include: Maryland Resource-Based Industry Financing Fund, Maryland Vineyard/Hopyard/Orchard Planting Loan Fund, Rural Business Equipment and Working Capital Loan Fund, and Forestry Equipment and Working Capital Loan Fund. Additional information on these programs is also available on our website.

Applications for the Pandemic Adjustment Loan Fund must be submitted by May 31st. The application form is available on the MARBIDCO website at www.marbidco.org. For questions, please call the office at (410) 267-6807. Due to current social distancing procedures, phone calls may not be readily answered (but all calls will be returned).

Contact: Steve McHenry | (410) 267-6807 | smchenry@marbidco.org

Announcing the Farmers’ Guide to COVID-19 Relief. Several of the programs discussed in this Guide are the product of the CARES Act—technically known as the Coronavirus Aid, Relief, and Economic Security Act. The CARES Act became law on March 27, 2020. This guide will focus on how these various programs can provide relief to farmers. Check FLAG’s website (flaginc.org) for updates as the pandemic and farmer relief unfolds.
New CRP Program Offers Longer-Term Benefits

USDA Press Release, abridged

The U.S. Department of Agriculture’s Farm Service Agency (FSA) will open signup this summer for CLEAR30, a new pilot program that offers farmers and landowners an opportunity to enroll in a 30-year Conservation Reserve Program (CRP) contract. This pilot is available to farmers and landowners with expiring water-quality practice CRP contracts in the Great Lakes and Chesapeake Bay regions. The program signup period is July 6 to Aug. 21, 2020.

Annual rental payment for landowners who enroll in CLEAR30 will be equal to the current Continuous CRP annual payment rate plus an inflationary adjustment of 27.5 percent, since CLEAR30 contracts will be for 30 years – much longer than the 10 to 15-year contracts for Continuous CRP offers.

USDA Service Centers are open for business by phone appointment only, and field work will continue with appropriate social distancing. Anyone wishing to conduct business with the FSA, Natural Resources Conservation Service or any other Service Center agency is required to call to schedule a phone appointment. More information can be found at farmers.gov/coronavirus.

Grain Marketing Site Updated: Crop Budgets & Custom Rates

Shannon Dill, Principal Agriculture Agent
University of Maryland Extension, Talbot County

The University of Maryland Extension has updated extension.umd.edu/grainmarketing site with new input data and spray programs for the 2020 field crop budgets.

Crop Budgets

Cost of production is very important when making decisions related to your farm enterprise and grain marketing. Enterprise budgets provide valuable information regarding individual enterprises on the farm. This tool enables farm managers to make decisions regarding enterprises and plan for the coming production year. An enterprise budget uses farm revenue, variable cost, fixed cost and net income to provide a clear picture of the financial health of each farm enterprise.

The 2020 Maryland enterprise budgets were developed using average yields and estimated input cost based upon producer and farm supplier data. The figures presented are averages and vary greatly from one farm and region to the other. It is therefore crucial to input actual farm data when completing enterprise budgets for your farm.

How to Use University Enterprise Budgets

The enterprise budgets can be used as a baseline for your operation. Make changes to these budgets to include your production techniques, inputs and overall management. New spray programs were added for herbicide resistant weeds.

The budgets are available electronically in PDF or Excel online at www.extension.umd.edu/grainmarketing. Use this document as a start or reference to create your crop budgets. If you have problems downloading any of these budgets, contact information is located on the website.

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Do You Need Micronutrients in Your Starter?

Jarrod Miller\textsuperscript{1}, Amy Schober\textsuperscript{2}, and Nicole Fiorellino\textsuperscript{3}

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\textsuperscript{3}Extension Agronomist, University of Maryland

Whether or not you need micronutrients in your starter should come down to last year’s soil or tissue tests. Over the last two years, our research projects have not revealed a deficiency in many micronutrients, but we still understand it is out there. In 2018, we conducted a study at the Carvel Research and Education Center (Georgetown, DE) with two rates of manganese (Mn), zinc (Zn), and boron (B) in the starter. We observed no effect on yield, which was expected as these soils were adequate in Mn and Zn based on UD recommendations. Although starter B had no effect on yield, B did have a positive correlation with yield in the starter study. This implies that with increase tissue B concentrations, yield also increased. Correlations imply relationships, but not necessarily why this occurred. An environmental variable may have influenced both B uptake and yield in this case, such as saturated soils leaching B while reducing yield.

In a collaborative study between UMD and UD, we saw the same relationship between higher tissue B and greater yield, across a range in soil types. In both 2018 and 2019, very few corn ear leaf samples reached the critical threshold for boron, which would indicate we are having a difficult time maintaining B in our soils. Due to this result, we performed a study with split applications of B in Georgetown, but also observed no effect on yield.

While we have observed that B is tied to greater yield in corn tissue samples, the method of application or uptake has not been as straightforward. As an anion, soil tests for B may not be accurate. Levels of boron from a fall soil test may be leached from the upper soil by the time planting occurs. Mid-season soil samples from a soybean study have had a stronger correlation between soil B and whole plant B. The combination of mid-season tissue and soil samples may be a better way to manage B, but further research is needed. It remains possible that starter B applications may also be leached from the soil surface prior to plant uptake, so that tissue samples will be necessary following higher rainfall.

Very few of our tissue samples across Maryland and Delaware have been lacking in Zn, while all samples from the ear leaf tissue study were above critical thresholds for Cu, Mn, and Fe in both 2018 and 2019. A major variable controlling micronutrient availability is pH, and we have observed greater uptake of Zn in soybeans with lower pH, even in soils not lacking in Zn. It is imperative that soil pH effects on micronutrients are considered when making lime applications, as this may have greater contributions to uptake and availability than starter applications.

\textit{Research in this study was supported by Maryland Grain Producers and the Delaware Soybean Board.}

Online Private Applicator Pesticide Recertification

University of Maryland Extension has an online private applicator recertification course for those that did not get a chance to attend a renewal course during their license cycle. The instructions, video, and form can be found by clicking this link:

Click to view

If you have any questions, contact R. David Myers, Principal Agriculture Agent in Anne Arundel County, myersrd@umd.edu | (410) 222-3906.
Considering an Insecticide For Your Small Grain?

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This time of year, anyone growing small grains will be planning to apply fungicides to manage Fusarium head blight, and many will consider tank-mixing an insecticide to control any insect pest problems at the same time. These tank mixes are an appealing option to reduce the time, fuel, and damage to the crop from having to make a second pass over the field later on in the season. In addition, with many synthetic pyrethroids now available as cheaper generic versions, the costs associated with adding an insecticide to the tank may seem like cheap insurance against possible pest outbreaks. However, to ensure that this added investment gives you a return with increased yields, you should still follow an integrated pest management approach and base the decision to add an insecticide on scouting and documentation of an existing pest problem. Below, we outline several possible insect pests that could be controlled with an insecticide applied with fungicides over small grains, and summarize situations where that application may be warranted, and when it may not.

**Aphids.** Aphid populations need to be controlled in the fall to reduce Barley Yellow Dwarf Virus incidence in small grains. Spring insecticide applications will not reduce incidence of the disease. Only a few aphid species tend to feed on grain heads, and can reduce yield from head emergence through milk stage (Fig. 1). After the soft dough stage, no economic losses occur. Aphid populations are generally kept in check by insect predators and parasitoids, and thresholds for chemical control of aphids in the spring require at least 25 aphids per grain head (with 90% of heads infested) or 50 per head (50% heads infested) and low numbers of natural enemies. Applying a broad spectrum insecticide when aphid pressure is not above threshold tends to kill off beneficial predatory and parasitic species, which can allow aphid populations to flare up, as they are no longer being suppressed by their natural enemies.

**True armyworm and grass sawfly.** Both true armyworm (Fig. 2) and grass sawfly (Fig. 3) are sporadic pests of small grains and their pest pressure and feeding damage can vary widely from year to year. Automatically applying an insecticide to target these pests is not likely to be a cost-effective strategy since they are not pests that reliably cause economic injury. When these pests are present in high numbers, they are capable of causing significant yield loss through their behavior of clipping grain heads. Scouting should be done to check for the presence of these two pests and insecticide treatment is only needed if they exceed threshold values of one larva per linear foot for armyworm and 0.4 larvae per linear foot for grass sawflies.

**Hessian fly.** Cultural methods are the best way to control Hessian fly in small grain, such as planting after the fly-free date, selecting resistant varieties, and using crop rotation to disrupt their population growth. Spring feeding by the fly larvae can cause stems to break, reducing yields. There are no effective rescue treatments for Hessian fly; insecticides targeting fly larvae are ineffective since they are well protected from sprays by feeding inside of the leaf sheath (Fig. 4). If this
year’s crop is damaged, it is imperative that fly-resistant varieties are planted after the fly-free date next year.

Cereal leaf beetle. This species is widespread in Maryland and is typically present in small grains, though it only occasionally reaches levels that injure crops. Cereal leaf beetle larvae chew the upper surfaces of leaves, leaving them skeletonized (Fig. 5). Larvae can cause yield loss if the flag leaf is severely skeletonized before grain-fill is completed. Insecticides with good residual activity tank mixed and applied with fungicides can potentially control populations of cereal leaf beetles, protect the flag leaf, and improve the yield of the crop if beetle pressure is high. However, predicting whether populations will reach damaging levels is not straightforward, and scouting should be used to guide spray decisions. If a field has 25 or more larvae plus eggs per 100 tillers, and there are more larvae than eggs, then chemical control is needed. In Maryland, a parasitoid wasp species (Anaphes flavipes) may parasitize 70-98% of cereal leaf beetle eggs, so if a field is dominated by eggs with few larvae, insecticide may not be needed. Additionally, feeding by cereal leaf beetle will not cause economic damage after the hard dough stage. So far, we have received no reports of economic levels of cereal leaf beetle in the region.

In conclusion, tank mixing an insecticide with your fungicide application can pay off if you have economically damaging levels of an insect pest, but applying any insecticide without a pest problem will not pay off. If populations are present, seem to be increasing, and you will not be harvesting soon, you could gamble. The risks of that gamble include losing money on an unnecessary input cost, secondary pest outbreaks if natural enemy populations are wiped out, or the target pest outbreaks anyway because the application was poorly timed. Scouting fields regularly to document pest pressure and using IPM thresholds as a guide for using chemical controls is the best way to hedge your bets when deciding whether to add an insecticide to the tank this spring.

For more information on tank-mixing insecticides with small grain fungicide applications, check out current research updates from Dr. Dominic Reisig at North Carolina State University: [https://smallgrains.ces.ncsu.edu/2019/03/aphids-in-wheat/](https://smallgrains.ces.ncsu.edu/2019/03/aphids-in-wheat/)
[https://entomology.ces.ncsu.edu/2015/04/should-you-spray-cereal-leaf-beetle/](https://entomology.ces.ncsu.edu/2015/04/should-you-spray-cereal-leaf-beetle/)

And Dr. David Owens at the University of Delaware: [https://www.udel.edu/academics/colleges/canr/cooperative-extension/fact-sheets/cereal-leaf-beetle/](https://www.udel.edu/academics/colleges/canr/cooperative-extension/fact-sheets/cereal-leaf-beetle/)

**Figure 4.** Hessian fly larvae feeding inside of wheat leaf sheath.

**Figure 5.** Cereal leaf beetle larva and feeding damage.
Pesticide applicators may have trouble obtaining the label-listed (and thus required) personal protective equipment (PPE) while safety supplies are in short supply due to new and expanded needs as individuals seek to minimize their potential exposure to sources of the COVID-19 virus. In many cases, pesticide labels call for the same PPE that is currently needed to protect front-line workers, such as first responders and medical professionals. It is important to understand that label-listed PPE for working with pesticides has been required because of demonstrated or scientifically-based necessity to protect the applicator’s health. It is acceptable to choose PPE that is more, but not less, protective. When possible, the best alternative is to choose a product that does not require the hard-to-obtain PPE.

State Pesticide Safety Education Programs (PSEPs) are aware of the problems and have been working together to address this issue. The following resources may help.

**PPE for Pesticides**

- The American Association of Pesticide Safety Educators (AAPSE) has information and resources on a page created specifically to address the COVID-19-related shortage of PPE. Available at [https://aapse.wildapricot.org/COVID-19PPE/](https://aapse.wildapricot.org/COVID-19PPE/), the site includes a listing of resources to help applicators search for alternative pesticides and/or methods that do not require the short-supply items.


- Penn State University PSEP revised the following publication in 2017 – *Respiratory Protective Devices for Pesticides* – [https://extension.psu.edu/respiratory-protective-devices-for-pesticides](https://extension.psu.edu/respiratory-protective-devices-for-pesticides).

- Some good respirator information is available from the Pesticide Environmental Stewardship site at NC State University PSEP at [https://pesticidestewardship.org/respirators/](https://pesticidestewardship.org/respirators/). Be sure to check out the embedded pages including:
  - Types of Respirators
  - Purifying Elements
  - TC Numbers and Cartridge Colors
  - What Respirator Do I Need?
  - Medical Clearance
  - Fit Test
  - Fit Test or Seal Check

- The California Department of Pesticide Regulation has issued some guidance for applicators on alternatives if you can’t find N95 masks or appropriate gloves:
  - N95 Masks
  - Gloves

Glyphosate is a widely used herbicide that controls broadleaf weeds and grasses. It has been registered as a pesticide in the U.S. since 1974. Since glyphosate’s first registration, EPA has reviewed and reassessed its safety and uses, including undergoing registration review, a program that re-evaluates each registered pesticide on a 15-year cycle.

In January 2020, after receiving and considering public comments on the glyphosate proposed interim decision, EPA released the interim decision for registration review. As part of this action, EPA continues to find that there are no risks of concern to human health when glyphosate is used in accordance with its current label. EPA also found that glyphosate is unlikely to be a human carcinogen. EPA is requiring management measures to help farmers target pesticide sprays to intended pests, protect pollinators, and reduce the problem of weeds becoming resistant to glyphosate.

Basic Information on Uses

Glyphosate targets a broad range of weeds and is important in the production of fruits, vegetables, nuts, and glyphosate-resistant field crops such as corn and soybean. It is effective at managing invasive and noxious weeds. In addition, glyphosate breaks down in the environment, can be used for no-till and low-till farming which can reduce soil erosion, and is useful for integrated pest management.

Products containing glyphosate are sold in various formulations, including as liquid concentrate, solid, and ready-to-use liquid. Glyphosate is used in products such as Roundup® to control weeds in both agricultural and non-agricultural settings. Glyphosate can be applied in agricultural, residential and commercial settings using a wide range of application methods, including aerial sprays, ground broadcast sprayers of various types, shielded and hooded sprayers, wiper applicators, sponge bars, injection systems, and controlled droplet applicators.

Agricultural uses include corn, cotton, canola, soybean, sugar beet, alfalfa, berry crops, brassica vegetables, bulb vegetables, fruiting vegetables, leafy vegetables, legume vegetables, cucurbit vegetables, root tuber vegetables, cereal grains, grain sorghum, citrus crops, fallow, herbs and spices, orchards, tropical and subtropical fruits, stone fruits, pome fruits, nuts, vine crops, oilseed crops, and sugarcane.

Nonagricultural uses include conservation land, pastures, rangeland, aquatic areas, forests, turf grass, residential areas, non-food tree crops (e.g., pine, poplar, Christmas trees), rights of way, commercial areas, paved areas, spot treatments, ornamentals, parks, and wildlife management areas.

Human Health

EPA scientists performed an independent evaluation of available data for glyphosate and found:

**No risks of concern to human health from current uses of glyphosate.** Glyphosate products used according to label directions do not result in risks to children or adults.

**No indication that children are more sensitive to glyphosate.** After evaluating numerous studies from a variety of sources, the Agency found no indication that...
children are more sensitive to glyphosate from in utero or post-natal exposure. As part of the human health risk assessment, the Agency evaluated all populations, including infants, children and women of child-bearing age, and found no risks of concern from ingesting food with glyphosate residues. EPA also found no risks of concern for children entering or playing on residential areas treated with glyphosate.

**No evidence that glyphosate causes cancer in humans.** The Agency concluded that glyphosate is not likely to be carcinogenic to humans. EPA considered a significantly more extensive and relevant dataset than the International Agency on the Research for Cancer (IARC). EPA’s database includes studies submitted to support registration of glyphosate and studies EPA identified in the open literature. For instance, IARC only considered eight animal carcinogenicity studies while EPA used 15 acceptable carcinogenicity studies. EPA does not agree with IARC’s conclusion that glyphosate is “probably carcinogenic to humans.”


**No indication that glyphosate is an endocrine disruptor.** Glyphosate has undergone Tier I screening under EPA’s Endocrine Disruptor Screening Program. Based on all available information, EPA concluded, using a weight-of-evidence approach, that the existing data do not indicate that glyphosate has the potential to interact with the estrogen, androgen or thyroid signaling pathways. The screening program did not indicate the need for additional testing for glyphosate.

**Food Safety**

Residues of glyphosate on any food or feed item are safe for consumers if they comply with the established tolerances. Before allowing the use of a pesticide on food crops, EPA sets a tolerance or limit on how much pesticide residue can legally remain on food and feed products, or commodities. The complete listing of tolerances for glyphosate can be found in 40 CFR § 180.364. If residues are found above the established tolerance level, the commodity will be subject to seizure by the government. The presence of a detectible pesticide residue does not mean the residue is at an unsafe level.

Due to its widespread use, trace amounts of glyphosate residues may be found in various fresh fruits, vegetables, cereals, and other food and beverage commodities. However, these trace amounts are not of concern for the consumer because they are not present at high enough levels.

EPA conducted a highly conservative dietary risk assessment for glyphosate that evaluated all populations, including infants, children, and women of child-bearing age. EPA assumed that 100 percent of all registered crops were treated with glyphosate, that residues were at the tolerance level for each crop, and that residues in drinking water were from direct application of glyphosate to water. These assumptions would lead to much higher estimated levels of exposure than would be expected to occur with actual use. The resulting conservative estimates of dietary exposure were not of concern.

**Ecological Health**

The ecological risks identified in EPA’s ecological risk assessment included potential risk to terrestrial and aquatic plants and birds, and low toxicity to honeybees. To address these risks, EPA required spray drift management labeling to reduce off-target spray drift and protect non-target plants and wildlife. Learn more about these restrictions in the glyphosate interim decision.

EPA is committed to protecting pollinators, including the monarch butterfly, from pesticide exposure. As with all other herbicides, EPA is requiring registrants to updated the label language for these pesticides to raise awareness of their potential effects to pollinator habitat and direct users to instructions on minimizing spray drift. EPA’s strategy to protect the monarch butterfly also includes collaborating with federal, state, and other stakeholders on conservation efforts and promoting best management and integrated pest management practices to reduce spray drift and help preserve pollinator habitat. Read more about what EPA is doing to protect the monarch butterfly.
With the recent showers in the state, the risk of Fusarium Head Blight appears to be high. In the Eastern Shore and the Southern part of the state wheat is flowering/towards the end of flowering. Growers with their wheat still flowering or are within a window of 4-5 days of flowering are advised to spray head scab fungicides (Prosaro, Caramba, Miravis Ace). These fungicides do not need to be tank mixed with another product for spraying. The fungicide products should be applied at the full rate recommended by the manufacturers. Strobilurin containing fungicides should not be sprayed at this stage. Aerial application at a rate of 5 gallons per acre or ground application at 15 gallons per acre with 300-350 um droplet size is recommended. Spray nozzles should be angled at 30°-45° down from horizontal, toward the grain heads, using forward- and backward mounted nozzles or nozzles with a two directional spray, such as Twinjet nozzles. In the Northern counties, we are still around 7-10 days away from flowering.
Over the past few weeks I have gotten questions about red/purple discoloration to barley heads (Figure 1). These symptoms are not widespread in the field; maybe 1% of heads exhibit this condition. To the best of our knowledge, these symptoms are not caused by a disease but likely a physiological response to an abiotic stress. This spring went from very mild in March to cool and even freezing in April. These symptoms could be a response to environmental conditions, genetic, or a combination of both. Affected heads appear to be viable and able to produce grain.

A second condition appearing this year is leaf burn or tip necrosis (LTN) in wheat (Figure 2). This disorder is often a response to cold injury or wind, but can also manifest as a result of heat and drought stress. These symptoms can be intensified by specific leaf rust and stripe rust resistance genes. In any case, there is nothing you can do to remedy the situation.

Leaf tip burn/LTN may be confused with barley yellow dwarf virus (BYDV). LTN tends to cause death of the leaf tip resulting in necrotic brown tissue (Figure 2), whereas BYDV can cause a range of symptoms from yellowing of the leaf, which may or may not be accompanied with bronzing/purpling of the leaf tips (Figure 3). Since BYDV is vectored by aphids, symptoms tend to be localized in hotspots in a field, whereas leaf burn and LTN more uniformly affect the entire field.
As the 2020 planting season begins, marestail is bolting and common ragweed has started to emerge (Fig. 1). Populations of marestail in the region are resistant to glyphosate and ALS-herbicides (Group 2, i.e. Classic), and populations of common ragweed are resistant to glyphosate, the ALS-herbicides, and PPO-herbicides (Group 14, i.e. Reflex). Herbicides such as 2,4-D, dicamba, and Gramoxone will provide control of emerged weeds, but they are most effective when applied to weeds less than 4 inches tall. Now is the time to spray these weeds. If you have already burned down your field, scout before planting to make sure these species have not escaped or emerged since your burndown application. If they have, consider adding Gramoxone to your at planting application. Dicamba can be used prior to planting Xtend soybeans or 2,4-D can be used with Enlist crops. Always consult the label for application instructions and approved tank-mixes.

**Figure 1. Common ragweed (left) and marestail (right). Imaged: Kurt Vollmer, University of Maryland.**

**Has Your Burndown Been Effective?**
*Kurt Vollmer, Extension Weed Management Specialist*  
*University of Maryland*

Department to Phase Out Regular Use of Chlorpyrifos
*Maryland Department of Agriculture Press Release*

The Maryland Department of Agriculture (MDA) announced that it will develop regulations to immediately phase out the regular use of chlorpyrifos, a pesticide used in agricultural production and turf management. The department will engage agricultural leaders, environmental advocates and farmers to identify a solution that addresses all parties’ interests while preserving the established regulatory authority for pesticide use.

“In light of the department’s ongoing conversations with farmers, I have directed MDA to convene all interested stakeholders and begin the process of crafting reasonable and responsible regulations that will accelerate the phase out of chlorpyrifos,” said Secretary Joe Bartenfelder. “This is in the best interest of the agriculture industry and the environment, and will protect the independence and integrity of our robust science-based regulatory framework while providing farmers time to identify alternative or replacement products.”

The U.S. Environmental Protection Agency (EPA) sets national standards for the sale and use of individual pesticide products. These decisions are determined by an exhaustive, science-based review process. MDA works closely with the EPA to enforce its regulations and provides educational support to ensure that these products are used responsibly and safely by farmers and licensed applicators. This regulatory solution keeps that authority within the federal and state agencies responsible for pesticide regulation.

The move toward an accelerated phase-out of chlorpyrifos is in step with similar actions in other states and the private industry. Earlier this month, Corteva Agriscience, a major manufacturer of crop protection products, announced that it would cease production and sales of chlorpyrifos by the end of 2020. This decision follows use data in Maryland that shows a sharp decline in the use of chlorpyrifos since the 1990s.

For more information on pesticide regulation in Maryland, please visit the program’s [website](http://www.mda.maryland.gov). More information on chlorpyrifos is available on the [EPA website](https://www.epa.gov).
Along with making corn and soybean planting a challenge, spring rains make for a challenging forage harvest as well. The faster we can get our hay or haylage dry enough to bale or wrap, the more we can reduce the risk of rain damage and retain a higher quality end product. Follow these guidelines to help optimize drying time during forage harvest this spring.

The Forage Drying Process

Let’s think for a moment about the basic principles behind forage drying. When forage is cut, it is around 75 to 80% moisture but it must be dried down to 60 to 65% moisture for haylage or 14 to 18% moisture for dry hay. During this wilting and drying process, plants continue the natural process of respiration, breaking down stored sugars to create energy and carbon dioxide. The longer it takes the forage to dry, the longer the forage continues to respire in the field. Data suggests that 2 to 8% of the dry matter may be lost due to respiration, resulting in energy losses and an overall reduction in forage quality. This means that a faster drying time will not only get the forage off the field faster but will also lower the amount of dry matter and nutrients lost through respiration.

The drying process happens in several distinct phases; knowing and understanding these phases can help us manage our forage in a way that will maximize drying rates and ensure nutrient retention within the harvested forage.

Phase One: Moisture Loss via Stomatal Openings

The first phase in the drying process is moisture loss from the leaves. This happens through the stomata, which are the openings in the leaf surface that allow for moisture and gas exchange between the leaf and the outside air. These stomata are naturally open in daylight and closed in darkness. After a plant is cut, respiration continues but gradually declines until the moisture content has fallen below 60%. Rapid drying in this initial phase to lose the first 15 to 20% moisture will reduce loss of starch and sugar and preserve more dry matter and total digestible nutrients in the harvested forage.

Solar radiation is the key to maximizing drying during this initial phase. This can be accomplished by using a wide swath (at least 70% of the cut area), which will maximize the amount of forage exposed to sunlight. A wider swath will increase the swath temperature, reduce the swath humidity, and keep the stomata open to allow for moisture loss, encouraging rapid and more even drying immediately after cutting. In contrast, narrow windrows will have higher humidity and less drying, allowing respiration to continue and leading to further dry matter and nutrient losses. Research has shown that a wide swath immediately after cutting is the single most important factor in maximizing the initial drying rate and preserving digestible dry matter. A full width swath will increase the drying surface of the swath by 2.8 times, and moisture reductions from 85 to 60% can be reached in as little as 5 to 7 hours. Haylage from wide swaths has been shown to have lower respiration losses during drying, greater total digestible nutrients, and more lactic and acetic acid, improving forage quality and fermentation.

During this phase, a wide swath is more important than conditioning. Most of the respiration takes place in the leaves. While conditioning is important for drying stems, it has less impact on drying leaves and therefore will have little effect on this initial moisture loss. This means that for haylage, a wide swath may be more important than conditioning.

Phase Two: Stem Moisture Loss

The second phase in the drying process includes moisture loss from the stems in addition to the leaves. Once moisture levels have dropped to the point where plant respiration ceases, the closing of the stomata traps the remaining moisture, slowing further drying. At this stage, conditioning can help increase the drying rate because it provides openings within the plant’s structure, providing an exit path for moisture and allowing drying to continue at a faster rate. For maximum effectiveness, be sure the conditioner is adjusted properly based on the stem thickness (roughly 5% of leaves showing some bruising) and choose the best conditioner based on your forage type. For example, roller conditioners are often preferred for alfalfa due to reduced leaf loss.

Phase Three: Loss of Tightly Held Water

The final phase of the drying process is the loss of tightly held water, particularly from the stems. Stems generally have a lower surface to volume ratio, fewer stomata, and a semi-impervious waxy cuticle that minimizes water loss so conditioning is critical to enhance drying during this phase.
Additional Factors

In addition swath width and conditioning, several other strategies can be used to improve drying time. Be sure to cut forages at the proper height, leaving 2 to 3 inches for alfalfa and 4 inches for cool-season grasses. Not only will this result in improved stand persistence, earlier regrowth, and sooner subsequent cuttings, but the stubble will help to elevate the swath and promote air flow and rapid drying. If possible, mow hay earlier in the day, preferably mid-to late-morning after the dew has dried off. This will allow for a full day of drying right away, maximizing exposure to sunlight and resulting in a faster drop in moisture and reduced respiration. And finally, raking should occur when the forage is above 40% moisture. Raking the forage while it is still pliable helps to reduce leaf loss and maintain forage quality. Adjust the rake to minimize the amount of tines touching the ground to avoid soil contamination.

In conclusion, cutting in the morning and using wide swaths to take advantage of sunlight is key to both faster drying and preserving digestible dry matter. Remember, a wide swath enhances leaf drying while conditioning expedites stem drying; both are needed to make high quality hay.
Currently, 0% of the state is under any drought condition. Temperatures were below-normal in April and that trend is expected to continue into May. The eastern half of the state is predicted to have a 33-40% chance of above average precipitation for the month of May.
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Great resources are just a click away!

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Weather has been cool and wet. Corn planting has begun. Cereal grain harvest for silage is nearly complete. First cutting alfalfa is started even though drying days are hard to come by. — Jeff Semler, Washington Co.

Some sweet corn has been planted. We did have some good weather for chopping small grain silage last week, but now we’re getting some rain and colder temperatures, so that will push back planting for a few days. — Kelly Nichols, Frederick Co.

Cold and rainy has been the theme for April. Very few days have been fit for field work, and corn planting is roughly 2 weeks behind schedule. Soil temperatures have dipped below 50 degrees last week and I’d estimate that less than 10% of the corn crop is planted. Small grains are progressing with barley heading out. Cool temperatures have made for some yellow and sluggish looking small grains. With some heat, hopefully things will move along. Some small grains have been chopped for feed. Warmer temperatures in May would be welcomed and much-needed. — Andy Kness, Harford Co.

There have been a few acres of both corn and beans planted, but most seed is still in the bag. It has been taking 2-3 weeks for them to emerge in the cool soils. There doesn’t seem to be any difference between emergence time in tilled fields vs. no-tilled fields. Maybe the dead cover crop is acting like a blanket and keeping the heat in? The largest corn I have seen is 6” with the 5th leaf emerging. Unfortunately, within the same field and even the same row, there are wet colder soils with corn still emerging. Hopefully, by the time you are reading this after Mother’s Day weekend, we didn’t just have a frost or snow! Small grain looks good and progressing slowly. Most years, yields are higher with a slow grain fill period. As wheat is pollinating, hopefully there is/was no frost on Mother’s Day weekend. Hay crops look good and are ready to be cut, weather permitting. — Jim Lewis, Caroline Co.

Winter wheat is flowering. As recommended, due to the rainy last few weeks and continued rain, growers are spraying fungicides on wheat. Fields are being prepared for corn and soybean planting. Some corn has been planted and emerged, but the majority of fields remain to be planted. Between rains, growers are terminating winter cover crops, applying manure, and tilling. I have seen some impressive cover crop stands where they have not been terminated. This should help with early season weed control. — Sarah Hirsh, Somerset Co.

Conditions have been cool and wet the last three weeks with soil temps below normal. Corn planting progress has been slow this year with wet soil conditions. We are around 30-40% of acreage planted. Earlier planted corn is emerging without much problem. Plants remain yellow and are in need of some sunshine. We have not heard of any reports of slug damage, but farmers are keeping a careful eye out given the conditions, especially in no-till fields with heavy crop residue. Wheat is just past flowering stage. It has been a difficult season to predict flowering. We were ahead of schedule two weeks ago with wheat just starting to flower and then it slowed way down with the colder weather. It has been tough to get a head scab fungicide applications on between rains with saturated fields. Wheat and barley look good overall. Tobacco planting has started. Forage crops look great this spring. Unfortunately, it looks better standing than cut and rained on, with little chance to get dry hay made. Haylage equipment continues to pay for itself in springs like this. — Ben Beale, St. Mary’s Co.