MISSISSIPPI STATE UNIVERSITY EXTENSION

Mississippi Beekeeping Calendar

Beekeeping is a seasonal activity that depends on the blooming plants during the growing season of a given area. Honey bees require nectar and pollen from various flowering plants to survive and thrive. The availability of flowering plants impacts the annual growth cycle of honey bees, and beekeepers need to manage their hives accordingly.

This publication gives an overview of basic beekeeping activities in a concise manner. Monthly checklists are included to guide new beekeepers throughout the year. These checklists may differ slightly for north and south Mississippi due to variations in plant bloom dates. For instance, certain trees, like tulip poplar, will flower earlier during the spring in the southern part of the state, while some goldenrods will bloom 1–2 weeks sooner in the northern part during the fall.

While the monthly checklists offer a general outline of beekeeping activities based on the seasonal progression of blooming plants, extreme weather events can significantly impact beekeeping. Severe drought or excessive rain can reduce food availability, affecting the growth and development of honey bee colonies. Therefore, strict adherence to these checklists is not recommended. They serve as a guide for expected duties in a typical year, but extreme weather events and long-term climate change may necessitate adjustments to these schedules.

About the Checklists

The monthly page includes an activity checklist, a map showing the division between north and south Mississippi, and a short list of major blooming plants for each region during the month. Items on the checklist that apply to one region but not the other are marked with **n/a** for the region to which it does not apply. The boundary between the north and south regions of the state does not follow any particular ecoregion, but the demarcation provides a practical guide for deciding most beekeeping activities.

If your bees are located near the boundary line, the seasonal activities may be similar to areas on the other side. The extreme ends of the state show greater variation in seasonal progressions of blooming plants. Thus, strict adherence to the checklist is not recommended if you live near the boundary; instead, several years of beekeeping experience in an area may be needed to decide the best approach.

Each month, the list of blooming plants is limited to just a few major nectar and/or pollen sources. However, many more plants are in bloom for some months for each region. Extension Publication 3382 Maximizing Honey Production has a more complete list of food plants.

Issues to Consider Every Month

Disease Inspections

Look for symptoms of diseases, parasites, and pests every time you inspect a colony. However, exhaustive brood nest inspections cannot be conducted during all months of the year. Many colonies experience a broodless period sometime from mid-November into mid-January, and there is no brood nest to inspect. Wintering colonies can be severely stressed by opening the hives and disturbing the cluster during cold weather. Extensive hive inspections are not practical during periods of a dearth in pollen and nectar. Brood inspections require a significant amount of time (15–20 minutes), and opening colonies for even a few minutes during a dearth of food can stimulate robbing events in an apiary. Extensive brood nest inspections are best conducted during periods with major blooms of food plants (such as during a honey flow) and on warm, sunny days with calm winds during the periods of March to June and September to October.

The specific symptoms and details of progression of all major diseases affecting honey bees are beyond the scope of this publication. There are no specific bullet points on the monthly checklists about disease inspections because it is assumed that beekeepers must identify diseases and act to make their bees healthier whenever possible. Thus, beekeepers need to learn the symptoms of major diseases like American foulbrood, European foulbrood, *Nosema* sp. infection, and viral infections associated with varroa mites to be able to identify and mitigate these diseases and limit infections among bee colonies in an apiary. Beekeepers also need to recognize symptoms associated with infestations by small hive beetles and greater wax moths. There are many minor diseases (such as chalkbrood) that can weaken colonies and make them less productive without killing them.

A great resource for identifying honey bee diseases is *Honey Bee Diseases and Pests* by Pernal and Clay (see References).

Although symptoms for specific diseases will not be detailed here, examining capped brood patterns and the color of bee larvae and noticing abnormal decreases in the adult bee population are key to identifying brood diseases. Most viral, bacterial, and fungal pathogens kill developing brood, and the brood nest usually shows signs of these infections. The capped pattern of healthy brood is solid, and there are usually no (or only a few) empty brood cells in an area of capped brood cells. Spotty capped brood patterns—those with many empty brood cells scattered among the capped brood cells—can be a strong indicator of brood diseases. Sunken brood cell caps or pupae being uncapped by hygienic bees are good indicators of a potential brood disease or infestation by varroa mites. Unpleasant odors arise from sick and dying bee larvae or pupae; indeed, these odors help identify diseases like American foulbrood and European foulbrood. Healthy larvae are pearly white, while many diseased larvae are yellow to brown. Some adult bees exhibit symptoms of viral infections, such as shriveled wings associated with deformed wing virus or hairless, black bodies associated with other viruses.

Robbing

Robbing occurs when honey bees steal honey from neighboring colonies. Honey bees smell sources of nectar or honey quite well, and if they are hungry, they will try to enter neighboring hives to get the food. The attacked colony will fight intruders, and bees from different colonies will kill one another. The behavior is problematic for a couple of reasons. First, strong colonies can overrun and kill weaker colonies when they rob them. Second, although a single colony may be victimized by a neighbor at the start of a robbing event, if robbing is allowed to continue, **all** colonies in an apiary can be recruited into a robbing frenzy, during which workers from all colonies attack several other colonies in the apiary. Consequently, many colonies can be killed by a robbing event. Additionally, the stinging frenzy of robbing bees can spill over and become a safety issue for animals or people near the apiary. Tethered horses and dogs in small yards or kennel runs can be killed if they are within 300 yards of a robbing event.

All beekeepers must control robbing in their apiaries. As with most critical issues, prevention is easier than having to stop the frenzy once it has started. The best way to prevent robbing is to never spill honey or syrup in bee yards. Additionally, never cut burr combs from the top or bottom bars of your combs and toss these wet combs to the ground. These spills will stimulate scouting bees that find the food on the ground to communicate with round dances to their sisters. Honey bees use round dances to tell their sisters that food is less than 35 yards from the hive. Bees recruited by round dances will search close to their hives and in all directions to find the food. Because all hives in an apiary smell similar to the spilled honey and syrup, bees will try to enter neighboring hives to find the food. Within a short period, all colonies may have foragers recruited to search for food, and all colonies in an apiary may be attacked. The robbing war begins, and the trigger is the careless beekeeper.

Robbing also has a seasonal component. Robbing happens more frequently when incoming nectar and pollen are diminished, and it rarely occurs when there is an abundance of bloom during major honey flows and weather conditions permit bees to collect food. Robbing is a serious problem when there is a dearth of food during summer (July to August) and fall/winter (November to March). It is also an issue after periods of inclement weather during periods of major honey flows. Just taking the lid off a hive during these periods of dearth will provide enough odor of food in the air of an apiary to trigger robbing. This is why hive inspections in the heat of summer should be infrequent and kept to a minimal amount of time when they do occur.

Many beekeepers offer sucrose syrup to their colonies using community feeding troughs. This technique is not recommended because of the potential of starting a robbing event. However, large commercial beekeepers may have thousands of hives, and filling feeders in every hive can be labor-intensive and costly. If trough feeding must be used in these operations, it is best to locate the feeding trough at least 150 yards from the apiary. The trough should be placed near a landmark like a building, tall tree, or other prominent object in the landscape. The positioning of the trough at this distance causes worker bees to communicate the location of the food source by using waggle dances. Unlike round dances, the waggle dance communicates both distance and direction to recruited bees. Hence, recruited bees are less likely to investigate colonies within the apiary for food because the dances are telling them to look at a specific location that is farther from the apiary.

If you notice worker bees snooping around hives that you open during a hive inspection, you should stop inspecting the hives in the apiary. Immediately close all open hives and watch to see if any colonies are being attacked. Identify all spills and clean them up immediately. Wipe all syrup or honey from the surfaces of all hives. If colonies are under attack, it may be necessary to block the entrances of all colonies in a bee yard by stuffing something like pine straw into all entrances. This is a tactic that commercial beekeepers sometimes use. It takes colonies an hour or more to reopen the colony entrance if the straw is packed densely; during that time, the urge to steal honey usually goes away.

Beekeeping Tasks Specific to Each Season

The following sections highlight the major goals for seasonal periods (spring, summer, fall, and winter), which are itemized on the monthly checklists.

December through March—Surviving the Winter Period

Established Colonies

Food reserves: During this period, it is crucial to ensure that the colonies have sufficient stored honey to endure the rest of the winter until mid-March. The quantity of food and its proximity to the bee cluster are significant factors. Inspect colonies at least once a month to assess the remaining food reserves.

It is important to ensure that bee colonies have 65–70 pounds of stored honey for overwintering starting at the end of October. The heaviest combs of capped honey should be placed in the middle of the food box directly above the cluster of bees. As winter progresses, honey bees consume their food reserves from the bottom upward, and the cluster may consume most of the food and reach the hive's lid. During monthly inspections, the goals are to—

- assess if there is enough food for the bees to last until the next inspection.
- rearrange the food stores by moving empty combs from the center of the food box and replacing them with heavier combs of capped honey from the edges. Combs become brittle, and the propolis gluing combs to the hive body can be difficult to break in cold weather. Use extreme care to avoid damaging the combs, killing the queen, or killing worker bees within the cluster while rearranging food in the nest.

The bees must be fed if they are likely to run out of food before the next monthly inspection. Fortunately, most of Mississippi has warm periods during this time of year to permit feeding of sucrose syrup inside the hive with either top feeders or division board feeders. If the weather becomes very cold, feeding bees dry sugar, hard candy, or fondant is best to help them survive. See Extension Publication 2941 Colony Growth and Seasonal Management of Honey Bees for more information on wintering and feeding bees.

Traditionally, beekeepers supported brood production and colony growth by feeding bees various protein supplements or pollen substitutes. This was based on the belief that providing supplements within the hives can compensate for adverse weather conditions that hinder bees from gathering pollen. The idea was that this consistent nutritional support would facilitate continuous brood rearing. However, recent research at the University of Florida has shown that protein supplements did not noticeably improve colony growth. More research is required to substantiate the notion that protein supplements contribute to bee colony growth; beekeepers may be wasting time and money if they feed protein supplements to bees.

Dwindling cluster size: Egg-laying rates slow dramatically after the major fall honey flow ends in late October. The capped brood area will be much smaller in November than the typical brood nest from September to October. Most queens stop laying eggs near the beginning of winter (December 1) and will not resume oviposition until January, when the day length grows longer. Therefore, the size of the adult bee cluster tends to decrease in late fall and winter because the death rates of worker bees are higher than the replacement rates from new brood production. Healthy colonies can expect to lose 40 percent of adult worker bees from the end of October through mid-December. This loss mostly represents the deaths of geriatric summer bees.

Colonies can lose many more worker bees if the winter bees produced in September and October are compromised by viruses associated with high varroa mite infestations. Clusters in some colonies continuously dwindle all winter until only a few hundred workers and the queen remain, and these tiny colonies are doomed and cannot recover.

A beekeeper should be concerned if the overall cluster size in a colony falls to fewer than four deep combs covered by bees from January through mid-March. These small colonies are less likely to rebound when food resources become available, and it is best to combine weak colonies with stronger colonies during periods of warm weather. Diligent attention to removing weak colonies during the winter allows the beekeeper to save and protect combs and beekeeping equipment from hive pests like the greater wax moth and small hive beetle that destroy combs in the warmer months (see Extension Publications 2825 Small Hive Beetle and 3195 Minor Pests of Honey Bees in Mississippi).

Egg-laying by queens: Beekeepers should closely monitor egg-laying by queens starting in February and March. Although most queens begin laying eggs in January, some queens start later. The absence of eggs in the colony is much more concerning in February and March because it strongly suggests that a queen has either died or cannot lay eggs. Most beekeepers do not have replacement queens during the winter, and queenless colonies must be combined with colonies that have a queen by mid-March in most years.

Sampling for varroa mites: Varroa mites are a major threat as they transmit viruses to bees, leading to colony deaths from viral infections. Beekeepers need to make decisions about using miticides based on sampling mite populations

and following specific threshold levels for treatment. If you sample for mites in February, you can apply a miticide (if needed) far enough in advance of honey production and harvesting to avoid contaminating the honey. Some miticides are placed into hives for about 45 days, and these should not be used during honey production. In addition, each pesticide has a specific clearance time after it has been used in a colony before honey intended for human consumption can be collected. There is no research-based threshold mite population for this time of year. Still, a threshold of **one mite per 100 bees** for February is recommended because the average growth rate of mite populations would usually allow mite populations above this threshold in February to exceed damaging levels during the period of honey production in May to June.

If the treatment threshold is reached in February, beekeepers can use either miticides or a non-chemical method to control the mites. One non-chemical method is drone trapping, which takes advantage of the fact that varroa mites are more attracted to drone brood. When drone brood production is high, many more mites will invade drone brood cells than worker cells. The capped drone brood can be removed and destroyed after it has been infested and before the mites emerge from the brood cells. Since drone brood production is highest from February to May, spring is an excellent time to use this method to control mites. For more detailed information on managing varroa mites, see Extension Publication 2826 Managing Varroa Mites in Honey Bee Colonies.

Preparing for New Colonies

If you plan to buy starter colonies and queens for the current year's spring, they must be ordered within the first 2 weeks of January. Starter units are either nucs or packages. A nuc is a nucleus colony with about 10,000 worker bees, a laying queen, and five combs that contain all stages of brood, pollen, and honey. A package is a screened cage containing 10,000 worker bees and a caged queen (the queen is in a smaller cage placed inside the large shipping cage). Most bee producers in Mississippi prefer to sell nucs, but package bees can be purchased from suppliers in other states. Most producers of nucs and queens in Mississippi fill their order lists early in the season, and you are not likely to make a waiting list if you request nucs and queens after January. Details on buying, installing, and growing nucs can be found in Extension Publication 3594 Beginning Beekeeping in Mississippi.

April through June—Rapid Colony Growth

Established Colonies

Swarm management: Honey bee colonies grow rapidly during periods of intense bloom when pollen and nectar are abundant. Queens lay more eggs during this time, and nurse bees feed more larvae to support colony growth. Pollen provides the nutrients necessary for producing the brood food that is fed to developing larvae. This period represents the most intensive bloom period of the year, and the amount and diversity of pollen support the most rapid growth in honey bee colonies. Consequently, colony growth can be explosive, and colonies can become crowded by increased capped brood in the brood chamber and stored nectar/honey in the supers. The amount of nectar entering the hive can quickly fill all available honey supers, and the bees will begin storing honey in the brood nest. This condition is known as a honey-bound brood nest; if not corrected, a colony of bees will swarm.

Crowding of the brood nest is a major cause of swarming in honey bees. Swarming is a form of colony reproduction in which the old queen leaves with about 60 percent of the bees in a colony to find a new home. A new queen is raised in the original colony and usually emerges after the swarm has departed. To maximize honey production, you must prevent swarming to avoid losing a large force of foraging worker bees that collect nectar.

There are many techniques for swarm prevention, but they all are based on—

- providing empty combs in the brood nest for the queen to continue laying eggs at a high rate.
- providing honey supers to accommodate the rapid influx of nectar being stored by the bees.

This is also an opportunity to make new bee colonies by splitting existing colonies into either nucs or true splits. More information on swarm prevention and control can be found in Publication 2941 Colony Growth and Seasonal Management of Honey Bees.

Honey production: Beekeepers encourage honey bee colonies to store more honey than they naturally need to survive the winter. They achieve this by managing colonies to be larger than they would be in the wild. For example, beekeepers prevent swarming and allow colonies to grow larger than they would in a natural tree cavity. They also provide additional supers to the colonies to store incoming nectar efficiently. This way, beekeepers maximize the amount of food the bees can store.

The times when honey is produced vary significantly between north and south Mississippi. In north Mississippi, the main honey flow happens from the end of March through early June, and it is due to Chinese privet and white clover blooms. From mid-June to the end of August, there is a lack of food plants in most areas, which results in a decrease in nectar and

pollen, impacting new comb construction and the amount of capped brood in colonies.

In south Mississippi, the primary spring honey flow lasts at least 1 month longer than in the north, mainly because of the Chinese tallow tree, which is an excellent nectar and pollen source. This tree is abundant in the Jackson area and southward, especially between Interstates 20 and 10. As a result, many places in south Mississippi can have high honey production throughout June and into the first week of July. Therefore, while beekeepers in north Mississippi are harvesting their honey, those in southern Mississippi are still supering their hives to accommodate heavy amounts of incoming nectar.

Many beekeepers in south Mississippi harvest twice for spring honey; they like to harvest the privet and early spring honey separately from the Chinese tallow honey that is stored later. Regardless, they are harvesting some spring honey in July. Some beekeepers in north Mississippi wait to harvest honey in July, but all beekeepers usually harvest their spring honey by mid-July. More details on honey production can be found in Publication 3382 Maximizing Honey Production.

Requeening colonies: Queen honey bees are considered good egg-layers for the first 2 years of their lives, and most beekeepers replace older queens with new queens on a regular basis. The younger queens lay more eggs, produce larger colonies, and have pheromone blends for better colony cohesion. Many beekeepers replace their older queens during the spring because they can readily make their own queens this time of year, or you can buy queens from other producers. Commercial queen production occurs mostly from March into early July in Mississippi. Finding any mated queens for sale later in the year can be exceedingly difficult. Those beekeepers that prefer to requeen colonies in the fall must plan ahead, secure the replacement queens in the spring, and hold them in temporary colonies until needed in the fall.

New Colonies

The main objective for newly established colonies is to help them grow and become stable enough to survive the winter. Many new beekeepers starting their first colonies may not have pre-made combs, so the bees must create them from foundation. It takes about 25 pounds of nectar or honey to make 10 deep combs from foundation. New colonies are not expected to produce much harvestable honey during the first spring season because a lot of the nectar is used for building combs. However, some new colonies do manage to store extra honey.

Give new colonies installed in April sugar syrup to encourage comb construction and colony growth. This feeding should continue throughout the spring season or at least until the bees stop taking the syrup from the feeder. Check new colonies more frequently than established hives, and add new boxes of comb as the bee populations in the colonies grow. A beekeeper has done a good job if a five-framed nuc can be expanded to fill a hive volume of three boxes (a two-deep brood chamber and a medium super) by the end of June. Details on feeding and growing new colonies can be found in Publication 3594 Beginning Beekeeping in Mississippi.

July and August—The Summer Dearth in Food

Honey harvesting: At this point in the season, newly established colonies that have grown into full-size colonies are considered well-established hives. Managing these hives is similar to managing older colonies from previous years. Most spring honey should be harvested by mid-July for all well-established hives, and varroa treatments should begin (if warranted by sampling) before winter bees are produced.

After the honey is harvested, there is often a question of what to do with the wet combs from the honey extractor. Most beekeepers allow the bees to lick these wet combs dry, and then the combs are frozen before being stored until needed for the fall honey flow. The stored combs need to be protected from comb pests like the greater wax moth and the small hive beetle.

Beekeepers who produce summer honey face challenges in managing varroa mites. In some regions, a summer honey crop can be made from agricultural crops like soybeans and cotton. Many beekeepers harvest the spring honey before taking their bees to these summer crops. Honey from these crops is typically not harvested until mid-September. Beekeepers must wait until after harvesting their honey to use chemical treatments against the mites, which poses risks to the health of the bees as mite populations may be high into September when the winter bees are being made.

Small hive beetles: During this time, small hive beetles reach their peak population in beekeeping operations and apiaries. It is crucial to intensify monitoring of bee yards and to combine weak colonies with stronger ones to avoid infestations by these pests. Several other strategies for controlling small hive beetles include trapping the beetles, using chemical controls, and adjusting the spacing of combs in colonies by removing one comb from each box and evenly spacing the remaining combs across the box.

Sampling for varroa mites: It is important to promptly check for varroa mites in colonies after harvesting honey to have enough time to reduce mite numbers before colonies

start producing winter bees in September. It is best to sample for mites no later than mid-July, as some chemical treatments require the pesticide to be present in a colony for 45 days to work effectively. The treatment threshold for the growing season (May through October) is **three mites per 100 bees**, a published standard. It is crucial to shield winter bees from high mite loads or exposure to miticides during their development within capped brood cells.

Two chemical treatment strategies are used against varroa mites: long-term treatments and flash treatments.

Many **long-term treatments** are formulated as pesticides soaked into plastic, cardboard, or vinyl strips, and some of these strips are designed to hang in the brood nests of colonies for approximately 45 days. Pesticides are continuously released into the hive environment during this period to kill mites while they are on adult bees. Varroa mites that are within capped brood cells are protected from pesticides; however, these mites become vulnerable when they leave brood cells on their newly emerged host bees. Most mites spend at least a week on adult bees before invading new brood cells to reproduce, and the continuous release of pesticides over long periods increases the odds that most of these mites are killed before they can reinvade brood cells.

Flash treatments are designed for shorter exposures of pesticides into a colony, and the chemicals from these treatments kill mites over shorter periods of 3–10 days after application. The capped period for worker bees is 12.5 days, so most of the varroa mites in capped brood cells may be protected from exposure to pesticides during a flash treatment.

Several methods can be used to deliver pesticides as flash treatments. For example, formic acid is often delivered to hives by placing pads soaked in a solution of the acid into the brood nest. Thymol can be soaked onto wafers or gels for delivery into the brood nest. Oxalic acid is most commonly used by heating the crystalline acid and coating the bee cluster and interior of the hive with the sublimated acid (called vaporization). Oxalic acid can also be used in sucrose syrup that is trickled onto a cluster of wintering bees. Ambient summer temperatures in Mississippi are often too high to safely use any formic acid formulation. Similarly, some formulations of thymol cannot be used when the ambient temperatures are higher than 90°F. Oxalic acid vaporization can be safely used in the summer, but the presence of large amounts of capped brood can make treatment ineffective.

Some beekeepers try to control varroa mites with three to five serial flash treatments (especially oxalic acid vaporization) at 1-week intervals during the summer. Research has shown that serial applications of oxalic acid vaporizations during the summer are ineffective at controlling varroa mites when colonies actively produce brood. The effectiveness of flash treatments is improved when there is no capped brood in a colony of bees because the mites are not protected within capped brood cells. Instead, all varroa mites are exposed while on the adult bee population. Beekeepers can get much greater control of varroa mites in the summer by strategically applying a flash treatment after creating a break in brood production by caging the queen. See Publication 2826 Managing Varroa Mites in Colonies of Honey Bees or the Honey Bee Health Coalition for more guidance on which chemicals are safe to use during different times of the year.

September through November—Preparing for Winter

Hive preparations: As summer transitions to fall, it is important to place entrance reducers on beehives to help prevent robbing. If you use solid bottom boards, the reducers may make it harder for the colonies to ventilate on hot days. This means entrance reducers cannot be safely used on hives with solid bottom boards until cooler fall weather. However, if you use screened bottom boards, the reducers can be installed in the heat of August, as the screened floor helps eliminate heat from the hive. During winter, entrance reducers protect hives from intruders, such as rodents.

After the main fall nectar flow, any extra boxes of empty comb should be removed from the hives. This prevents the colonies from having excess space to defend during the cold winter, especially above the brood nest and stored honey. Extra space above the active nest can attract pests like small hive beetles, and it makes checking food reserves in winter more difficult. It is best not to have any boxes of empty comb on top of the active nest after the fall nectar flow is complete.

Many beekeepers lack sufficient storage space for boxes of empty comb and choose to leave an extra box (usually a deep box from the summer brood chamber) at the bottom of the hives. For instance, a hive entering winter might have an empty deep box on the bottom board, a second deep box above that contains most of the bee cluster, and a medium honey super on top filled with stored honey. Although this solution works well, it is important to use mouse guards or a small entrance reducer to prevent rodents from entering the bottom box. It will be unprotected by the cluster, and rodents can destroy the combs as they nest in the beehive during the winter. The bees only try to keep the volume immediately around the cluster at a warmer temperature, so the empty bottom box does not stress the bees when they thermoregulate.

Requeening colonies: Many beekeepers prefer to replace older queens with new queens in the fall of each year. This requires planning and preparation. Most commercial queen production occurs only in the springtime (March to July). Therefore, many people who requeen in the fall must produce extra queens during the spring and hold those

in reserve colonies until needed. Some people use nucs as reserve colonies, while others manage full-size colonies to hold queens. They often do this because they expect a certain level of colony losses during the growing season and want to sustain a certain number of colonies going into the winter. By making extra queens and colonies in the spring, they preemptively prepare for their needs in the fall of each year.

Feeding: The amount of honey produced from a typical fall season is usually enough to give colonies at least 65–70 pounds of stored honey for the winter. Colonies can be fed sugar syrup in warmer weather if there are shortfalls. If the weather turns unseasonably cold, hives can be fed dry sugar, hard candy, or fondant. More information on feeding colonies for winter can be found in Publication 2941 Colony Growth and Seasonal Management.

Flash treatments against varroa mites: Usually, the miticides used in flash treatments cannot penetrate the caps of brood cells, making these treatments fairly ineffective when colonies produce large areas of capped brood. During periods when brood production is absent or diminished, flash treatments are much more effective at providing chemical control of varroa mites. Vaporization of oxalic acid or applications of formic acid and thymol into broodless hives during this time of year has proven to be effective in controlling varroa mites.

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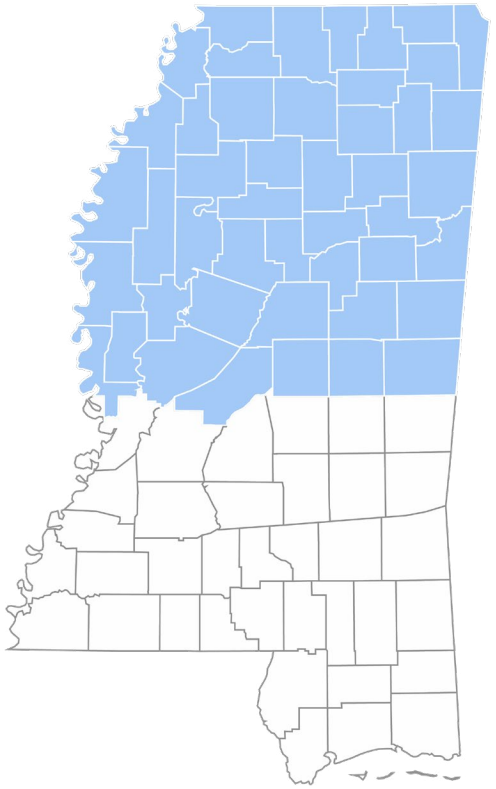
Mississippi Beekeeping Monthly Checklist

January

Task	North	South
Order nucs, packages, and queens for the season.	☐	☐
Clear **blocked entrances** of dead bees and debris.	☐	☐
Pick up all dead colonies to remove any unguarded stored honey that can trigger robbing behavior.	☐	☐
Check location and amount of **stored honey**; feed syrup if needed.	☐	☐
Check to see if the **queen is laying eggs**. Most will be laying eggs, but don't be concerned if some are not laying eggs yet.	☐	☐
Check the size of the **bee cluster** to identify weak colonies that may be combined later (within the next 2 months).	☐	☐



What is blooming this month?

North Mississippi

- hazel alder (end of month)
- tag alder (end of month)

South Mississippi

- hazel and tag alders
- red maple
- elm
- henbit

https://extension.msstate.edu/publications/mississippi-beekeeping-calendar

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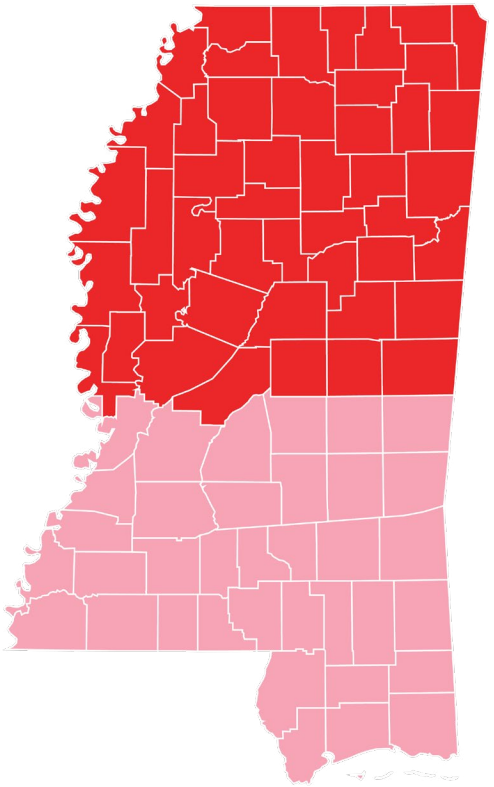
February

Task	North	South
Check location and amount of **stored honey**; feed syrup to colonies that have low reserves; feeding protein supplements may not support brood production.	☐	☐
Check for a **laying queen**. If there are no eggs or brood, presume the queen is dead and combine the colony with another.	☐	☐
Sample for **varroa mites** using an alcohol wash; treat with miticides if mite loads exceed a 1% action threshold.	☐	☐
Initiate drone trapping of mites as an alternative to miticides.	n/a	☐
Perform comprehensive colony inspection by the end of the month; full takedown of hive; clean bottom boards.	n/a	☐
Clean up all deadouts to save combs; combine weak colonies with other colonies.	n/a	☐



What is blooming this month?

North Mississippi

- red maple
- henbit
- purple deadnettle
- elm

South Mississippi

- eastern redbud
- spring titi
- fruit bloom

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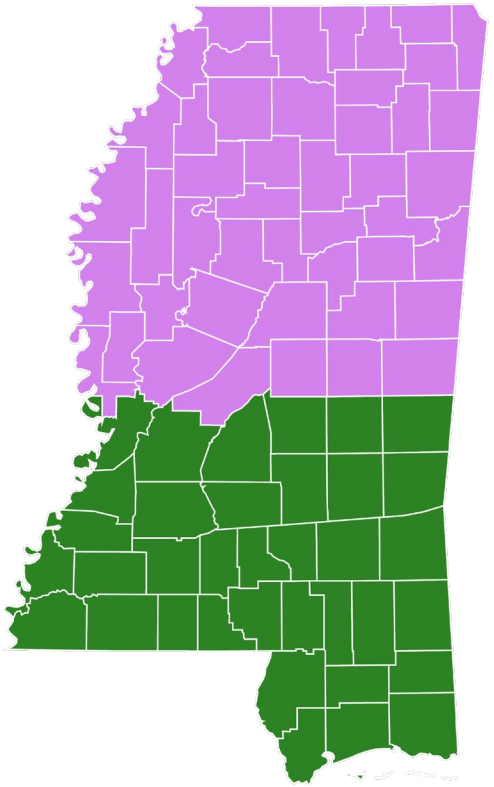
Mississippi Beekeeping Monthly Checklist

March

Task	North	South
Keep feeding bees until sustained bloom periods.	☐	☐
Evaluate capped brood quality; order new queen if necessary.	☐	☐
Initiate supering if nectar flow begins to crowd brood nest (and stop feeding).	☐	☐
Clean up all deadouts and weak colonies to save combs and prevent robbing.	☐	n/a
Initiate or continue drone trapping of mites as an alternative to miticides.	☐	☐
Perform comprehensive colony inspection by the end of the month; full takedown of hive; clean bottom boards	☐	n/a
Check for a **laying queen**. If there are no eggs or brood, presume the queen is dead and combine the colony with another.	☐	n/a



What is blooming this month?

North Mississippi

- white clover
- blackberry
- hairy vetch

South Mississippi

- white clover
- blackberry
- hairy vetch

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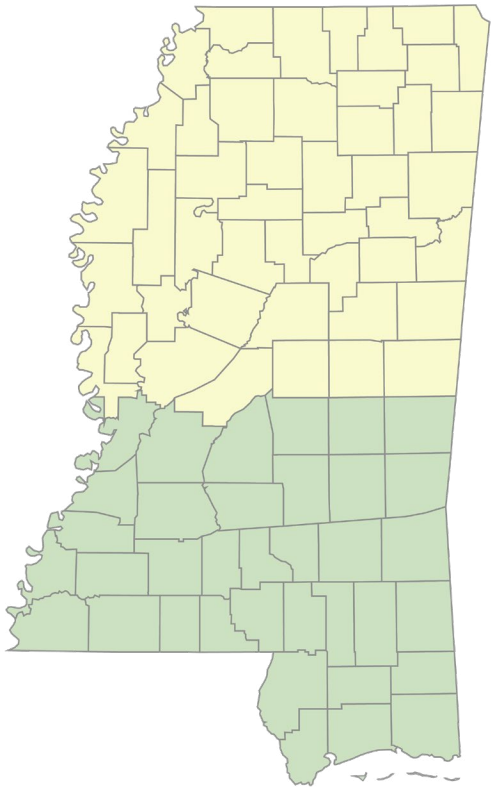
Mississippi Beekeeping Monthly Checklist

April

Task	North	South
Install nucs (or packages) and new **queens**.	☐	☐
Remove entrance reducers (if not already done).	☐	☐
Initiate or continue drone trapping of mites as an alternative to miticides.	☐	☐
Continue supering as major honey flow continues.	☐	☐
Implement various **swarm-prevention techniques**.	☐	☐
Split colonies to make new ones (can be part of swarm management).	☐	☐



What is blooming this month?

North Mississippi

- black locust
- tulip poplar
- yaupon holly

South Mississippi

- Chinese privet
- highbush gallberry
- tulip poplar
- rattan vine

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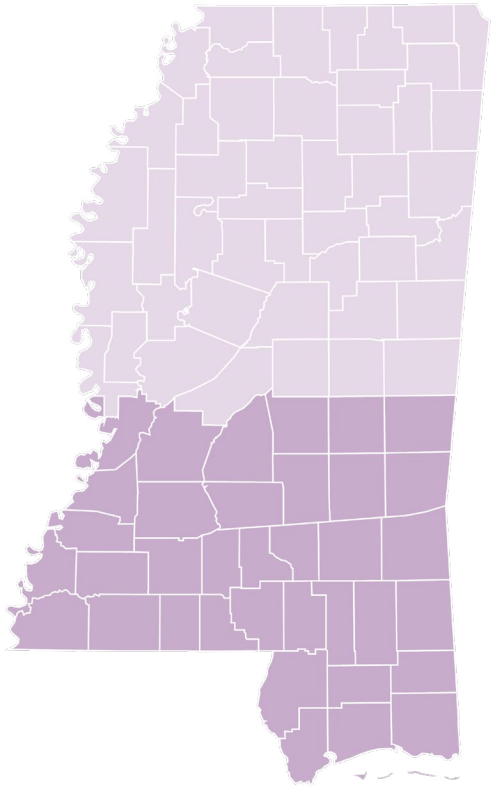
Mississippi Beekeeping Monthly Checklist

May

Task	North	South
Continue feeding new hives until they stop taking the syrup.	☐	☐
Add boxes of comb foundation to new colonies as they grow.	☐	☐
Continue drone trapping of mites as an alternative to miticides (optional).	☐	☐
Continue swarm prevention measures.	☐	☐
Provide supers to pace the rate of incoming nectar.	☐	☐
Capture swarms with traps or by shaking them into hive bodies (optional).	☐	☐
Continue monitoring brood pattern quality of the queen.	☐	☐



What is blooming this month?

North Mississippi

- tulip poplar
- yaupon holly
- rattan vine
- Chinese privet

South Mississippi

- low bush gallberry

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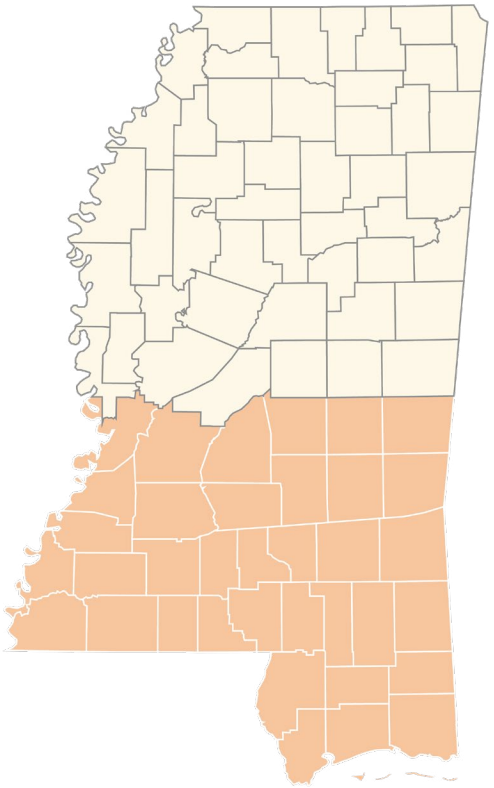
Mississippi Beekeeping Monthly Checklist

June

Task	North	South
Harvest honey; put extracted combs on hives to be dried; remove and store combs until needed in late summer/fall nectar flow.	☐	n/a
Sample for varroa mites **after** honey is extracted; use a 3% action threshold.	☐	n/a
Continue supering; honey flow will continue through early next month.	n/a	☐
Ensure water sources are available to bees for cooling hives.	☐	☐
Bearding of bees on hives is normal; ventilate hives to alleviate heat stress.	☐	☐
Check hives every 2–3 weeks for status of queen and space needs.	☐	☐
Control small hive beetles (SHB) as their numbers increase into the summer.	☐	☐



What is blooming this month?

North Mississippi

- sumac
- sourwood
- Chinese tallow
- peppervine
- blue vervain

South Mississippi

- sumac
- summer titi (toxic)
- Chinese tallow
- peppervine

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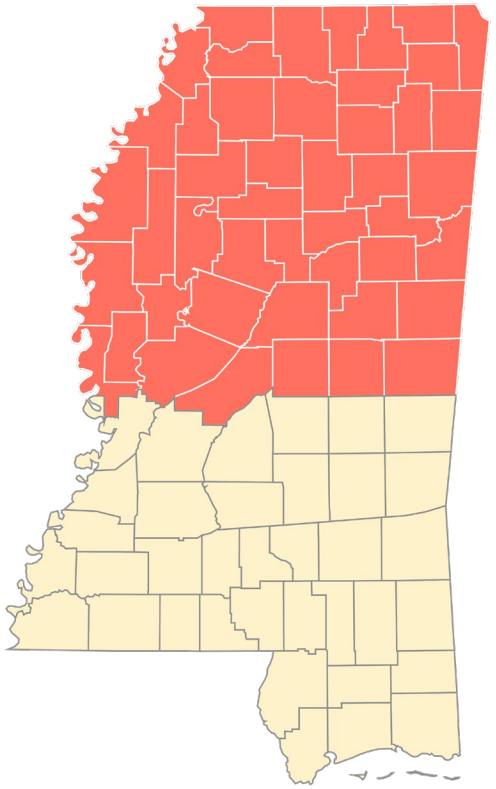
Mississippi Beekeeping Monthly Checklist

July

Task	North	South
Inspect every 2–3 weeks for colony and queen health; brief inspections.	☐	☐
Super as needed.	n/a	☐
Swarm control through midsummer.	n/a	☐
Prevent, control, and stop robbing.	☐	☐
Harvest honey; dry and store combs.	☐	☐
Sample varroa mites; 3% threshold to prompt the use of miticides (**critical time**).	☐	☐
Control small hive beetles (SHB) using vacuum, traps, or legal chemicals.	☐	☐



What is blooming this month?

North Mississippi

- upland cotton
- peppervine
- blue vervain

South Mississippi

- upland cotton
- peppervine
- blue vervain

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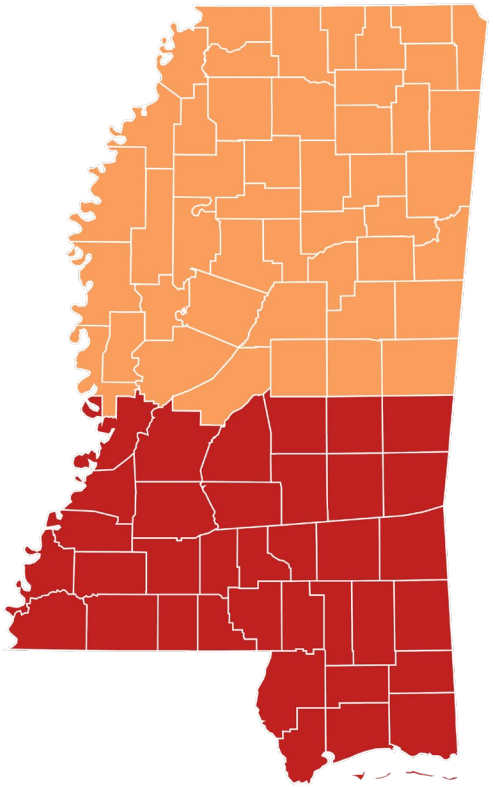
Mississippi Beekeeping Monthly Checklist

August

Task	North	South
Continue varroa mite treatments; control SHB.	☐	☐
Reduce hive volume as brood production declines.	☐	☐
Expect colony size to decline; brood area will decrease in hives.	☐	☐
Prevent, control, and stop robbing (**critical time for robbing**).	☐	☐
Do not open hives unless absolutely necessary, or during periods of light rain.	☐	☐



What is blooming this month?

North Mississippi

- upland cotton
- soybeans
- redvine
- blue vervain
- smartweed

South Mississippi

- upland cotton
- blue vervain

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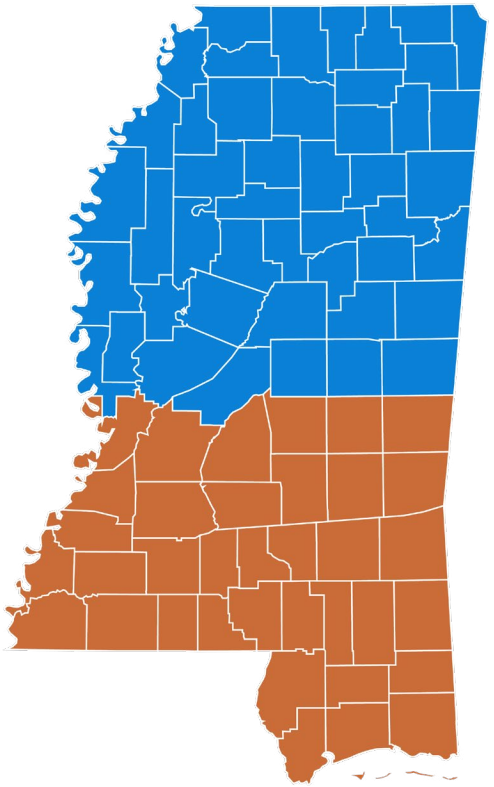
Mississippi Beekeeping Monthly Checklist

September

Task	North	South
Fall nectar flow begins but is often a mere trickle in the early part of the month.	☐	☐
Good time to requeen! New queens that overwinter will produce the best spring colonies. Maintain resource hives from the spring as sources of mated queens.	☐	☐
Remove all extraneous supers; prepare for storage (end of month through October).	☐	☐
If colonies do not have 70 pounds of stored honey, feed with heavy syrup (end of month through October).	☐	☐



What is blooming this month?

North Mississippi

- goldenrod
- boneset
- asters

South Mississippi

- blue vervain
- asters (end of month)

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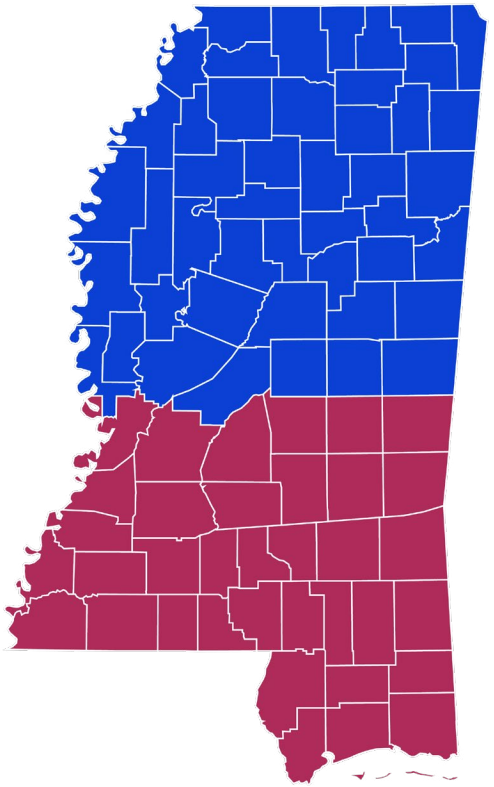
Mississippi Beekeeping Monthly Checklist

October

Task	North	South
Make sure colonies have **adequate food** for surviving the winter; can still feed syrup to make up deficits.	☐	☐
Reduce entrance by **inserting an entrance reducer**.	☐	☐
Consider using flash treatment when colonies become broodless to further control varroa mites.	☐	☐
Check for a minimal cluster size of eight deep combs covered by adult bees; ensure at least four combs of bees in January; combine weak colonies with stronger ones.	☐	☐



What is blooming this month?

North Mississippi

- goldenrod (finishing)
- asters
- eastern smokebush

South Mississippi

- goldenrod (starting)
- asters
- eastern smokebush

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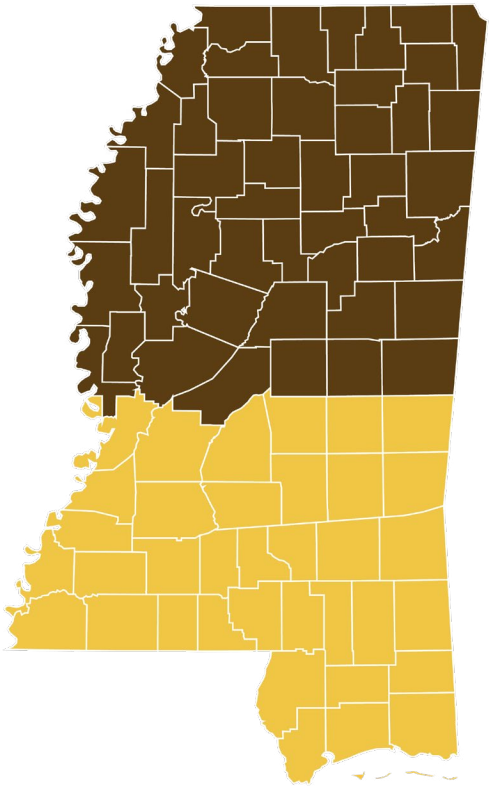
Mississippi Beekeeping Monthly Checklist

November

Task	North	South
Make sure colonies have **adequate food** for surviving the winter; can still feed syrup to make up deficits.	☐	☐
Switch to feeding fondant or dry sugar when temperatures drop below freezing point of water.	☐	☐
Consider using a flash treatment when colonies become broodless to further control varroa mites.	☐	☐
Clean up bee yards (by mowing, weedeating, etc.) to deter mice and rodents from seeking hives as winter homes.	☐	☐



What is blooming this month?

North Mississippi

- residual and declining asters
- residual and declining smokebush

South Mississippi

- residual and declining asters
- residual and declining smokebush

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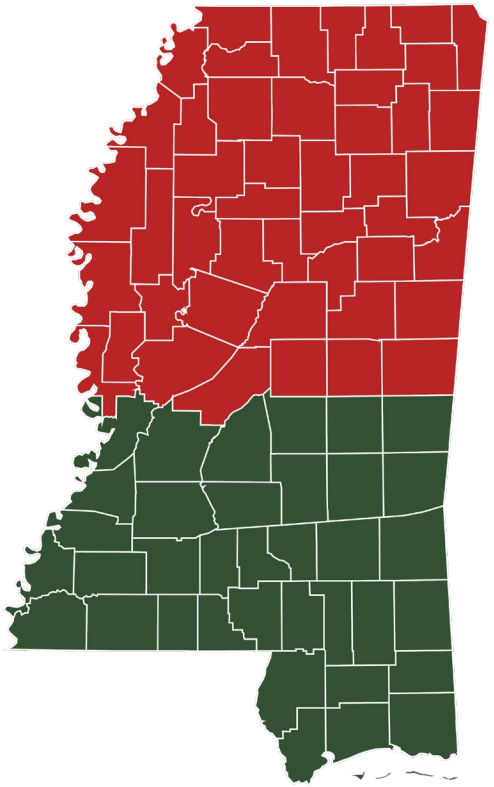
Mississippi Beekeeping Monthly Checklist

December

Task	North	South
Make sure colonies have **adequate food** for surviving the winter; can still feed syrup to make up deficits.	☐	☐
Open hives at least once per month from December to March to check cluster size and location of food relative to cluster.	☐	☐
Switch to feeding fondant or dry sugar when temperatures drop below the freezing point of water.	☐	☐
Consider using a flash treatment when colonies become broodless to further control varroa mites.	☐	☐
Relax knowing colonies are well prepared; read beekeeping literature during the winter to keep learning.	☐	☐
Prepare beekeeping equipment that will be needed next spring.	☐	☐



What is blooming this month?

North Mississippi

Not much of anything

South Mississippi

Not much of anything

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By **Jeffrey W. Harris**, PhD, Associate Extension/Research Professor, Agricultural Science and Plant Protection.

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