



**Your local link to MU for ag extension and research information**

<http://aqebb.missouri.edu/aqconnection>

For more information  
please contact your  
MU Extension Center:

**Adair**  
(660) 665-9866

**Audrain**  
(573) 581-3231

**Boone**  
(573) 445-9792

**Callaway**  
(573) 642-0755

**Chariton**  
(660) 288-3239

**Clark**  
(660) 727-3339

**Howard**  
(660) 248-2272

**Knox**  
(660) 397-2179

**Lewis**  
(573) 767-5273

**Linn**  
(660) 895-5123

**Macon**  
(660) 385-2173

**Marion**  
(573) 769-2177

**Moniteau**  
(573) 378-5358

**Monroe**  
(660) 327-4158

**Morgan**  
(573) 378-5358

**Pike**  
(573) 324-5464

**Putnam**  
(660) 947-2705

**Osage**  
(573) 897-2497

**Ralls**  
(573) 985-3911

**Randolph**  
(660) 269-9656

**Schuyler**  
(660) 457-3469

**Scotland**  
(660) 465-7255

**Shelby**  
(573) 633-2640

**Sullivan**  
(660) 265-4541

## Considerations for Double Cropping Soybeans After Wheat

Many farms across the state of Missouri engage in the practice of double cropping. One of the most popular double cropping practices is planting soybeans after wheat. A typical approach to crop rotation is a corn crop in year one, followed by a fall wheat planting after corn harvest in year one, wheat harvest in year two, and then soybean planting directly after wheat harvest in year two. A wheat planting after double cropped soybeans is typically not feasible due to lack of time for the wheat stand to gain winter hardiness, so wheat will only follow full-season soybeans or corn. A minimum (variety and maturity group dependent) of 90 frost-free days is needed to successfully grow a double cropped soybean field from emergence to physiological maturity. Typically, the first 28-degree killing frost that arrives in the northern portion of Missouri is around the last or second to last week of October. The statewide Freeze-Frost Probability Guide can be found at <https://ipm.missouri.edu/FrostFreezeGuide/>

If emergence occurred before July 22<sup>nd</sup>, which is the historical last average safe day for northern Missouri double crop soybean planting, the soybeans would possibly be safe from frost. However waiting to plant until late July will most likely incur yield loss also in part due to a moisture and rainfall deficit that will delay soybean emergence and provide poor stand establishment. There is a low probability of rainfall occurrence to crop establishment as you move into late June and July, so the best option for a double crop to make it is for wheat to be harvested in June and soybeans to be planted in that same month. As time advances throughout the summer, the yield potential of full season soybean varieties planted in June decreases by more than one bushel per week, and in July, the yield potential decreases by five or more bushels per week.

High-yielding, early-maturing wheat varieties, along with employing no-till planting, are good options to have soybeans in the ground sooner and to help conserve soil moisture. While tillage may be an option prior to planting double crop beans, it is not recommended in dry or late-planting conditions. Moisture loss can range from a quarter to three quarters of an inch per tillage pass. No-till planting systems prevent tillage moisture loss while conserving residue from the previous wheat crop. Ideally, a successful planting operation shall take place when there is moisture in the top two inches of the soil profile and the seed is positioned one to one and a half inches deep.

If soil moisture is available directly below two inches, consider using devices such as furrow openers/row cleaners to move the dry topsoil out of the way. Having row cleaners in place will also help move excess wheat residue out of the way and reduce the chances of hair pinning. When possible, planting at a 15 degree angle orientation to the direction the wheat was planted helps minimize hair pinning as well. An

important step to mitigate residue problems during planting due to the wheat residue is to evenly spread the threshed material to the width of the header. The other possibility is to raise the head in the wheat canopy so less stover material passes through the combine. The latter is not recommended if the straw will be baled. If straw will be baled, the spreader fans can be disengaged on the back of the combine, and a baler and tractor can follow directly behind. An additional valid option to add growing days for a soybean crop is to harvest high-moisture wheat.

High moisture harvesting of wheat in the 18-20% range and drying the grain down artificially, can lead to earlier planting and higher grain yield for the double crop soybeans. Physiological maturity in wheat occurs around 40% moisture, so beginning harvest at 20% moisture will not lead to any yield loss. Harvesting wheat above 20% moisture can lead to harvest damage, more difficult storage, and lower test weights. Harvesting below 14% moisture can lead to increased cutter bar losses, low test weight due to wet and drying cycles caused by dew or rain, and lodging. Wheat should be dried to 14% or less moisture within 48 hours to prevent kernels sprouting and spoilage of grain in the bin.

Wheat greater than 17% moisture (high moisture) can be dried with high-speed dryers and bin drying equipment. If dried in a bin, heat and stirring are a must. A high-speed dryer can handle wheat up to 24% moisture. Wheat that is less than 17% can be dried without heat. When using heat to aid in wheat drying, keep the temperature below 140 degrees to avoid damage to milling quality. Seed wheat should be dried with dryer air temperatures at or below 110 degrees. When bin drying wheat, it is best not to exceed seven to nine feet of depth; otherwise, adequate drying airflow will not be achievable. Wheat offers greater airflow resistance in bins than corn or soybeans.

Weed interference at harvest is possible issue that can be faced in a double crop system. Older weeds are harder to control with a follow-up burndown herbicide after wheat harvest. Another issue when waiting until wheat is below 14% moisture is that in heavy wheat residue, preemergent herbicide contact with the soil surface will be reduced. Additional rainfall will be needed to carry the preemergent to the soil off the wheat residue. The earlier the wheat harvest in the summer, the greater the chance of adequate rainfall for washing the preemergent herbicide off the wheat residue and into the soil and activating the herbicide. Careful consideration should be paid to what traits are selected in purchasing double crop seed as this directly affects post-wheat harvest herbicide options.

It is wise to plant a soybean variety typically used in a full season setting, but seeding rates will need to be adjusted by an increase of 5-20%.

A good target to aim for in double crop beans is a final stand count of 140,000-150,000 plants per acre. The seeding rate will be determined based on the seed lot germination rate and soil moisture conditions at planting. Row width should be 20 inches or less to accommodate for reduced vegetative growth development due to the shortened growing season. Planting closer together leads to increased light interception and quicker and more adequate row closure. Planting wider than 20 inches will not allow for row closure in the shorter growing season presented in double crop soybeans and will lead to substantial yield loss.

As row spacing is narrowed, desired number of plants per linear foot in the final stand will decrease. Not adjusting plant spacing as row width narrows will lead to over population. Due to this fact, careful attention should be given when determining seeding rates to avoid incurring economic loss due to overly high planting populations. Fertility in double crop soybeans is managed by applying adequate levels of phosphorus and potassium for both the wheat and soybean crops in the fall prior to wheat harvest the following summer.

Source: [\*Nick Wesslak, agronomy specialist\*](#)



## Northeast Missouri Bull Sale

The 52<sup>nd</sup> Annual Northeast MO Performance Tested Bull Sale was held in Palmyra on March 30. The overall average on thirty-four bulls was \$4,509.



The high breed average was Angus at \$4,590. Other breed averages were Charolais \$4,000, SimAngus \$3,500 and Polled Hereford \$3,500. High selling bulls in the sale were Angus consigned by Hudson Angus Farm, Jefferson City, \$8,400, Hudson Angus Farm, \$6,100, and Haerr Farms, Taylor, \$6,100. Four other bulls sold for \$5,000 or higher.

Bulls offered in this sale met certain predetermined standards to be eligible for this sale. Bulls must be in the upper 50<sup>th</sup> percentile in two out of four EPD (Expected Progeny Difference) traits: CE (Calving Ease) or BW (Birth Weight), WW (Weaning Weight), YW (Yearling Weight), or Milk, yearling height 49 in or above, weight at a year 1100 lbs. or above, semen tested and examined for breeding soundness, and to be

found satisfactory potential breeders. As well as meeting health requirements: tested and found negative for BVD-PI (Bovine Virus Diarrhea-Persistently Infected), vaccinated against Leptospirosis, and must follow state requirements for trichomoniasis. Thirty-one bulls in the sale utilized genomic testing to improve the accuracy of their EPD's for the perspective buyer.

The annual meeting of the Northeast Missouri Beef Cattle Improvement Association (BCIA), which sponsors the bull sale, was held on April 4th at Fiddlesticks in Hannibal with 80 members and guests attending. Several awards were presented at the banquet.

Plaques were presented to the owners of the high indexing bulls in the sale. Angus went to Hudson Angus Farm, Jefferson City. Other awards presented: included Outstanding Seedstock Producer, David and Tyler Wilt, Shelbina; Outstanding Commercial Producer, Latimer Farms, Hunnewell; and Outstanding Service to Dr. Mac Wilt, Paris.

The sale is a cooperative effort between the Northeast Missouri BCIA and University of Missouri Extension. For details on participating, contact your nearest Extension Livestock Specialist. The next sale will be March 29, 2025, at F & T Livestock Market, Palmyra.

Source: [\*Daniel Mallory, livestock specialist\*](#)



## June Gardening Tips & Tasks

### Trees & Shrubs

- Watch for bagworms feeding on plants, especially junipers and arborvitae. Collect and dispose.
- Fertilize roses as needed after the first round of blooms. Use a fertilizer higher in phosphorous if possible, otherwise, use a balanced fertilizer.
- If wanting to propagate plants, softwood cuttings can be taken from trees and shrubs as the spring's new growth begins to mature.
- Squirrels are making nests now and dropping leafed twigs. The remains of their feeding on horned oak galls may also be observed.
- Trees and shrubs may still be fertilized as needed before July 4th.
- Any pruning of spring-flowering trees and shrubs should be completed before the end of June to encourage as many blooms as possible in the following year. Pruning too late can result in cutting off the next year's blooms.
- Continue spraying roses with a fungicide as needed to

help prevent black spot disease.

- Rose slug damage may be noticeable. Treatment is not required as the damage is primarily aesthetic.
- Japanese beetles are usually active at this time. Pheromone traps may attract more beetles than they can trap, causing damage to be worse. A more practical control method is to hand-collect adults early in the morning when the insects are still sluggish and deposit them in soapy water.
- Bottlebrush buckeyes and St. John's wort are in bloom this month.
- Lace bug damage may be noticeable on azaleas and other plants. The damage appears as bronzing or stippling on the upper side of the leaves, with the insects being noticeable on the underside of the leaves. Lacebugs can be dislodged using a strong stream of water.
- Rose rosette is most readily transmittable in May-July on new active growth. Nothing except removal can be done for the plant.
- Apply a second spray for borer control on hardwood trees where needed.
- Leafcutter bees may be causing damage to plants, however, no control is needed as these native bees rarely cause actual harm.

### Annuals & Perennials

- Deadhead bulbs and spring flowering perennials as blossoms fade.
- Plant tropical water lilies when water temperatures rise above 70°F.
- Aster yellow may start showing symptoms this month. Nothing can be done to save infected plants, so remove and discard any infected plants.
- Daylilies are in peak bloom this month.
- During times of high humidity and cooler nights, powdery mildew may be prevalent, especially on phlox and peonies. Preventative fungicides, encouraging good airflow, and pruning out badly infected parts, are all useful control methods.

### Lawn

- Water turf as needed to prevent drought stress.
- Mow lawns frequently enough to remove no more than 1/3 of the total height when mowing. There is no need to remove clippings unless they become excessive.
- Gradually increase the mowing height of zoysia lawns throughout the summer. By September the mowing height should be 2-2.5 inches.
- Mow bluegrass at 2-3.5 inch height. Turfgrasses growing in shade should be mowed at the higher recommendations.
- Zoysia can be fertilized now while actively growing. Do not exceed 2-3 lb of nitrogen fertilizer per 1,000 sq. ft. per year.
- Keep an eye out for clematis wilt, vinca stem canker, and peony blotch.

## Fruits & Vegetables

- Peach moths emerge this month. They are most serious on peaches where the first generation attacks growing tips. Wilted shoots should be pruned out.
- Thin overloaded fruit trees to receive larger and healthier fruits at harvest. Fruits should be a hands-width apart.
- Strawberries are ready for harvest. After harvesting: thin excess plants, remove weeds, fertilize if needed, and apply mulch.
- Summer fruiting raspberries are ripening now.
- Begin control for apple maggot flies. The best control is preventing females from laying eggs by hanging red-painted balls coated with tanglefoot, or another sticky substance.
- Spray peach tree trunks and other stone fruits for peach tree borers.
- Prune and train young fruit trees to eliminate poorly positioned branches and establish proper crotch angles.
- Cucurbits, tomatoes, and peppers may have pollination issues during times of high heat. Tomatoes and peppers cannot set fruit when temperatures exceed 90°F. During high humidity, cucurbit pollen becomes sticky and does not transfer well.
- Flea beetles may be found on eggplant.
- Warm-season vegetables that can still be planted through June include basil, beans, cucumbers, edamame, eggplants, melons, okra, peppers, summer squash, sweet potatoes, and tomatoes.
- As cucumber and squash plants begin to vine, keep an eye out for cucumber beetles and squash bugs, squash vine borer adults emerge this month and lay eggs on the lower part of the stem.
- If mature enough, stop harvesting asparagus when the spears become thin. The plants can be fertilized after the last harvest with nitrogen. Apply 0.10 lbs of a balanced fertilizer per 100 sq. ft.
- Treat corn earworms by applying a couple of drops of mineral oil to the base of the silk as they appear. BT spray will also work while the silks are young, however, once the earworm is in the ear, it becomes ineffective.

**Source:** *Missouri Botanical Garden*