



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

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(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

Monroe
(660) 327-4158

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

Colostrum Management

The most critical component in the health of a newborn calf is the timing and amount of colostrum consumed. Colostrum is the first milk produced by the mother and is full of antibodies and more concentrated amounts of protein.

Newborn calves need to stand and nurse within the first few hours of life to maximize immunity.

Unlike some other mammals, cows do not pass antibodies through the placenta to their offspring during pregnancy. Instead, the intestines of a

newborn calf are capable of carrying the antibodies found in the colostrum across the intestinal wall and into the bloodstream after birth. The gut begins to "close" as soon as the calf's first meal is consumed to protect the newborn from pathogens that can also cross the intestinal wall. As a result, fewer antibodies can be absorbed from each meal until gut closure is complete. The window of time for delivery of colostrum generally is 24 hours, but really depends on when the calf first consumes any kind of meal. A calf can still absorb some antibodies at 24 hours if the calf has had nothing to eat. Closure begins immediately after consumption and can also end before the 24-hour mark.



The ideal method for a calf to receive colostrum is through nursing its own dam. A chute can be used to restrain the cow if it is unwilling to let a calf nurse. If a newborn cannot nurse, the cow can be milked and fed to the calf through a bottle or tube, or frozen colostrum from a cow that has previously lost her calf can be used. Calves need about two quarts of colostrum within four to six hours after birth and another two quarts four to six hours after the first feeding. If using previously acquired and frozen colostrum, thaw gently in warm water because thawing rapidly in boiling water will destroy a portion of the antibodies.

If there is no colostrum available, a commercial colostrum replacement product can be used, although they can be expensive. A last resort could be to feed colostrum supplement. Colostrum **replacements** provide higher levels of antibodies than colostrum **supplements**. Supplements are effective when the calf receives some colostrum from the dam. Commercial colostrum replacer is more expensive than supplement, but much more effective and worth the cost if there is no colostrum available. Check the label to ensure desired product is being used. Consult with a veterinarian and have supplies ready with a plan in place before this year's calving season starts.

Source: *Jenna Monnig, livestock specialist*

What You Should Know About the Earned Income Tax Credit and Child Tax Credit for 2021

The Earned Income Tax Credit (EITC) is for working people who earn less than \$57,414. This year, the amount of the credit you could receive is up to \$6,728. The amount of the credit depends on:

- 1) marital status,
- 2) the number of qualifying children,
- 3) earned income.

This refundable tax credit is targeted at low to moderate income workers and their families. The EITC is one of the largest anti-poverty tools in the U.S. As earned income increases, the credit decreases or phases out. A large amount of investment income disqualifies the credit.

The IRS estimates that 20%, or 1 in 5 people eligible for the credit, do not claim it. In the 2020 tax year for Missouri, over 476,000 families received the EITC totaling \$1.2 billion. The average amount per family was \$2,452. The overall economic impact was \$3 billion. Unclaimed dollars for Missourians in 2020 was \$300 million.

To determine eligibility for the EITC

- Must be a U.S. citizen or resident alien all year.
- Must work and have earned income.
- Needs to have a Social Security number that is valid for employment issued on or before the due date of the return (including extensions).
- All qualifying children must have Social Security Numbers.
- May not have more than \$10,000 of investment income (such as interest).
- May not file as married filing separately.
- May not be a qualifying child of another person.
- May not file Form 2555 (related to foreign earned income).
- Must file a federal income tax return to get the EITC even if no taxes are owed or recipient is not required to file.

Families with no children may qualify for a reduced credit. Children must meet the relationship; age, residency, and joint return tests to qualify for the EITC.

Relationship Test: The child must be the recipient's son, daughter, stepchild, foster child, brother, sister, half-brother, half-sister, step-brother, step-sister, or a

descendant of any of them. An adopted child is always treated the same as a biological child.

Age Test: The child must be:

1. Under age 19 at the end of the year,
2. Under age 24 at the end of the year and a student,
3. Permanently and totally disabled at any time during the year, regardless of age.

Residency Test: The child must have lived with the recipient in the United States for more than half of the year.

Joint Return Test: The child must not file a joint return for the year, unless they are filing a return only to claim a refund of income tax withheld or estimated taxes paid.

The Child Tax Credit has been expanded for 2021. A child age 0-5, provides a \$3,600 credit. A child age 6-17 provides a \$3,000 credit. Half the credit was distributed monthly from July to December, unless opted out. The other half will be refunded on the tax return. This credit does not require earned income.

The table below shows income thresholds based on filing status and number of children, if any, to be eligible for the EITC.

Number of children	Married Filing Joint	Single or Head of Household
No children	\$27,380	\$21,430
One child	\$48,108	\$42,158
Two children	\$53,865	\$47,915
Three children	\$57,414	\$51,464

Source: *Darla Campbell, ag business specialist*



Gardening Tips for January

Ornamentals

- Brush off heavy snow from trees and shrubs.
- Allow ice to melt naturally from plants to reduce injury.
- Check stored summer bulbs such as dahlias, cannas, and gladiolus to be sure they are not rotting or drying out.
- Limbs damaged by ice or snow should be pruned promptly to prevent bark from tearing.
- Sow pansy seeds indoors.

Houseplants

- Wash dust off plant leaves on a regular basis. This allows the leaves to gather light more efficiently and will result in better growth.
- Set pots of humidity-loving house plants on trays filled with pebbles and water.
- Kill mealy bugs on plants by wiping them off with a cotton ball soaked in rubbing alcohol.
- Insecticidal soap sprays can be safely applied to most house plants for the control of many insect pests.
- To clean heavily encrusted clay pots, scrub them with a steel wool pad after they have soaked overnight in a solution consisting of one gallon of water, and one cup each of white vinegar and household bleach.

Miscellaneous

All Month

- Store wood ashes in sealed, fireproof containers for future use.
 - ▶ Apply a dusting of ashes around lilacs, baby's breath, asters, lilies, and roses in spring.
 - ▶ Do not apply to acid-loving plants.
 - ▶ Excess ashes may be composted.
- Check fruit trees for evidence of rodent injury to bark.
- Avoid foot traffic on frozen lawns as this may injure turf grasses.

Week 1-2

- Christmas tree boughs can be used to mulch garden perennials.
- If bulbs were not planted before the ground froze, plant them immediately in individual peat pots and place the pots in flats. Set them outside where it is cold and bury the bulbs under thick blankets of leaves. Transplant them into the garden any time weather permits.
- Seed and nursery catalogs arrive. While reviewing garden catalogs, look for plants with improved insect, disease, and drought-tolerance.
- Old Christmas trees can be recycled outdoors as a feeding station for birds. String garlands of peanuts, popcorn, cranberries, and fruits through their boughs.

Source: Missouri Botanical Garden

MU Variety Testing Program

The 2021 performance results for the fall crops of corn, soybean and grain sorghum are available online on the MU variety testing website

<https://varietytesting.missouri.edu/>

MU Extension Publications

Following are a list of new and updated publications. All publications are available online at <https://extension.missouri.edu/publications> or contact your location county extension center.

- Updates to Missouri's Private Pesticide Applicator Manual - G854
- Getting Started With Soil Health Testing in Missouri - G6953
- Grazing Cover Crops - G4165
- Missouri Farm Land Values Opinion Survey - G401

Planning Budgets:

Corn

Corn (Dryland) Planning Budget – G651
Corn (Irrigated) Planning Budget – G652
Corn Silage Planning Budget – G664

Grain Sorghum & Wheat

Grain Sorghum Planning Budget – G653
Winter Wheat Planning Budget – G656

Soybean

Soybean (Dryland) Planning Budget – G654
Soybean (Double Crop) Planning Budget – G655

Forages

Alfalfa Establishment Planning Budget – G661
Alfalfa Baleage Planning Budget – G662
Alfalfa Small Bales Planning Budget – G663
Cool Season Pasture Establishment - G665
Fescue – Clover Hay Planning Budget – G666
Fescue Seed and Forage Planning Budget – G667
Native Warm Season Grass Planning Budget – G672

Industrial Hemp

Industrial Hemp for Fiber Planning Budget – G669

Dairy

Dairy (Grazing) Planning Budget – G677
Dairy Heifer Planning Budget – G678

Beef

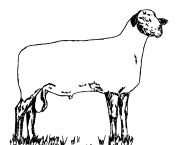
Northern Missouri – Cow Calf Planning Budget – G680
Beef Backgrounding Planning Budget – G681
Beef Heifer Planning Budget – G682
Yearling Beef Steer Feeding Planning Budget – G683

Sheep & Goats

Sheep – Early Lambing Planning Budget – G685
Sheep – Late Lambing Planning Budget – G686
Goats – Early Kidding Planning Budget – G690
Goats – Late Kidding Planning Budget – G691

Swine

Feeder Pigs Planning Budget – G687
Farrow to Finish Swine Planning Budget – G688
Hog Finishing Planning Budget – G689



PPAT Schedule

The following list is for in-person training.

Pre-registration is required with limited seating.

For questions: Valerie Tate (660)-985-5123
or Dhruba Dhakal (573) 581-3231.

Adair County- Jan. 26 @ 10 a.m., or 2 p.m.
MU Extension office 660-665-9866

Boone County- Jan. 24 @ 9 a.m., or 2 p.m.
MU Extension office 573-445-9792

Clark County- Jan. 19 @ TBD 660-727-3339

Knox County- Jan. 24 @ 10 a.m. or 2 p.m.
Greenley Research Center 660-397-2179

Lewis County- Jan. 13 @ 2 p.m. or 6 p.m.
Courtroom 573-767-5273

Linn County- Feb. 1 @ 2 p.m. or 6 p.m. Forage
Systems Research Center 660-895-5123

Macon County- Feb. 7 @ 10 a.m. or 2 p.m. or
6 p.m. MU Extension office 660-385-2173

Putnam County- Feb. 2 @ 10 a.m. or 2 p.m.
4-H Building 660-947-2705

Schuyler County- Feb. 9 @ 2 p.m. Courthouse
basement 660-457-3469

Scotland County- Jan. 31 @ 10 a.m. or 2 p.m.
Scotland County Fire Dept. 660-465-7255

Sullivan County- Feb. 9 @ 2 p.m. City Hall
Community Room 660-265-4541

Online Training: Jan. 12 @ 1:30 p.m. To register
<https://tinyurl.com/PPAT-Jan2022> or call Dhruba
at 573-581-3231