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Fine-tuning Planter Performance

With today's planter monitors, keeping tabs on planter performance is easier than ever before. Though physically double-checking planter operation during the season can maximize performance, the following is a list of items to be checked.

Planter Levelness

An improperly-leveled planter can inhibit the action of the row unit's parallel-bar linkage, potentially leading to non-uniform seeding depth. Check this while the planter is stopped and engaged in the soil. The planter's tongue and the row units' parallel-bar linkages should be nearly level (parallel) with the ground. Symptoms of an unlevel planter can include inconsistent seed spacing and depth. A severely unlevel planter may also have difficulty closing the seed furrow.

Down force

Many planters have springs or air bags in the parallel-bar linkage. These devices transfer weight from the planter's frame to the row unit to help disk opener and residue clearing/cutting coulter (if equipped) penetrate the soil and minimize unit bounce in rough conditions. Row unit down force should be adjusted when adding or removing row unit attachments, if there is a significant change in soil conditions (texture, moisture, tillage) or if the row units are bouncing when planting. Pay particular attention to row units following tractor tire tracks as they may require additional down force. Too little down force can result in row unit bounce and, subsequently, shallow seed placement. However, too much down force could accelerate wear on the row units' ground-engaging components and could negatively affect early plant development.

Row cleaners (if equipped)

Row cleaners, trash wheels, or trash whippers are designed to sweep residue out of the path of the opener and, as such, must be adjusted to just touch the ground. Row cleaners adjusted too high will not rotate and will leave residue in the path of the opener. Adjusted too low and they may move too much soil which could affect seeding depth and cause the seed to be planted in cool, damp soil. Long residue can wrap around the row cleaners. In this case, a lead coulter may be needed to cut the residue before it can be moved out of the way by the row cleaner.

Tire Pressure

On planters ground-driven by pneumatic tires, tire pressure should be checked daily. The tires need to be properly inflated to ensure an accurate seeding rate. An under-inflated tire will reduce the gear reduction of the drive leading to a higher seeding rate. The opposite is true for an over-inflated tire.

Checking Seed Population

To check population, pick a couple of row units to monitor for a repeated measurement. Release the closing wheel down force and use a chain or strap to restrain the closing wheels so they do not touch the ground. Plant long enough so the planter is at operating speed and allows a distance to ensure the observed population will be representative of the rest of the field.

Next, measure the length of the row representing 1/1000th of an acre. Use the table below to determine how far to measure for a specific planter setup. After measuring the correct distance corresponding to 1/1000th of an acre, count the number of seeds found in that distance. To find your population, simply multiply the number of seeds counted by 1000. For example, if planting 30-inch rows and 32 seeds are counted in 17 ft. 5 in., then the seed population will be 32,000 seeds per acre. Since seeds can be difficult to see in the furrow, it is recommended to do this test over a couple of rows to get a good idea of the actual seed population.

Planting distance needed to cover 1/1000th of an acre for each row. First measure the correct distance for your planter setup, then count the number of seeds in the furrow and multiply by 1000 to convert to seeds/acre.

Planting width (in)	Distance
15*	34 ft. 10 in.
20	26 ft. 1 in.
30	17 ft. 5 in.

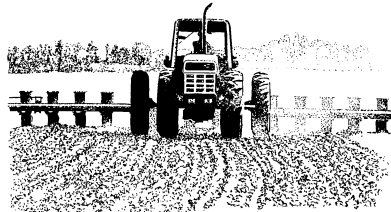
* This number can also be used for twin-row planted on 30-inch centers.

Planting speed

The effect of planting speed on planter performance is well known. Manufacturers have worked to design planters to operate at higher speeds, but seed singulation and depth control still become more difficult at higher planting speeds. Keep in mind, slowing down may improve planter performance.

Checking these items may be time consuming, but can ensure one's planter is operating at its maximum performance.

Source: *Kent Shannon, natural resource engineer*



You Decide - Make it Your Estate Plan

Being proactive with asset designation is important, as the state of Missouri through Probate has a plan in place. For the ability to determine where assets go consider estate planning tools available. Every effective estate plan begins with defining goals. Identifying answers to questions such as “Will the farm be passed on to someone specific?”, “Is the farm a retirement plan?” “How will long-term care be paid if needed?” Are there heirs, friends, or organizations to support?” “Do any of the heirs have special needs?”

Some of the simplest and least expensive tools are non-probate transfers such as payable on death, transfer on death, and beneficiary deeds. Trusts are also a non-probate transfer and can be a valuable tool, but will not be discussed in this article. Payable on death (POD) is used to designate who gets assets such as a checking account, savings account or certificate of deposit upon your death. Transfer on death (TOD) does the same function, but for different assets such as vehicles, investment accounts, and insurance policies.

A beneficiary deed transfers real estate upon death to beneficiaries if the document has been recorded with the Recorder of Deeds prior to death. The beneficiary deed should cost no more than a couple of hours of legal time and a nominal filing fee.

PLAN *For the Future*

Disadvantages of non-probate transfers include unrestricted access to the asset upon your death and a short time delay between a person's death and a copy of the death certificate, which will be required to take possession of the asset. In regards to the beneficiary deed, it does not work well for designating specific tracts of property unless deeded separately. Another disadvantage is none of the three tools – POD, TOD, or beneficiary deed, are protected from creditors such as a nursing home. It is possible for these assets to be pulled back into the deceased estate to address Medicaid, federal or state tax liabilities, etc. Of the three tools, the beneficiary deed is the most vulnerable because of its traceability.

Even though there is no estate tax in Missouri, these accounts are considered part of the estate for the federal estate tax calculation, which is now \$11.4

million per individual. These assets pass outside of probate so there is no cost incurred. The earnings from any POD, TOD or beneficiary deeded asset becomes the responsibility of the recipient once the transfer has officially occurred. Prior to transfer, the earnings are attributed to the decedant's estate.

Another straight-forward estate planning tool is title. In Missouri, property can be titled solely which may go through probate upon death or owned jointly. Real estate can be jointly owned as tenancy by the entirety, tenancy in common, or joint tenancy with right of survivorship. It is important to know how property is titled because it can have a significant impact on how the asset is transferred. For example, with tenancy in common the ownership shares do not have to be equal and each party can choose who receives their shares. Joint tenancy with right of survivorship (JTROS) property can only be inherited from the last surviving person on the title.

Wills are another estate planning tool. Wills are administered through probate. Wills are used to designate a personal representative who will administer affairs through the probate process. Wills are often used to protect minor children and pass on non-titled assets. Non-titled assets include such items as livestock, machinery, collectables, etc. If a will conflicts with either a beneficiary deed or title, the latter two will prevail and parties named in the will, lose out.

In summary, do not procrastinate if you want to determine how your assets are distributed. Understanding the tools available and setting goals are the first step. Then seek competent legal counsel specializing in estate and succession planning. Lastly, communicate wishes to heirs. It is not an easy conversation, but it allows for explanations and transparency that can minimize family conflict and keep the farm business functioning.

Source: Darla Campbell, ag business specialist

Pruning & Care of Fruit Trees & Small Fruit Plants

The day fruit trees are planted is the day to begin to care for, and prune for future production. Too often backyard gardeners plant fruit trees and leave them untended for several years. This neglect results in poor growth and delayed fruiting. Persons investing money in fruit trees should take the time to learn how to care for them. Learn which diseases and insects fruit trees are susceptible to and how to control them. Caring for fruit plants can be time consuming and

labor intensive as nearly all fruit plants need annual pruning, fertilizing and often spraying. Late winter is the best time to prune fruit trees such as apples, pears, peaches, apricots, and others, as well as grapevines and bramble fruits.

Dormant oil can be applied at this time to smother overwintering insects such as scale and mites. If Peach Leaf Curl has been a problem on peach trees in the past, apply a product containing "cholorthalonil" for prevention while the tree is still dormant.

Apple trees are trained to a modified leader system. Trees should be trained with one central leader or main trunk in the center, with several wide-angled limbs spaced around the leader. The tree should mature to a pyramidal shape. Pruning bearing trees is critical to maintain



healthy fruiting wood. Remove weak, "shaded-out" wood, diseased or dead wood, water-sprouts and root suckers. Many people purchase a house where an apple tree was planted years ago. Often, the previous owner did not take the time to properly prune or care for the tree and it has become bushy, weak and produces poor quality apples. Trees like this, require extensive corrective pruning. The main objective in pruning an apple tree is to open up the interior to allow good light penetration. The first step is to remove all the upright, vigorous growing shoots at their base that are shading the interior. As with young apple trees, it is necessary to select 3 to 5 lower scaffold branches with good crotch angles and spaced around the tree. Limbs with poor angles, and excess scaffold limbs, should be removed at their base. In some cases, it is advisable to spread the corrective pruning over two to three seasons.

Grapevines need some form of support, and pruning or training to develop the plant and to maintain it on the support provided. Regular, purposeful pruning is essential for controlling the number, position and vigor of fruiting canes and the yield and quality of the fruit. If pruning is delayed until near bud swell, the cuts commonly ooze sap abundantly. Though not desirable, "bleeding" seems to be of minor importance. Grapevines left unpruned can grow into a mass of unruly vines that grow in every direction. Prune yearly to avoid this situation.

Raspberry, blackberry, gooseberry and blueberry plants should be pruned before bud break, which is typically the end of March in northeast Missouri. For

information on how to prune brambles, refer to MU guide 6000.

University of Missouri Extension has guides on growing many different fruit crops, including tree fruits, brambles, grapevines and strawberries. If you are interested in learning more about a particular fruit crop or need information on pruning, contact your county Extension Center or download guides at <http://extension.missouri.edu>

Source: *Jennifer Schutter, horticulture specialist*

Century Farms

Farms that have been in the same family prior to Dec. 31, 1919, are eligible for recognition as Missouri Century Farms.

To qualify, the same family must have owned the farm for 100 consecutive years. The line of ownership

from the original settler or buyer may be through children, grandchildren, siblings, and nephews or nieces, including through marriage or adoption. The farm must be at least 40 acres of the original land acquisition and make a financial contribution to the overall farm income.

Details and a downloadable application are available at extension.missouri.edu/centuryfarm. Completed applications and the fee must be postmarked by May 15.

For more information, call your county MU Extension center.

MU Extension, MU College of Agriculture, Food and Natural Resources, and the Farm Bureau jointly sponsor the Missouri Century Farms program.

