**Wheat Management Quick Reference**


**Planting Date** – October 1st – 31st
There is a Hessian fly free date. In southeast MO that date is highly dependent on weather. The average date is October 15th. With wheat there is no yield advantage to planting early, but there can be a yield penalty. In an ideal world planting past this date is beneficial due to less risk of yield loss from Hessian fly and aphid feeding and vectoring Barley Yellow Dwarf Virus.

**Planting Rate** – 1.3 to 1.5 million pure live seed per acre
Total weight or bushels will depend on seed size. Final plant stand should be 30 to 35 plants per square foot. Actual seeding rate will depend on germination and planting conditions, methods, and if planting past ideal dates.

**Planting Depth** – ¾ inch to 1.5 inch
Too shallow or too deep will result in poor emergence. Too deep will negatively influence tillering.

**Planting Method** – Drilled wheat into a clean (weed free) seed bed is ideal. Buggy applied wheat is an option.

**Fertility – Soil Test**
Nitrogen – 90 to 120 lbs actual/A; Phosphorus - removal rate is 0.6 lb P2O5/bu; Potassium – removal rate is 0.3 lb K2O/bu
Fall – Nitrogen needs for wheat in fall is around 20 lbs actual/A. Phosphorus according to soil test. You can also apply 15 lbs/A of elemental Sulfur in the fall. Potassium is required and most of that demand is in the spring. Applying potash for maximum utilization depends on soil type and spring nitrogen management. Potassium is mobile in the soil much like nitrogen. Sandy soil and heavy rains can move K and N below root zone.

Spring – Fields with less than 60 tillers per square foot in the early spring between Feekes 2 and 3, apply 30 to 50 pounds of nitrogen to increase tillering. For fields with 60-80 tillers per square foot apply 20 to 30 pounds. In many cases this is where we see split applications boosting yield. However, if plants are healthy and tiller numbers are greater than 80/square foot then holding off until Feekes 5 may be more economical and provide the biggest results. This is because the time of greatest nitrogen uptake is between jointing (Feekes 6) and head emergence (Feekes 10.5). Therefore pre-jointing applications would supply this upcoming demand and reduce plant damage from ground applications. Consider using urease inhibitors containing the active ingredient NBPT when applying urea based fertilizer. Tissue tests just before jointing can help determine nitrogen needs at jointing. 10 to 15 lbs/A of sulfate sulfur if elemental was NOT applied in fall.
Pest Management – Weeds, Insects, Disease
Read and follow all label directions.
Weeds – fall - ryegrass and cheat; spring - wild garlic, henbit, chickweed and vetch
Herbicides – Early POST – Ryegrass – Osprey; Ryegrass and Cheat – Olympus Flex; Wild Garlic (2 inches of new spring growth) – Harmony Extra; Broadleaves – 2, 4-D Ester + Harmony Extra
Rates – Osprey at 4.75 oz/A; Olympus Flex at 3.5 oz/A; Harmony Extra TotalSol at 0.6 oz/A + 2, 4-D LV Ester at 16 oz/A.
**Check label for additional surfactant needs specific to products used.

Insects – fall – Aphids; spring – Aphids and Armyworm. Threshold: Aphids - 5 per foot of row; Armyworm – 4 per square foot.
Insecticides – insecticide seed treatment consider for fall aphid;
POST applications of pyrethroids in February for aphids. Armyworm from flag leaf to heading
**Check label for specific instructions.

Disease – Fall - Seedling disease. Spring – Foliar disease at flag leaf emergence (Feekes 8-9) and head scab (Feekes 10.51).
Fungicides – Seedling disease – Recommended to use a seed treatment, numerous available; Foliar disease – Strobolurin chemistry – numerous; Stripe, Leaf and Stem Rusts – triazole chemistry – numerous; Consider package mixes or tank mixes;
Head scab – (Suppression only) - products containing prothioconazole, metconazole, tebuconazole or a package mix of two triazoles. Avoid application of products containing a strobolurin for head scab due to risk of increasing DON levels.
**Check label for specific instructions.

University of MO does not endorse any one product. Product Trade names are used for ease of reference.

Harvest Losses - 20 seeds per square foot = 1 bushel per acre
Measure in front, behind header and behind separator to get an estimate of where losses are occurring and combine for total harvest loss. Harvest losses of 5% or less are ideal.