Western wheatgrass, Canada and Virginia wildrye are native cool-season species that developed in North America and are adapted to this region. These species are good choices to include with native warm-season grasses to gain species diversity in native planting. The cool-season component will extend the green period and may help control erosion that can occur between the warm-season grass bunches.

Reed canarygrass is native to the northern regions of both North America and Eurasia. It is well adapted to north Missouri, in fact so much so that it can become a problem along riparian zones where it does especially well. However its aggressive root system is unmatched in its ability to control erosion on difficult erosion prone areas. It is likely that the “improved” cultivars most often used in Missouri were developed from plant material introduced from Europe.

The remaining cool-season grasses included in this publication and used extensively in north Missouri were introductions from Eurasia. Since these species were not part of the original local plant community, they are not completely in harmony with the rest of the ecosystem where they now find themselves growing. Though generally well suited to north Missouri’s conditions they often require more management and greater financial input to support their potential yield. For example, most introduced species respond well to nitrogen fertilization and some even require it to maintain a satisfactory production level. The introduced cool-season grasses are not self sustaining and over the long run stands must be periodically renovated to maintain productive.

Whether their origin is native or introduced, cool-season grasses provide good production and high quality grazing in the spring and again in the fall when moisture is adequate. However, even with adequate rainfall growth slows significantly in the summer when temperatures become too warm. Adding legumes to cool-season grass pastures helps maintain total forage quality during the summer slump period that will occur if cool-season grasses are grown alone.

Because cool-season grass have a different process of photosynthesis than warm-season grass they have different requirements for growth. Cool-season grasses produce optimum growth when temperature is 65-75° F while optimum growth for warm-season grasses is 90-95° F. Cool-season grasses need twice as much water to produce the same amount of dry matter than does warm-season grasses. Cool-season grasses become light saturated at 25% full sunlight while warm-season grasses continue to utilize solar energy through full sunlight.