USING ECOLOGICAL SITE CONDITION TO EVALUATE HABITAT SELECTION BY SHARP-TAILED GROUSE BROODS (POSTER)

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Brood survival, an important vital rate affecting population viability of sharp-tailed grouse, is largely determined by the selection of brood-rearing habitats by females. Both the quantity and quality of brood-rearing habitat are influenced by land management decisions, and therefore, improper rangeland management can lead to habitat degradation and have a negative effect on sharp-tail grouse populations. Many land management decisions affecting brood habitats (e.g., livestock stocking rates, prescribed burning) are based on metrics including the type and condition of ecological sites. However, associations between brood habitat use and these common rangeland assessment metrics have not been evaluated. We developed a method of delineating ecological sites and assessing vegetation condition by comparing current vegetation to the climax communities across our study area in eastern Montana and western North Dakota. We then evaluated selection ratios of radio-marked brood hens in relation to ecological sites and their relative condition. Our results should provide useful information on brood habitat selection relative to habitat assessment frameworks used by rangeland managers and have implications for the management of sharp-tailed grouse brood habitats in the northern mixed-grass prairie.