

Teff: Tiny Seeded Tri-Purpose Alternative Crop for Oklahoma

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Abstract

Teff [*Eragrostis tef* (Zucc) Trotter] is a summer annual grass native to Ethiopia. Teff can be grown for food, forage and cover crop. As a forage/hay crop, horses and sheep have a strong preference for teff. The crop has small grains that can be made into different types of foods. What makes teff grain superior to some of the typical grain cereals is its balanced nutrition. It has minerals and proteins in an ideal balance for body uptake. In Oklahoma, teff grain yield ranges from 800 to 1600 lb ac⁻¹. If lodging is prevented using multiple or single cut system, and nitrogen (N) is applied at optimal rates, teff can yield up to 2100 lb ac⁻¹. Since teff has a soft stem, N fertilization is extremely critical. We recommend 30 lb N/ac at planting and 20-30 lbs N ac⁻¹ at stem elongation for grain production. Additional N might be needed if teff is intended for multiple cut. Teff requires about 25-50 lbs P₂O₅ ac⁻¹ if the soil is deficient in phosphorus. Fertilizer rates should be adjusted for soil supplied N and P. Teff requires a fine seedbed. However, with proper weed control and residue management, it can grow well in reduced or no-till settings. If planted in rows, seeding rate is 8 to 10 lb ac⁻¹ (at maximum depth of 1/8 to 1/4 in) in rows and up to 14 lb ac⁻¹ if broadcasted. The seed must be gently pressed at seeding or immediately after seeding whether drilled or broadcasted. In central Oklahoma, we recommend planting teff between late April and early May. With this planting time, the crop can be cut 2-3 times for hay (just before heading) until mid-July. After mid-July, the crop must be left to produce grain that can be harvested in late September or early October. Teff could be a valuable alternative crop since both grain and hay fetch attractive price for growers. Healthy and baby food industries are also eyeing on teff as an alternative ingredient in their products.