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Development of ‘Ellis’ soybean with high soymeal protein, resistance to stem canker, southern root knot nematode, and frogeye leaf spot

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‘Ellis’ soybean [*Glycine max* (L.) Merr.] (CV-523, PI 680630) was developed by the University of Tennessee Agricultural Experiment Station and was released as a high-yielding conventional (non-GMO) cultivar. The cultivar Ellis (breeding line TN05-5018) is an F_5-derived single plant selection from the cross between two high yielding University of Tennessee cultivars, ‘5601T’ and ‘5002T’. In extensive field trials, Ellis has shown excellent adaptation and performance in Tennessee, the Mid-South region, and the Southeast region of USA. Ellis exhibits a relative maturity (RM) of 4.9, determinate growth habit, white flowers, gray pubescence, and tan pod wall. It is resistant to stem canker, *Diaporthe phaseolorum* (Cooke & Ellis) *Sacc*. var. *caulivora* K.L. Athow & R.M. Caldwell, resistant to Southern Root Knot nematode, *Meloidogyne incognita*, and shows field tolerance to frogeye leaf spot, *Cercospora sojina* Hara. The protein and oil concentrations of Ellis seed enable it to produce high protein meal (>48% protein in the meal fraction). The excellent seed yield of Ellis coupled with its ability to produce high protein meal have shown high estimated processor values for this new cultivar. It will be useful as a parent to soybean breeders, valuable as a new high yielding cultivar to producers, and profitable to processors.