

Lolium temulentum

Lolium temulentum, typically known as darnel, poison darnel, darnel ryegrass or cockle, is an annual plant of the genus *Lolium* within the family Poaceae. The plant stem can grow up to one meter tall, with inflorescence in the ears and purple grain. It has a cosmopolitan distribution.

Darnel usually grows in the same production zones as wheat and was a serious weed of cultivation until modern sorting machinery enabled darnel seeds to be separated efficiently from seed wheat.[1] The similarity between these two plants is so great that in some regions, darnel is referred to as "false wheat".[2] It bears a close resemblance to wheat until the ear appears. The spikes of *L. temulentum* are more slender than those of wheat. The spikelets are oriented edgewise to the rachis and have only a single glume, while those of wheat are oriented with the flat side to the rachis and have two glumes. Wheat will appear brown when ripe, whereas darnel is black.[3]

Darnel can be infected by an endophytic fungus of the genus *Neotyphodium* and the endophyte-produced, insecticidal loline alkaloids were first isolated from this plant.[4]

The French word for darnel is *ivraie* (from Latin *ebriacus*, intoxicated), which expresses the drunken nausea from eating the infected plant, which can be fatal.[1] The French name echoes the scientific name, Latin *temulentus* "drunk."

The ancient Greek botanist Theophrastus stated in his *De causis plantarum* (8:7 §1) that wheat can transform (*metaballein*) into darnel (*aira*), since fields sown to wheat are often darnel when reaped.[1]

Let both grow together until the harvest: and in the time of harvest I will say to the reapers, Gather ye together first the tares, and bind them in bundles to burn them: but gather the wheat into my barn.

