



The research says

→ Earthworm casts create a serious management problem in turfgrass on golf courses and sports fields, particularly under cool, moist conditions.

→ Cultural methods do not adequately control the earthworms or their casts, and no chemicals are currently approved for earthworm control in the U.S.

→ In the 1890s, British greenkeeper Peter Lees discovered that when mowrah meal, made from seeds of the butter tree of India, was applied to turf and watered in, it acted as an expellant, forcing the worms to the surface, where they were raked up and removed from the site.

→ Recently, Chinese tea seed meal pellets, made from the seeds of the tea tree, have been shown to be effective in expelling earthworms and suppressing casting on turfgrass playing surfaces. Like mowrah meal, the pellets are made from a plant rich in saponins, which may irritate the earthworms' skin.

→ Tea seed meal is now available in the U.S. as an organic turfgrass fertilizer suitable for fairways and putting greens.

natural byproduct of tea oil manufacture containing natural surfactants called saponins, is effective for expelling earthworms and suppressing casting on playing surfaces. The mode of action is similar to that of mowrah meal, a mainstay for managing earthworms on golf courses a century ago. Tea seed meal has been formulated into an organic fertilizer (Early Bird 3-0-1) suitable for use on fairways and putting greens by Ocean Organics Corp. Early Bird has been available since 2010.

Most of the casting problems on North American golf courses are caused by non-native, invasive earthworm species. Saponin-rich natural products such as tea seed meal have promise as an alternative to off-label use of synthetic pesticides for alleviating the problems caused by excessive earthworm casts on low-cut playing surfaces.

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