

BDM UPDATE

Sweetpotato (*Ipomoea batatas*) is one of the most nutritious root crops, and ranks seventh in world food production after wheat, rice, maize, potato, barley, and cassava. In the U.S., more than 90% of the total sweetpotato production is from North Carolina, Louisiana, California, Arkansas, Florida, and Mississippi. Due to the perceived limitations of a short growing season and relatively cool summer temperatures, sweetpotatoes have not been grown commercially in the northern U.S. Yet, research has shown that sweetpotato yield in northern regions of North America have the potential to be high because of the longer photoperiod during the growing season that increases growth of the storage roots, as long as soil temperature is warm enough for root development.

Polyethylene (PE) mulch has been used successfully to increase soil temperatures and productivity for many crops including sweetpotato. However, an alternative to PE mulch is desired to reduce agricultural plastic waste. Soil-biodegradable plastic mulch (BDM) is suitable as it provides comparable crop production benefits and can be tilled into the soil after use, where it will biodegrade. In a field experiment in Mount Vernon, WA in 2019, PE mulch and BDM produced a similar yield of 18.5 t·ha⁻¹ on average, which was also similar to the average yield of sweetpotatoes in the southern U.S. region (24.7 t·ha⁻¹ on average). In the Mount Vernon field trial, the yields of U.S. no. 1 (4 t·ha⁻¹ on average) and U.S. no. 2 (8 t·ha⁻¹ on average) grades of sweetpotato were also equivalent between PE mulch and BDM. Mount Vernon, WA has an average daylength of 16 h in June and July. Hence, sweetpotato is a potential alternative crop for northwest Washington when grown using BDM that reduces waste and disposal challenges. [View Full Article](#)



‘Covington’ sweetpotato grown with polyethylene (PE) and soil-biodegradable plastic mulch (BDM) at Washington State University Northwestern Washington Research and Extension Center, Mount Vernon, WA, on 19 Aug. 2019.

News Update: USDA SCRI CAP Project New Award: Improving end-of-life management of plastic mulch in strawberry systems (\$8 million). Project Director: Lisa DeVetter, WSU Mount Vernon NWREC. More information [here](#).

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