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## Effects of organic amendments and cover crops on soil characteristics and potato yields

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Intensive potato production may reduce the soil organic matter content (SOM), which may impact several soil functions and increase the incidence of potato diseases. We examined if cover crop and addition of organic materials may counteract these effects. Organic materials were one application of biochar mixed with liquid digestate (BLD); solid digestate (SD); or farmyard manure (FYM); with or without winter rye as cover crop, in a field with regular potato growing. Organic amendment increased SOM, especially for FYM and BLD, while cover crop did not affect SOM. Yet, cover crop increased tuber yields in the second year, and reduced the severity of potato diseases by 10% in post-harvest potatoes in both years. In the

second year, the number of marketable potatoes after storage increased by 37% with cover crop. Organic amendments did not affect potato yield or quality, but the proportion of marketable potatoes tended to be higher in the amended soil. By lab incubation, BLD showed the largest potential for SOM storage, up to 32 years, followed by FYM and SD. Cover crops and organic amendments is recommended in potato production, especially for early potatoes where there is sufficient time after harvest to establish a good cover crop.

Link to full article: <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:dfec7c97-f832-3229-9e1f-a3ae361742d4>