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## Effect of Chinese Milk Vetch (*Astragalus sinicus* L.) as a Cover Crop on Weed Control, Growth and Yield of Wheat under Different Tillage Systems

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**Abstract:** Reduced tillage systems are gaining popularity but weed control is often a limiting factor in the adoption of such systems. Cover crops have become a viable option for sustainable agriculture because of its contribution to soil fertility and improved crop performance. However, the contribution of cover crops to weed management is not clearly defined. We compared minimum tillage (MT) and no-tillage (NT) with conventional tillage (CT) for their effects on wheat growth in an original paddy land clay soil in the presence of Chinese milk vetch as a cover crop. Cover crop biomass, weed emergence, main crop growth and yield and soil penetration resistance were examined. Chinese milk vetch was successfully established under MT and CT but not under NT, which retarded its growth resulting in a significantly large biomass of all weed species. Weed suppression was more effective when the cover crop was broadcasted than row seeded. The presence of milk vetch as a cover crop significantly suppressed weed growth under MT especially at the late stage of growth and resulted in a comparable grain yield to that under CT. Although soil penetration resistance under MT remained high throughout the period of wheat growth, milk vetch could be effectively utilized as a cover crop under MT and wheat grain yield under MT was comparable to that under CT without mulch treatment.

**Keywords:** [Chinese milk vetch](#), [Minimum tillage](#), [No-tillage](#), [Weed Control](#)

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