

Worasit Utaramat 2011: Effects of Land Preparation and Weed Control on Soil Erosion and Corn Yield. Master of Science (Sustainable Land Use and Natural Resource Management), Major Field: Sustainable Land Use and Natural Resource Management, Interdisciplinary Graduate Program. Thesis Advisor: Professor Honorary Piya Duoungpatra, Ph.D. 90 pages.

The objectives of this field trial in Pha Khong village, Hui Som sub-district, Phu Kradueng district, Loei province were to study effects of land preparation and weed control on soil erosion and yield of corn variety CPDK 888. The experimental design was randomized complete block with 3 replications and 5 treatments. The treatments were comprised of conventional tillage, tillage method recommends by the government, minimum tillage, no tillage and strip tillage.

No tillage improved soil physical properties. Minimum tillage, no tillage and strip tillage also improved some chemical properties of soil. Minimum tillage, strip tillage and no tillage in particular, gave more pronounced effects on reducing soil loss by erosion than conventional tillage. Nevertheless, minimum tillage, no tillage and strip tillage exerted insignificant effect on promoting corn growth and yield but gave more income than that of the conventional tillage method.

Most research – participated farmers did not want to adopt minimum tillage, no tillage and strip tillage methods for corn cultivation due to the lack of farming knowlegdes about the merits of these three tillage methods on augmenting corn yield.

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Thesis Advisor's signature