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"UBER with controlled release property"

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ABSTRACT

For years, much effort has been concentrated in the reduction of fertilizer consumption and reduction of fertilizer pollution from farmlands, changing fertilizers and fertilization procedures. Those were successfully practiced using coated fertilizers. The nitrogen use efficiency of several fertilization procedures have been analyzed precisely by using ^{15}N labeled MEISTERs and ^{15}N labeled conventional fertilizers.

Although higher nitrogen use efficiencies were obtained by one time broadcasting application of coated fertilizers than multiplied application of conventional chemical fertilizers, the highest nitrogen use efficiencies were obtained by co-situs applications of coated fertilizers. The strict release control of fertilizer segment is necessary for this co-situs application, especially at the initial stage release control to avoid the damage to the fine roots of young plants.

In Japan, very high nitrogen use efficiencies and remarkable reductions of fertilizer pollution have been practiced using MEISTERs, keeping higher crop yields with high product quality in many Agricultural Research Centers.