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Herbicides Enable the Replanting of Rubber Trees on Small Farms in South Asia

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The rubber tree, *Hevea brasiliensis,* is a major crop for smallholders in Southeast Asia where over 90% of the world's natural rubber is primarily produced in Indonesia, Thailand and Malaysia. About 70% of rubber production is on small farms; the remaining 30% takes place on large plantations. The smallholder share is gaining in importance since many plantations are turning to more profitable palm oil crops.

Rubber latex

The economic life span of the tree is about 30 years. During the first 2 to 3 years after the planting of seedlings, the light intensity at ground level is almost 100%. This is when control of weeds is most important. The success of the crop depends a great deal on effective control of weeds during the critical immaturity phase [1]. As the rubber trees mature and the canopy closes, sunlight and hence the weed population under the rubber trees are progressively reduced.

Historically, an abundant supply of cheap labor allowed the use of hand weeding on rubber tree farms for the first two years after planting. However, rising labor costs have necessitated changes in weed control practices; herbicides are now widely-used on small farms [2]. Research has demonstrated that the use of chemical herbicides makes a striking reduction in labor required for weeding: from 248 hours/year per acre for hand weeding to just 8 hours/year per acre with herbicides [3].

Herbicide use in immature rubber trees

Many smallholder farms have low rubber productivity and need to be replanted. Recognition of the importance of the smallholder sector has resulted in government action to support farmers in the form of credit and technology packages which include seedlings, fertilizers, and herbicides [4].

References

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Noxious weeds in rubber cause poor growth

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