

Fun appropriate technology Hawking

Handmade machine for weeding between
lines of crops in dry fields

Weeds between Plants



Between
lines

Between
plants

Ducks do not concern themselves with the spaces between lines and plants.



Bill Morrison in Hanoi in late autumn 1994





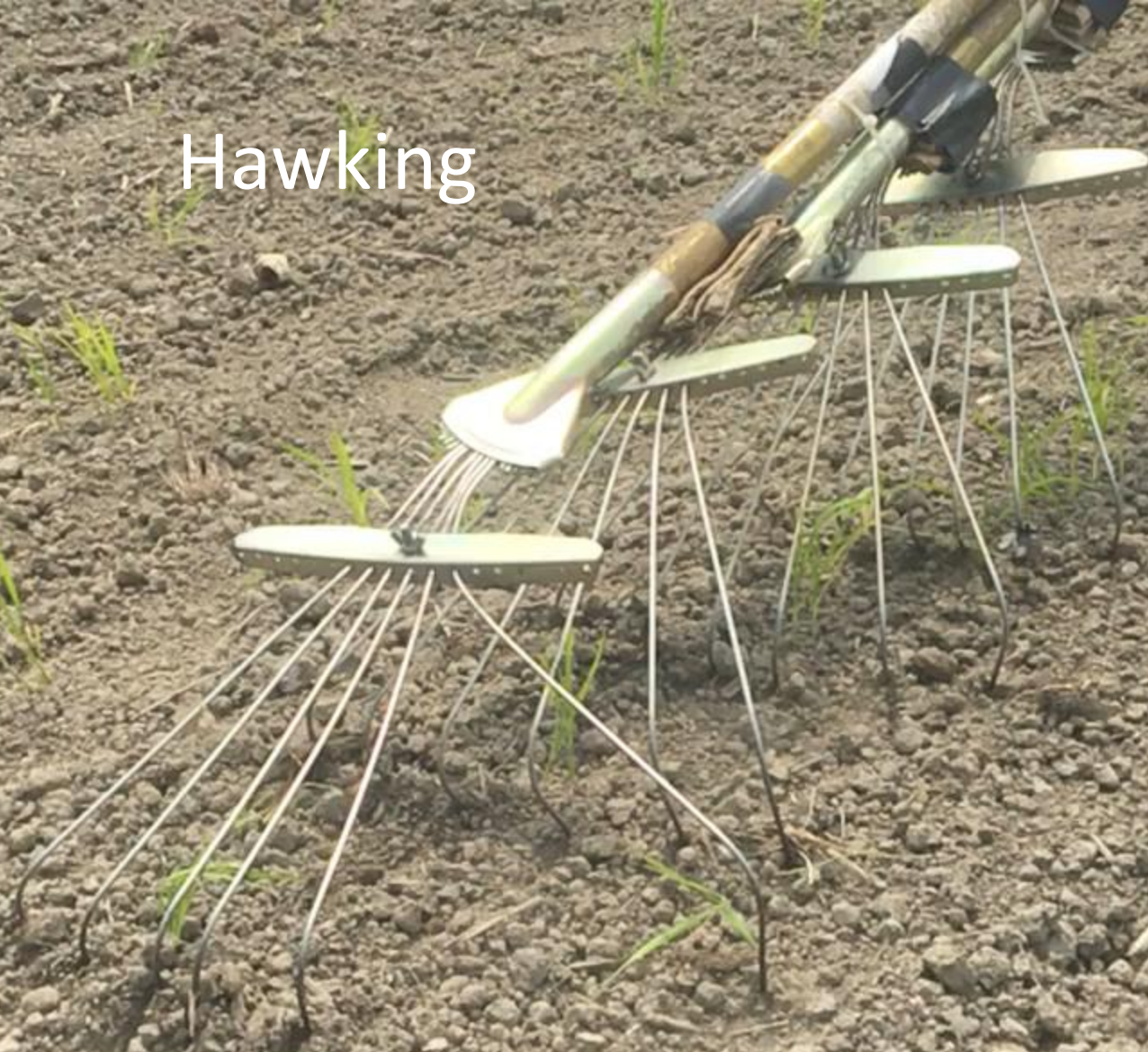
Direct sowing is less labour intensive



Echinochloa



Hawking



Root positions
between rice and Echinochloa

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Rice



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Echinochloa

5 cm

地面

3 cm







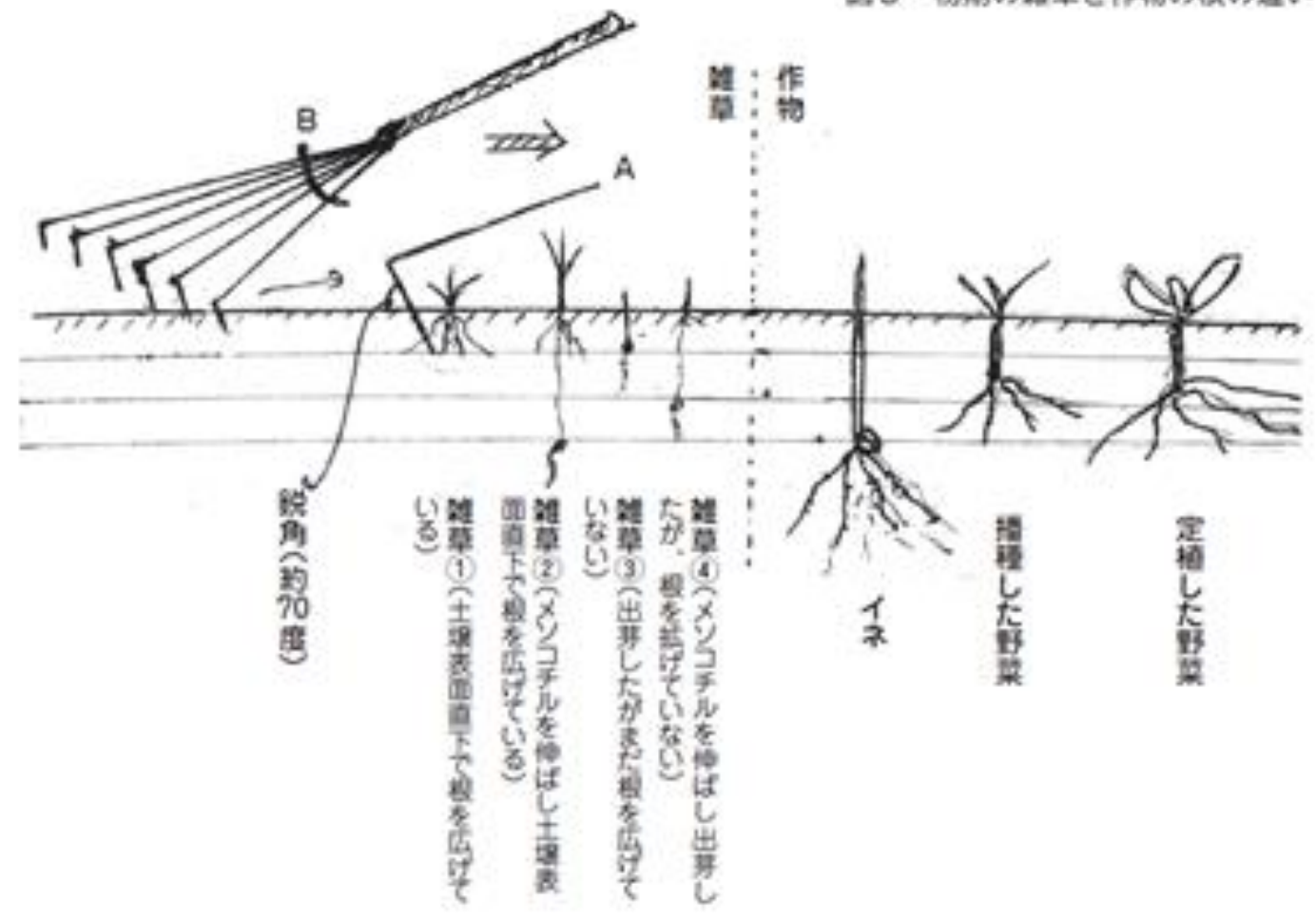
Famer, hundred products





Mechanism of hawking

図3 初期の雑草と作物の根の違い



ホウキングのもうひとつの特徴

ホウキングの実演を複数の農業機械の専門家に見ていただきました。「針金を斜めに構えた事で直進力を左右の揺動に変え除草する点がユニーク」と言われました。これも普遍性のある特徴のようです。



Between Potato plants



Between Potato plants



Edge of bed



Soil



Lettuce



Effect of hawking on wild spinach

First hawking wild spinach 409 weeds → 29 weeds (7%)

Second hawking wild spinach 29 weeds → 8 weeds (2%)

