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Mechanization Solutions for Conservation Agriculture

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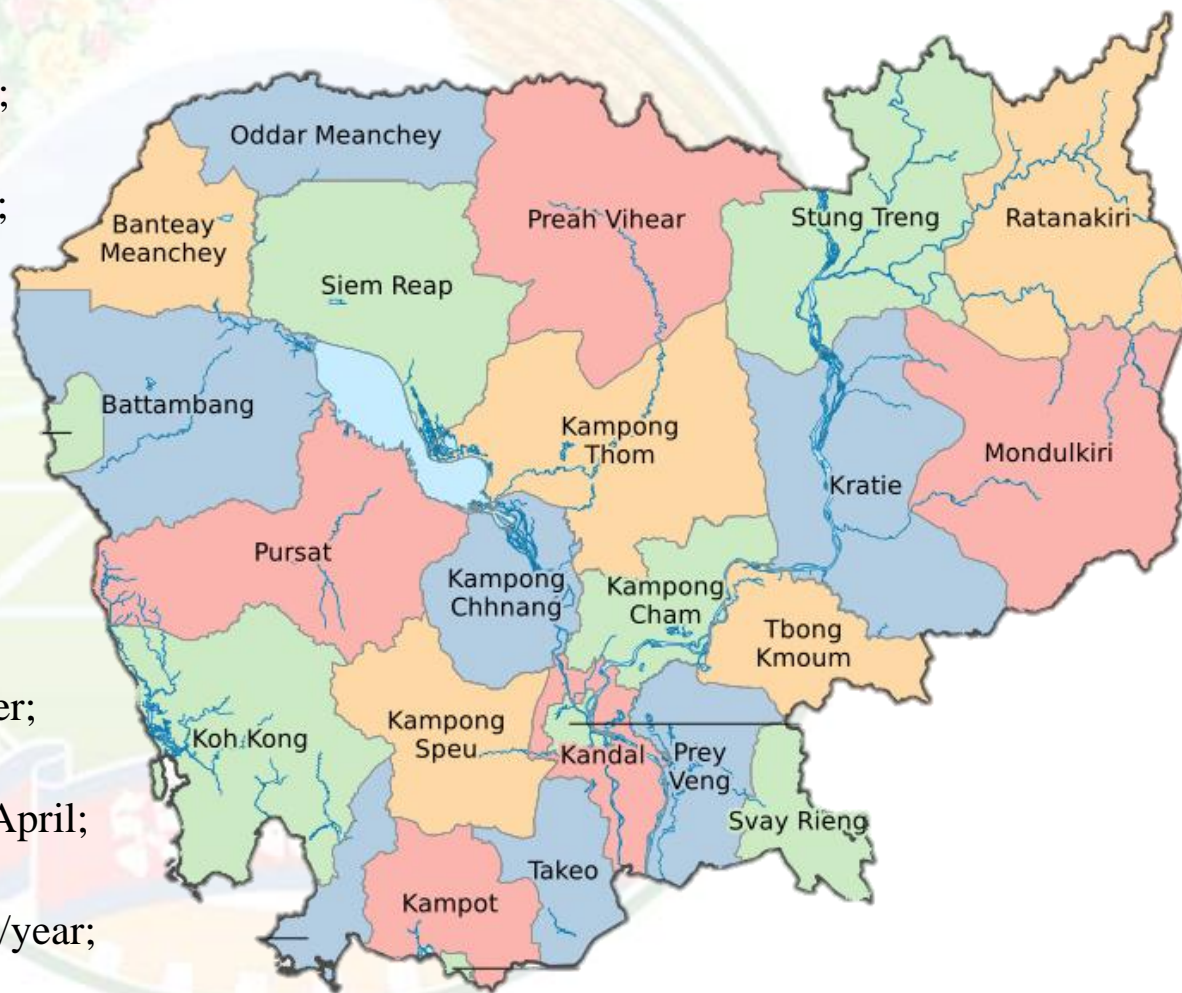
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Mechanization Solutions for Conservation Agriculture

Cambodia

- Location: Southeast Asia;
- Total land: 181,035 Km²;
- Structure: 25 provinces:
 - 209 districts,
 - 1,652 communes,
 - 14,570 villages;
- Wet season: May-October;
- Dry season: November-April;
- Rainfall: 1500 - 2500mm/year;
- Main crop: Rice.





Mechanization Solutions for Conservation Agriculture

Conservation Agriculture (CA):

CA has 3 main principles:

- No soil tillage or minimum soil tillage;
- Permanent organic soil cover (crop residues or cover crops);
- Crop species diversification (intercropping, crop rotation, etc.).

These principles trigger ecological processes, a continuous flow of fresh organic matter, driving soil biota diversity and functionality, soil structure and soil organic Carbon (C) and Nitrogen (N) accumulation contributing to the resilience of the system.



Mechanization Solutions for Conservation Agriculture

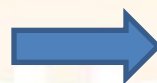
Mechanization solutions:

Crop residue burning is a serious concern leading to:

- Negative impact on soil nutrients, pH, moisture, organic matter, fertility;
- Air pollution, transboundary haze and GHG emissions;
- Public health hazard, transportation disruptions.

Residue burning is against the CA principles of minimum soil disturbance and permanent soil cover.

Agricultural machinery can provide sustainable solutions to address residue burning (straw collection, straw incorporate into soil) and conservation agriculture (minimum or no-tillage, green manure, cover crop).





Mechanization Solutions for Conservation Agriculture

Mechanization Solutions in Cambodia:

Land preparation → Cover crop seeding (Sunnhemp, 45-50 days), 30-35 kg/ha
→ Roller crimper the cover crop (attachment in front tractor) and main crop seeding (rice or maize) in the rear attachment.





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THANK YOU VERY MUCH

