Demonstration on Integrated Management Straw Residue in Cambodia

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28 October 2020
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A. General Information about Cambodia

- **Location:** Southeast Asia
- **Latitudes 10-15 North and Longitudes 102-108 East.**
- **Total area:** 181,035 km²
- **Provinces:** 25
- **Capital city:** 1 (Phnom Penh)
- **Population:** 16 million (2019)
- **Wet season:** May-October (15°C-21°C)
- **Dry season:** November-April (25°C-35°C)
- **Rainfall:** 1500mm-2500mm/year
- **Main crop:** Rice, Sugarcane, Cassava, Maize
Ecosystem Zones in Cambodia

- The total land area is 17.652 million ha.
- Arable area is 4 505 267 ha
- Rice cultivation area is 2 818 323 ha
- Industry crop area is 883 170 ha
- Other crop area is 803 774 ha
- Mechanized area is 2 735 983 ha (rice)
- Potential of irrigated area is 2 599 586 ha (wet season rice)
B. Rice Straw Collection

- Rice straw is abundant and low value in Cambodia.
- Rice straw is burned or left out decaying in the field without proper treatment.
- Rice straw is a small amount recycling.

Collecting by manual
Collecting by machine
Burning at rice field
C. Rice Straw Issues

- Rice straw is abundant and low value in Cambodia.
- Rice straw is burn or left out decaying in the field without proper treatment.
- About 10 million tons of rice straw is generated after harvesting and 3 million tons are burned.
- Burning and burying to grow new season of rice.
- Field burning of rice straw pollute air and also emits greenhouse gases such as methane (CH4) and Nitrous oxide (N2O).
- Lack off technology to support rice residue
- Lack off management without policy or strategy of straw
D. Rice Straw Utilization

- For Silage for animal feed.
- Making Compost to apply on the rice field.
- Mulching for vegetable garden.
- For using in Mushroom farm.
E. Rice Straw Residue

- Making Silage for cow and buffalo
- Rice straw burn in biochar kiln to make biochar to apply in rice field or vegetable production.
- Using rice straw in Mushroom production.
F. Challenges of Rice Straw

- Greenhouse gas emission of the open field burning of rice straw.
- The number of animal using in agriculture has been decreased every year.
- There are no technology to train the farmer to convert the rice straw to use in other purpose.
- The demand of rice straw is still small for using in agriculture (feed animal, mushroom farm and compost production).
- Farmers not understand the benefit from rice straw.
- Lack off technology support and budget to promote and improve rice straw management in rural areas.
- Lack off policy or strategy to improve the rice straw management.
Thanks for your attention..!