WEBINAR: WOMEN FARMERS AND SUSTAINABLE MECHANIZATION: IMPROVING LIVES AND LIVELIHOODS

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Agricultural Sector in general

- Agricultural Land is 2.363 million Ha. but characterized by **Low land productivity** (subsistence farming)
- Diverse agro-ecology, capable of producing various agricultural crops.
- More than **60% of the population's main occupation**
- **Out migration of men leading to feminization of agriculture leading at times to** disturbances in social harmony also (divorce and conflict)
- Male population (49.6%) 14,519,111; female population(50.39%)14,753,096
Mechanization as an opportunity

- **Increases labour productivity** (timeliness of operations) and saves time.
- Enables **efficient utilization of agri-inputs** - seeds, fertilizers, etc.
- Reduces drudgery of women due to high workload
  - On average, female works 16.3 hours more in non-economic works whereas male labor is paid works for 7.4 hours more than female (CBS, 2016).
- Women need to be technically backstopped.

Source: CBS, MOAD
Status of Agricultural Mechanization - Focus on the Hills

Hills

- Mechanization started only in 2000s but spreading fast since 2015 with **Approx. 5% area mechanized in Hills.**

Land Preparation/Tillage

- Mini tillers are popular in Hills due to small size and weight. Approximately **50,000 minitiller** (sold in Nepal) with **90% (45,000)** minitiller adopted in Hills and mountain.

Planting/Seeding

- Minitiller attach puddling wheels is popular in hill for puddling land.

Harvesting Technology

In Terai - Brush cutter, reapers, combine harvester are spreading but can they spread to the hills?
Subsidy Policy and Program

• In 2014 government initiated implementation of subsidy schemes with focus on small-scale appropriate machinery and attachments.

• Average of 50% subsidy is provided to 4-wheel tractor attachments, power tillers mini-tillers, and their attachments.

• Providing limited amount of flat subsidy on agricultural machinery may distort the market and under privileged groups of farmers will have difficulty in accessing government subsidy.

• Women’s interest for subsidy for machinery is high but obstacle for access to subsidy programs due lack of land ownership document.

• Gradually subsidy for larger machineries introduced like combine harvester, laser land leveler.
Agriculture Development Strategy (ADS)

- Strongly recognized the need for promotion of agricultural mechanization for the commercialization and development of competitive agriculture.
- The importance of integrating GESI provision has been recognized throughout the ADS process.
- Improvements in the landownership by women from 16 percent to 50 percent during 2015-2035.
- Silent on quantifying either the proportion of the women in the agricultural research or technology cadre.
Main Objectives

• To increase productivity as per the economic and geographical need in order to develop the sustainable, competitive and commercial agriculture sector

• To develop the services and business of agriculture machineries through coordination among the government, private sectors and cooperatives

• To identify and promote women and environment friendly agriculture machineries. (encouraging the use of tools to reduce the workload of women, empowerment, and design, adopt appropriate machinery etc..)

• To establish and strengthen the organizational structure of quality standardization, regulation, monitoring and promotion of agriculture machineries for agricultural mechanization.
Agricultural Mechanization Promotion Operational Strategy (AMP-OS under approval)

Targets set for raising the level of Agricultural Mechanization

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<tr>
<td>% of AM</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>40% Terai-61%, Mid-hill 15%, mountains-2%</td>
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<td>Power use in Kw/Ha (Mechanical)</td>
<td>0.74</td>
<td>0.85</td>
<td>1.19</td>
<td>0.67</td>
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NARC develop women friendly technologies

Help to reduce women’s’ drudgery in agriculture sector.

<table>
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<th>Agricultural technology and machinery</th>
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<tr>
<td>• Zero minimum tillage technology</td>
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<tr>
<td>• Rice weeder</td>
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<tr>
<td>• Pedal paddy thresher for wheat thresher</td>
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<td>• Manual corn sheller</td>
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<td>• Water management technology for early rice and wheat</td>
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<td>• Low cost solar dryer</td>
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<td>• Improved cardamom dryer</td>
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<td>• Improved plastic house for off-season vegetable cultivation</td>
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<td>• Jab seeder/planter</td>
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Gender Responsive Budget

• The government of Nepal has institutionalized of GRB system in all government mechanism.
• Introduced a GRB system in the financial year 2007/2008 in Nepal (MOF).
• Increased GRB from 11.09 percent to 37.42 percent in twelve years from 2007/2008 (Source: MOALD, 2018).
• The GRB in agriculture is oriented primarily towards the livelihood support in the areas of:
  • food security
  • income generation and
  • marketing
# Strategies for Reducing drudgery of women farmers in hills

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<th>Mechanization technologies for various crops (cereals, vegetables and fruits)</th>
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<td><strong>Cultivation</strong></td>
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<td><strong>Sowing</strong></td>
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<td><strong>Mechanized irrigation</strong></td>
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<td><strong>Inter-culture operation</strong></td>
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<td><strong>Insecticide/pesticide operation</strong></td>
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<td><strong>Harvesting</strong></td>
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<td><strong>Threshing</strong></td>
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<td><strong>Postharvest and Processing</strong></td>
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Government role in women friendly mechanization

- Effective Implement of **women friendly policies**
- Scale up NARC developed drudgery reducing technology.
- **Priority of local manufacturing** women friendly machineries.
- Subsidize machineries on **women centered mechanization** program.
- **Budget allocation** for mechanization technology innovation
- Easy access and availability of **Credit facility** without collateral.
- **Empowerment of women** through capacity building.
- **Recruitment of women Engineers** in research and extension.
- **Internship provision** of women Engineer in research and extension.
- **Survey/study/statistics/design** for extension on woman mechanization
Ways Forward

Policy level

• Scale appropriate machineries that are locally manufactured through direct subsidy to promote hill mechanization

• **Encourage entrepreneurship development and increase access** through custom hiring along with development of mobile apps for custom hiring.

• Training program for scale appropriate mechanization

• Priority in research and design of location specific women friendly machineries

Program level

• Expanding Women Farmers' Groups and promote women as active entrepreneurs and managers in machineries technology.

• Provide Regular budget and support program to increase woman in mechanization along with targeted capacity building

• Provide Regular budget in subsidy for women CHC for mechanization along with improving Credit flow
Thank you