

MIGIP Portfolio in Agriculture Technology Commercialisation

Mekong Inclusive Growth &
Innovation Programme (MIGIP)

2017-2020



ABOUT US

- Mekong inclusive growth & Innovation Programme (MIGIP) is a program of Swisscontact that focuses on rural development in agriculture and tourism sectors.
- In Agriculture, MIGIP aims to increase successful commercial adoption of appropriate existing agro-technologies and strengthen local capacity in the development and commercialisation of new, appropriate agro-technologies for smallholder farmers.
- MIGIP, through close collaboration with public and private partners, has been working on promotion of existing and new technologies, giving special emphasis to sustainable agriculture, through supporting private sector and promoting public-private partnerships.



WHAT MIGIP DID

PRIVATE SECTOR ENGAGEMENT AND SUPPORT

Connected and pitched ideas for partnership and cooperation with private company

Worked closely with team of private company to implement the activities

Provided support to private companies including strategic consulting, problem solving and skills & capability improvement

MARKET SYSTEM DEVELOPMENT

Developed 4S model, a “go-to market strategy”, by working with service providers in the community to provide services to small holder farmers

Introduced marketing strategy both traditional marketing methods and social media marketing

PUBLIC-PRIVATE SECTOR ENGAGEMENT

Supported on engagement and coordination between government entities and private companies to work together in promoting machinery and technology to smallholder farmers

Private Partners



LARANO



Public Partners



- Department of Agriculture Engineering (DAEng)
- Department of Agriculture Land Resource Management (DALRM)
- Department of Extension for Agriculture Forestry and Fisheries (DEAFF)

Research Institutions Partners



5 Private Sector

3 Public Sector

3 Research Institutions

12
partnerships

OUR RESULTS

707



AG MACHINERY UNITS SOLD

USD 600,000+



INCREASED SALE

8,078



FARMERS GAINED ACCESS

1,763



FARMERS INCREASED INCOME

10 technologies



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អង្កប់វាយដី



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ឧបករណ៍បាញ់ថ្នាំ



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TECH 1

This technology plays an essential role in Conservation Agriculture (CA) practices as the no-till planter gives consistent seed furrows and depth which is the tool to serve for minimum soil disturbance.

previous practice:
convention ploughing
and tillage



change in practice:
planting without tillage



yield increase

- reduce soil erosion and conserve moisture
- increase soil fertility



cost decrease

- fewer operations
- less labour
- reduce fertilizer usage

No-till Planter

the tractor implement used in planning stage of farming. The technology is applied according to one of Conservation Agriculture principal with minimum soil disturbance.



LARANO



experience in:
Battambang

TECH 2

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and tillage



change in practice:
planting without tillage



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cost decrease

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- less labour
- reduce fertilizer usage

No-till Planter (Chinese brand)

a tractor implement used in planning stage of farming. The technology is applied according to one of conservation agriculture principal with minimum soil disturbance.



LARANO



experience in:
testing

TECH 3

This technology plays an important role in CA practice as it is used to roll over the cover crops and leave them to decompost as organic fertilizers, which then is followed by planting the cash crops by using the no-till planter attached at the back of the tractor.

previous practice:

- no cover crop planting
- use herbicides and fertilizers



change in practice:

- planting cover crop before cash crops
- mow down cover crop using Roller Crimper



yield increase

- reduce water evaporation
- create organic fertilizer



cost decrease

- reduce herbicides
- reduce health's risks
- reduce fertilizer usage

Roller Crimper

a tractor implement attached to the front of the tractor, used in the cover crops management stage to terminate or mow the cover crops down on the ground.



LARANO



experience in:
Battambang

TECH 4

Uneven soil surface has a major impact on the germination, stand, and yield of crops due to inhomogeneous water distribution and soil moisture. Therefore, land levelling is a precursor to good agronomic, soil, and crop management practices.

previous practice:

- conventional land levelling



change in practice:

- levelled land
- homogeneous water distribution



yield increase

- good germination and growth of crops results in higher crop production



cost decrease

- reduce time and water irrigation

Land Leveler

a **tractor implement** used in land preparation stage of farming.



LARANO



experience in:
Battambang

TECH 5

Previous seed spreading or broadcasting practice is done by hand, which requires a lot of labour force and time; which can be saved by this machinery. Fertilizer spreader/seed broadcaster is effective in increasing production as it is less time consuming and requires minimal labour.

previous practice:

- broadcasting by hand
- labour force and time consuming



change in practice:

- spreading fertilizer and broadcasting seeds by the machine



yield increase

- spreads adequate and equal amount of fertilizer and seed on land



cost decrease

- minor labour and time required
- seed and fertilizer efficiency

Seed Broadcaster

is a **locally invented machinery** used in planning stage of rice farming (where broadcasting method is applied).



experience in:
Kampong Thom

TECH 6

Spraying chemical on the crops manually is labour and time consuming. The exposure to chemical itself is also a big concern for farmers who work directly in the spraying processes. Noeurn Sprayer can be a big of help to alleviate these concerns.

previous practice:

- hand spray with human labour



change in practice:

- using Noeurn Sprayer to spray liquid fertilizer & pesticide



improve health safety

- greater safety to farmer's health



cost decrease

- reduce labour and solve labour shortage
- save time and increase efficiency

Noeurn Sprayer

is a locally invented machinery, capable for big and muddy farmland, used to increase the time and resources efficiency and reduce the risk of direct exposure to liquid chemical.



experience in:
Kampong Thom

TECH 7

BCS hand tractor is a beneficial substitution of human labour in terms of maintaining the farm. BCS tractor comes with various types of implements that can be used for any activity as the farmers need and it increases the productivity since it reduces the amount of labour and time.

previous practice:

- human labour



change in practice:

- using hand tractor as substitute



yield increase

- timely maintenance of the plantation



cost decrease

- reduce labour and solve labour shortage
- save time and increase efficiency

BCS Hand Tractor

(multi-purpose two-wheeler)

is an Italian **hand-held machinery** imported by a local company, Angkor Green. It is used for various type of activities in the farm especially in maintaining processes.



experience in:
Battambang

TECH 8

Angkor Sprayer can be a big help to alleviate concerns of exposure to chemicals and excessive labour and time consumption. Angkor Sprayer is equipped with high-end technology where it produces electro-magnetic droplets to spread all over the crop effectively.

previous practice:

- human labour



change in practice:

- using Angkor Sprayer to spray liquid fertilizer and pesticide



improve health safety

- greater safety to farmer's health



cost decrease

- reduce labour and solve labour shortage
- save time and increase efficiency

Angkor Sprayer

is a new type of **fertilizer sprayer** for fruit trees. It uses the enhanced electrostatic technology to make liquid fertilizer spraying more effective and efficient.



experience in:
Battambang

TECH 9

Among many implements, only ploughing tools for land preparation stage are the most popular. In other farming stages, farmers still highly depend on human labour, opening a market potential for other tractor implements.

previous practice:

- human labour



change in practice:

- using implements attached to tractor to replace manual works



increased productivity

- can be used on large farmland



cost decrease

- reduce labour and solve labour shortage
- save time and increase efficiency

Tractor Implements

are **attachments to tractors**, that enable different operations for various farming stages. They include ploughing tools (disc plow, disc harrow, rotary), cassava planter, cassava ridge, cassava puller, rice seeder, boom sprayer, etc.



experience in:
Oddar Meanchey

TECH 10

Cassava cutter has the ability to cut cassava into small chunk quickly which helps the farmers save labour and time.

previous practice:

- human labour



change in practice:

- using local invented cassava cutter instead of cutting manually

 **cost decrease**

- reduce labour and solve labour shortage
- save time and increase efficiency

Cassava Cutter

is a **locally invented machine** used to cut the harvested cassava into pieces for drying and to be sold as dried cassava which is the popular practice among Cambodian farmers.



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experience in:
Oddar Meanchey

Thank you!

Mekong Inclusive Growth &
Innovation Programme (MIGIP)

