

Mass Cultivation of Mung Beans in Rural and Saline Areas of Bangladesh

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Subject

1. How did we establish GYM? (History)

2. Project Plan and Contents

3. Addressing Climate Change Issue

What is Moyashi Sprout ?



Why GYM was born ?



Why GYM was born?



Sprout market in Japan

1. Market Sales in Japan: 60 billion JPY (2011)

2. Import Amount: 66,660t (2012)
[Ratio] China 89%, Myanmar 10%

Sprout market in Japan

3. Price Trend

2013 (Year) [10 years ago] Duty-paid Price Purchase Price

(Unit : US\$ / ton)

Win-win Benefits for Japan





1. Sustainable supply for Japan

2. Avoid the price risk to rise

3. Supply safe and reliable bean by using YMC check-system for pesticide like that

Win-win Benefits for Bangladesh

1. Job Creation at rural area

2. Supply low-priced mung beans for the local people

3. Introduce the high technology know-how from Japan

GYM creates jobs [Cultivation]



Farmer Interview

District: Ishwardi (West Area) Farmer: Mr.Shahidul



	2011	2012
Harvest ※ 1bigha=0.2ha	160kg/bigha	320kg/bigha
Sales Price	43BDT/kg	60BDT/kg

2012

Invest 2	3,250BDT	\rightarrow	Income	48,000BDT
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※BDT:Currency Unit in Bangladesh 1,000 BDT=12.8 USD (Feb.26, 2014)

GYM Activities Area & Harvest



Year	Number of Farmers	Area (hector)	Harvest (ton)
2010	51	5	0.1
2011	91	12	2
2012	7,510	2,284	1,417
2013	5,649	2,043	761

GYM Social Business Model



Changes in soil salinity over the years



1973 833,450 ha



2009 1,056,190 ha

Source Soil Resource Development Institute, Ministry of Agriculture, Bangladesh



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査を実施いたしました。

1. 春支結果

2. 問い合わせ先

平成 25 年 7 月 19 日

教具

ELL

株式会社 野村総合研究所 公共経営コンサルティング部 「途上国における遠応対策事業」事務局

<u>平成 55 年度</u> 途上国における道応対策への我が国企業の貢載可提化に向けた実現可能性調査事業 公募審査結果のお知らせ

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のとおり審査結果がまとまりましたのでご連絡いたします。

でごて来ください。

[Adaptation issue of climate change]



GYM will develop methods for harvesting mung beans in saline area.



MOA



Back ground in accordance with the abive from Ministry of Agriculture (lefter norosts oscionoco 2010-1151 dated July 16, 2012), GYM should be given priority to the south region of Bangladeds in culturating numbers through contact famine, DAE and GYM is traction agreement on manghem culturation policy in the south region of Bangladeds. Ministry of Mangladeds with regions technical cooperation through contact famine in the south region of Bangladeds with regions technical cooperation from DAE.



MOU concluded with DAE

Business under the jurisdiction of METI

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(METI: Japanese Ministry of Economy, Trade and Industry / MOA: Ministry of Agriculture, Bangladesh)

Feasibility study of mass cultivation of mung bean in saline area

Survey in 2012/13

- Research of measuring EC & pH (Field/River water/Tubewell water / Cistern water)
- Salt removal work (Plowing/Fertilizing calcium sulfate / Irrigation salt removal)
- Germination test of mungbean using saline soil & water
- Mungbean sowing area was 55 ha in saline field (level 2) .

Results

- "Plowing" and "Fertilizing calcium sulfate" are verified for effectiveness of salt removal.
- Mungbean yield in 2013 was 10 ton from 55 hector field in saline level 2 affected by cyclone.
- Questionnaire survey to 128 farmers was implemented in salinity area (Morrelganj, Batiaghata), and GYM could grasp current situation.



Plowing



Fertilizing calcium sulfate





Feasibility study of mass cultivation of mung bean in saline area

Survey in 2013/14

- Building the operation system of salt removal effect in mass cultivation
- Mungbean sowing area will be 250 ha in saline field (level 2)
- Development of saline tolerant variety*1
- Effective measures for replant failure by rotational cropping and verification of increasing the amount of rice harvest
- Establishment of the laboratory technology in local university



Efficient expected

- By verifying the effect of rotational cropping^{*2} in mung bean cultivation (lead to improvement of soil due to fixed nitrogen ability and increasing yield), there is possibility to spread the method to other areas which have same problem as replant failure due to the climate change and continuation of cultivating single crop.
- Development of saline tolerant variety will contribute to expand the capability of cultivating in saline field. By using saline tolerant variety, experiment will be implemented in saline field (level 3).



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 アルファルファ (1年目)

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 ライムギ (冬作)
 日場C

 トウモロコシ (1年目)
 ライムギ (冬作)

*² Rotational cropping (Image)

*1 Khulna test field for the development of saline tolerant variety

