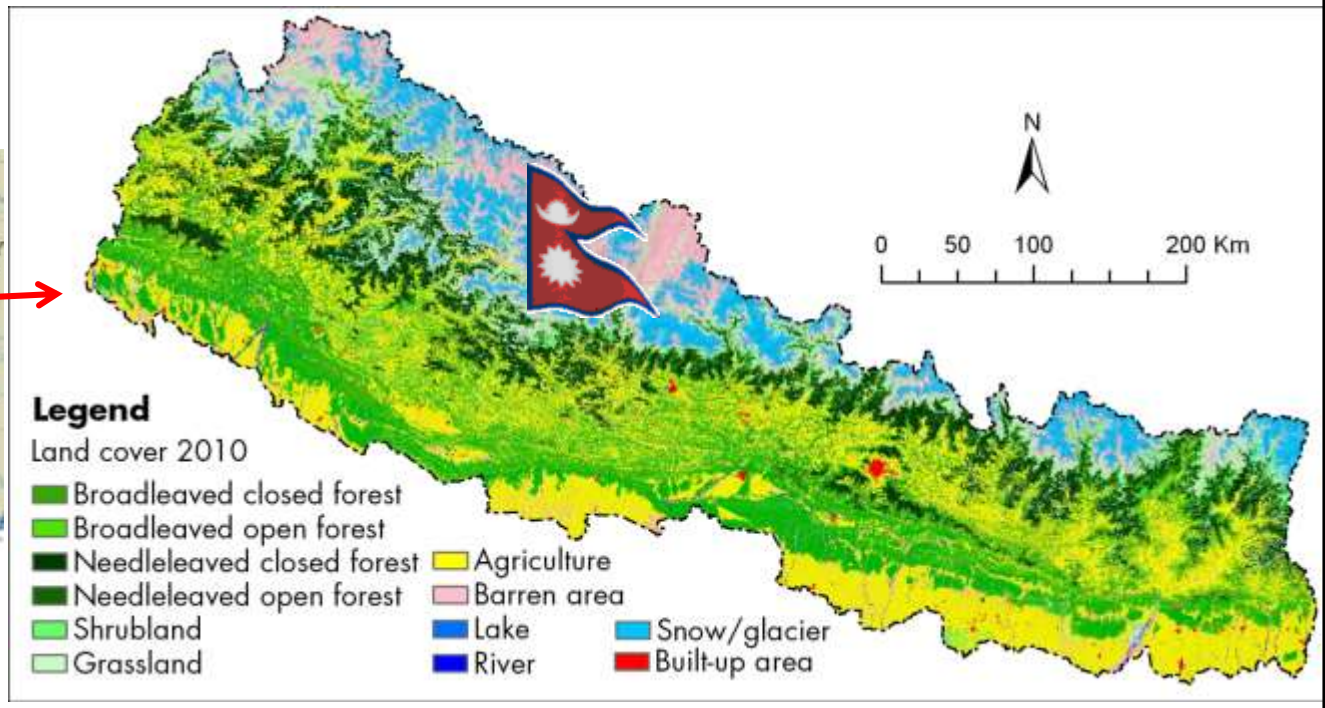
Farming project in Nepal



Bhaniswor Pokhrel
Niels Damsgaard Hansen

Content

- Introduce farming project - Niels
- Farming system in Nepal
- Major problems of Nepalese agriculture
- Solution options of the problems

Bhanu

- First phase program
- What is next?

Niels

- Demonstration plot – Bhanu
- Conclusions - Niels

Farming System in Nepal

Country profile

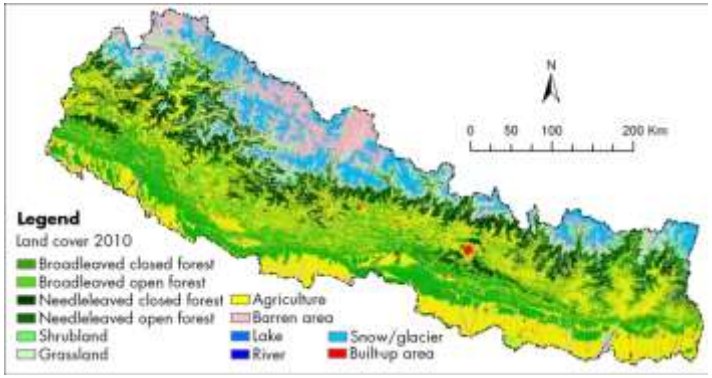
Area- 147181 km^2

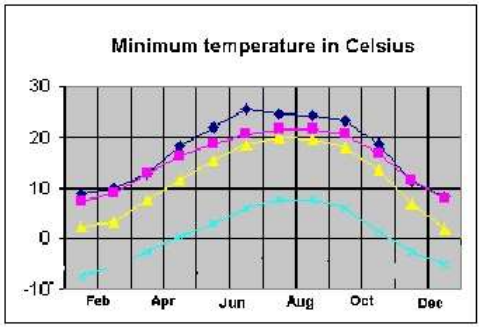
-Mountain – 17%

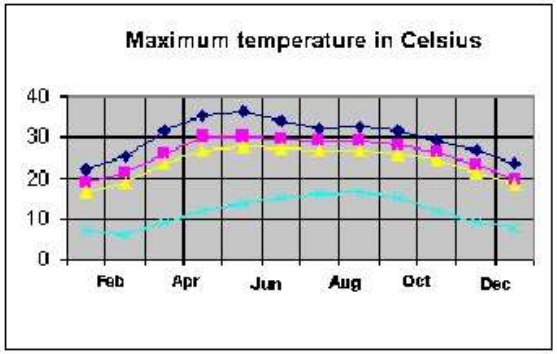
-Hill – 68%

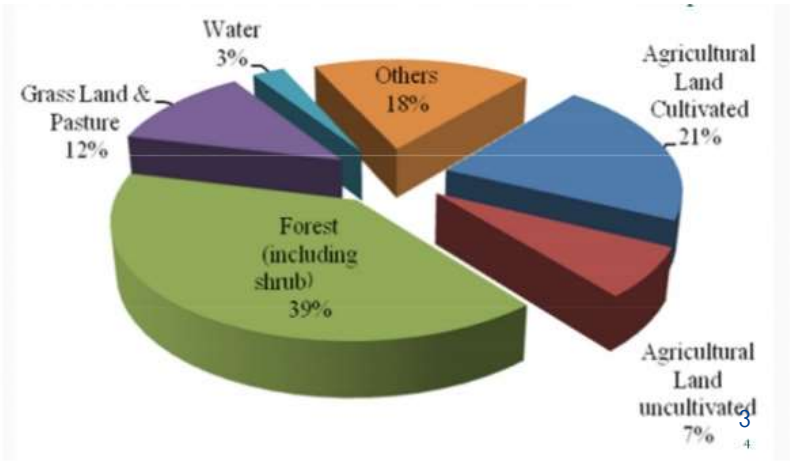
-Terai – 15%

- Population- 27 million
- GDP - $ 24.1 billion (20146
- Per capita $ 837 (2016)
- Export - < $ 0.7 billion (2016)
- Import - $ 7.8 billion (2016)









An overview of agriculture sector in Nepal

21%	Cultivated land
60%	Population employed in Agriculture
33%	Agriculture contribute on GDP
0.9 hector	Average size of holding
1.8 billion$	Import of agricultural product
0.4 billion $	Export of agricultural product

Major food crops and productivity

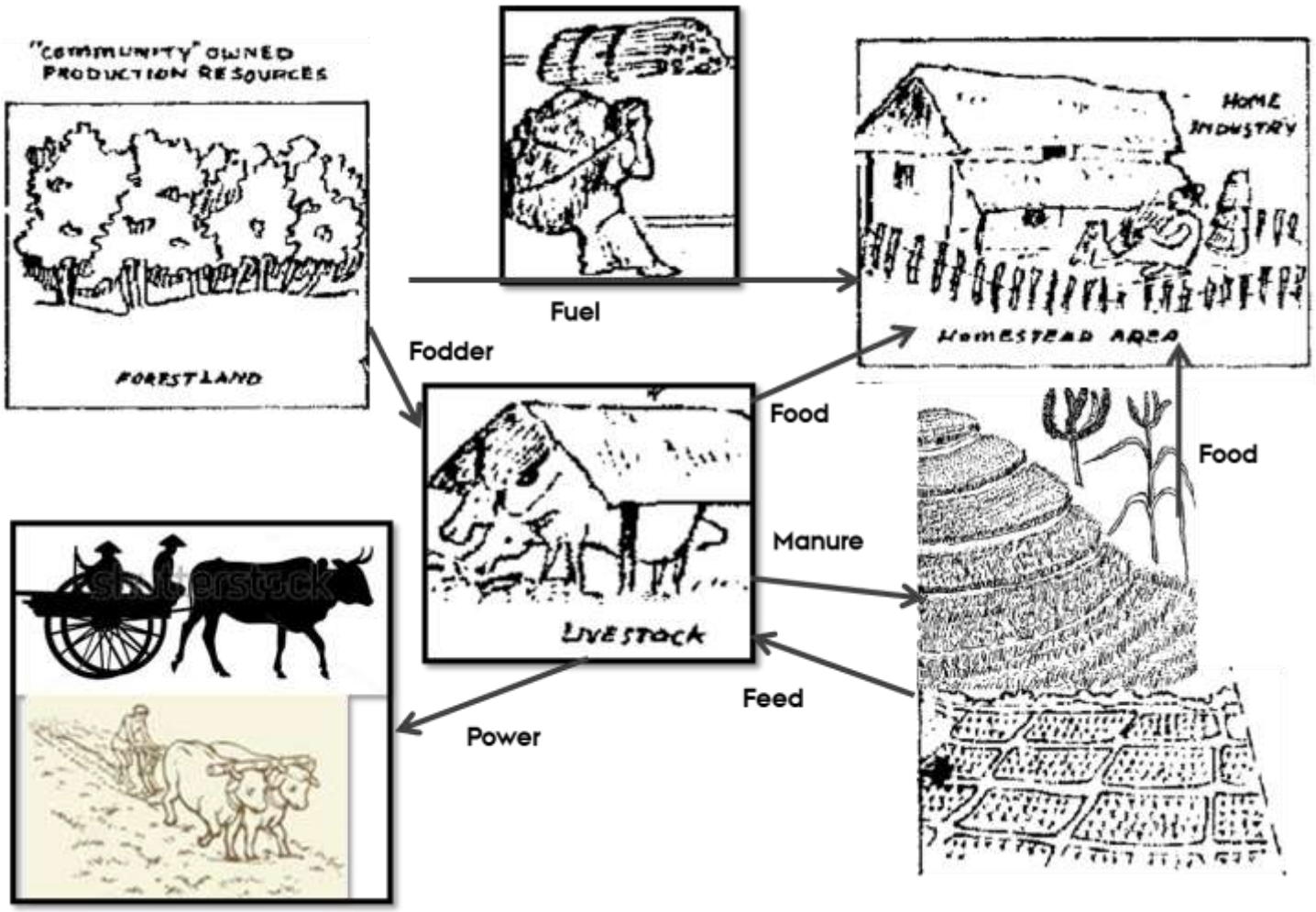
Crops	Area (000 ha)	Production (000 ton.)	Yield (ton/ha)
Cereals	3480	9563	2.8
Legumes	329	353	1.1
Vegetables	255	3421	13.4
Oilseed	225	195	0.9
Potato	206	2818	13.7
Fruits	110	965	8.8
sugarcane	77	3316	43.1
Spices	58	430	7.5
Total	4740	21061	9.1

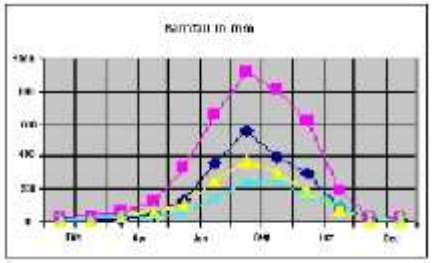
Productivity of wheat 2.3 ton/ha (in Denmark 8-10 ton/ha)

Livestock sector in Nepal

Commodities	Production
Total milk (000 ton)	1700
• Buff milk	70%
• Cow milk	30%
Total meat (000 ton)	298
• Buff	58%
• Goat meat	20%
• Chicken	14.5%
• Pork	6.2%
• Lame	1%
Wool (ton)	587
Egg (million)	882.9
• Hen egg	97.5%
• Duck egg	2.5%

Features of Nepalese Agriculture

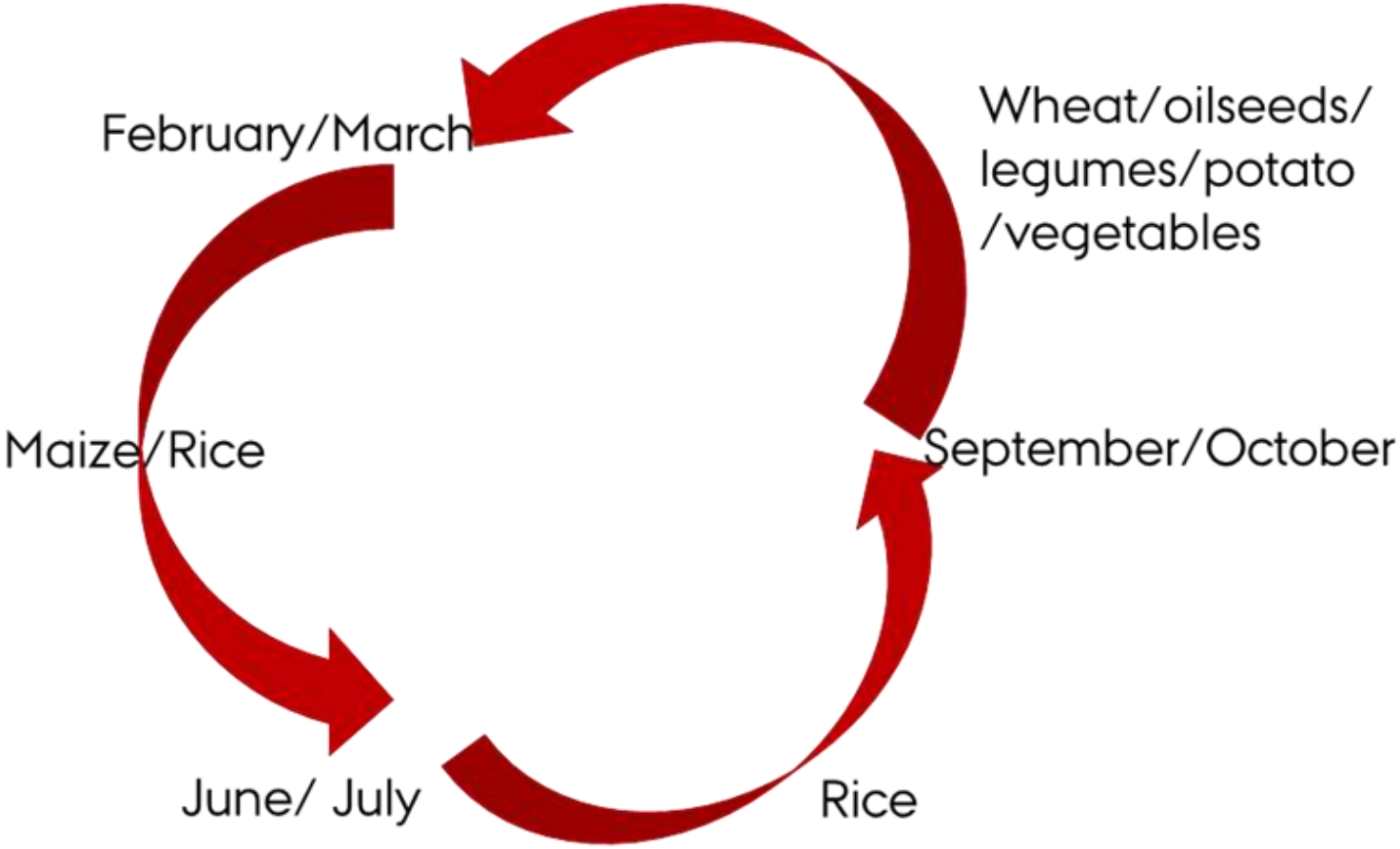




Features of Nepalese Agriculture

- Monsoon dependent farming, more than 80% rainfall occurs during the monsoon season (June-September)
- Subsistence and crop-livestock mixed farming systems are commonly practiced with domination of small holder farmers
- High crop varieties
- Predominance of food crops
- 70% of farmers used seed from their previous crops
- Low productivity (Cereals **2.8 ton/ha**, milk **700 l/head/year**)
- Poor mechanization

Cropping cycle



Crop nutrition

- Animal manure is a major source of crop fertilizers
- 80-90% farmers stored manure in open heaps
- 20-60% of the farmers applied manure in the field at least 10 days before ploughing
- Animal urine is treated as non valuable product
- Great amounts of nutrients lost per unit of manure




Major challenges faced by Nepalese Agriculture

- **Lack of irrigation**
- **Lack of healthy soil**
- **Lack of technical knowledge**
- Lack of improved cultivar
- Difficult mechanization due to geography and small holdings
- Scarcity of skilled labors due to Nepalese migration for international jobs
- Agriculture is lest respected and attractive business in Nepal.
- Open border with India. Agricultural enterprises are uncompetitive due to heavy subsidies for Indian farmers

Solution options of the problems

- Irrigation – rain water harvesting pond, deep well
- Improve soil fertility through increase soil organic matter
- Improve farm yard manure store and application in the field
- Train farmers to Improve farmer's levels of knowledge
- Change farmers attitude towards improve farming through demonstrating new technology.

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- **First phase program**
- **What is next?** — **Niels**
- **Demonstration plot – Bhanu**
- **Conclusions - Niels**

Frist phase program

Training and technical support from expert during autumn and winter 2016

- 12 days training about vegetable production during September 2016
- Total participation 12 (3 female and 9 male)
- Seed and technical consultant were provided to farmers by project
- Farmers produced different vegetables in their field under supervision of local expert
- Established one demonstration plot where practical teaching were conducted
- All farmers were actively participated on field practical training

Participations of vegetables training

S.N	Names
1	Narayan Bastakoti
2	Tirtha Bahadur Sunar
3	Indra Bahadur Poudel
4	Phadindra Puri
5	Rita Dhakal
6	Rita Garja Magar
7	Tilak Adhikari
8	Som Nath
9	Shyam Bdr. Magar
10	Tikaram Subedi
11	Raj Kumari Gurung
12	Yam Badur Magar
13	Hem B. Magar
14	Surya prasad Regmi
15	Dol Bahadur Magar

Results

Results


Side 14 EffektivLandbrug
Lørdag den 19. november 2016
GLOBAL FARMING
Nepalesisk landbrug foran store forandringer – 2. del
Landmænd i Madi-dalen i Nepal vil gerne udvikle deres landbrug, så de kan dyrke afgrøder til salg og dermed tjene penge, de kan bruge til at få en bedre og mere moderne levestandard.
NEPAL
AF NIELS DAMSGAARD HANSEN – i Nepal
Byggede et drivhus ved skolen
Muligheder og udfordringer i Nepal


Lørdag den 19. november 2016
EffektivLandbrug Side 15
GLOBAL FARMING
Brug for danske landmænd
Sluttede med uddeling af frø
Fakta om Nepal
Areal: 147.200 km² (Danmark 43.000)
Indbyggertal: 28,95 mio. (2016)
Befolkningstilvækst pr. år: ca. 260.000
Netto udrejsende pr. år: ca. 70.000
Religion: Ca. 86,5 pct. hinduer, 7,8 pct. buddhister, 3,5 pct. muslimer, 2,1 pct. andre etniske befolkningsgrupper
BNI pr. capita: 730 US$ (2013) (DK: 58.590 US$)
Beskæftiget i landbruget: 68 pct. af befolkningen
Landbrugsareal: 28,7 pct. (2013) svarende til 4,2 mio. ha (DK: 2,6 mio. ha). Nepal kan ikke brødføde sig selv, men importerer blandt andet ris fra Indien og mange grønsager. Så der er muligheder for landmændene, hvis de kan konkurrere på pris og kvalitet. Et stort problem er landbrugsprodukter forurenet med sprøjtemidler og landmænd, der har fået sprøjteskader ved forkert brug af sprøjtemidler - derfor er økologi i fokus.
Hovedstad: Kathmandu
Nepal er et af verdens fattigste lande. Det anslås (i 2010), at 25 pct. af befolkningen levede under fattigdomsgrænsen. I 1990-92 var 23 pct. af befolkningen underernæret - i 2014-16 er skønnet, at andelen er faldet til otte pct.

Outcome

- Program was fruitful
- Farmers are benefited through improving their knowledge on vegetable production
- Farmers are excited and waiting for second phase program

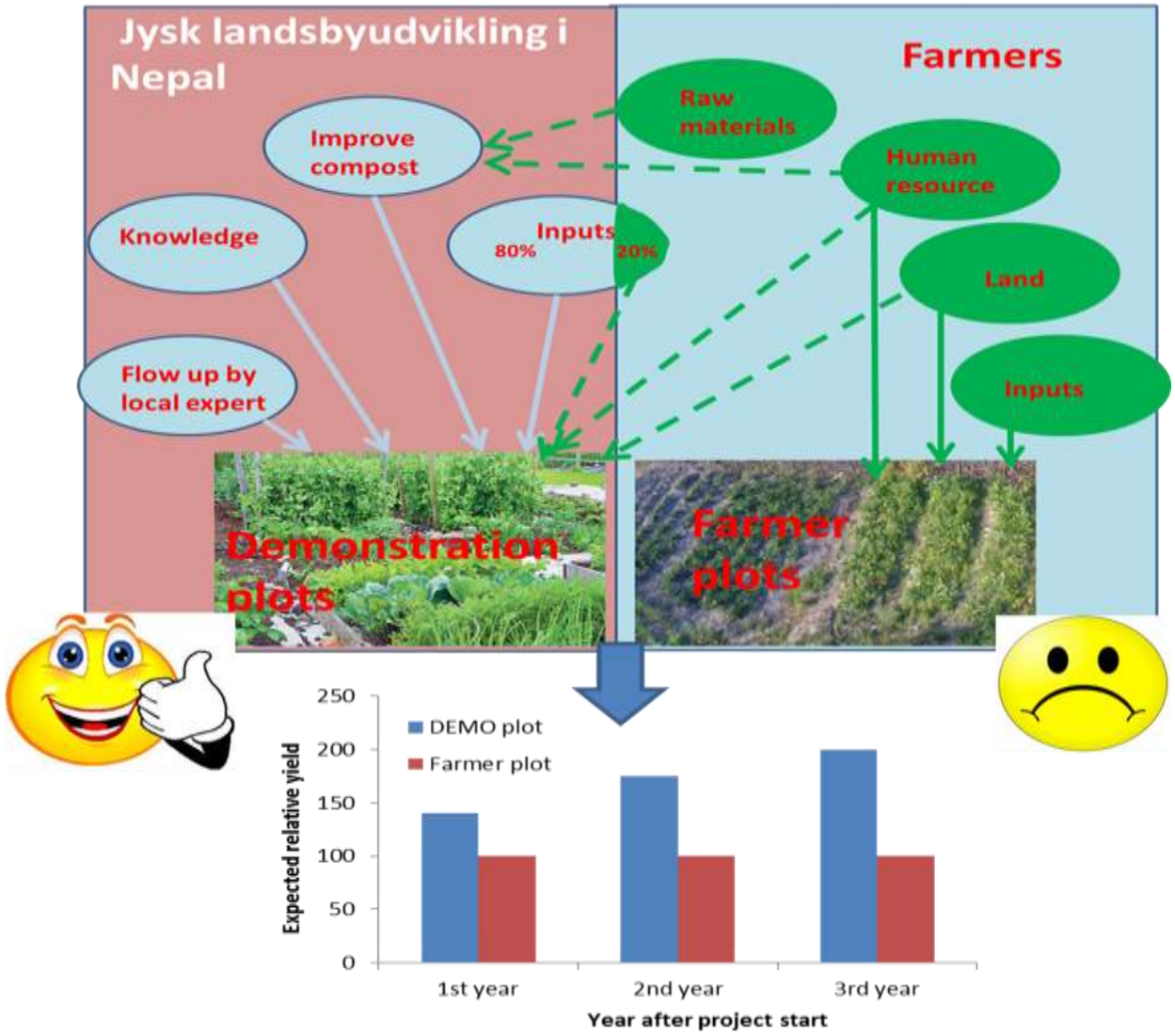
What to do next:

- Train a group of skilled farmers (some of them participated in the 2016-training)
- Train a group of women (15-20) on a basic level
- Establish 3-5 demo plots in the different villages.
- The demo plots is farmed by the principles of Conservation Agriculture

- this aims:

- Produces more with less (less input - bigger output)
- Uses as much bio-base local resources as possible
- Enhance the soil fertility by building up more soil carbon
- Reduces external inputs for crop nutrition and crop protection
- If needed uses chemical produced fertilizers and pesticides in a safe way

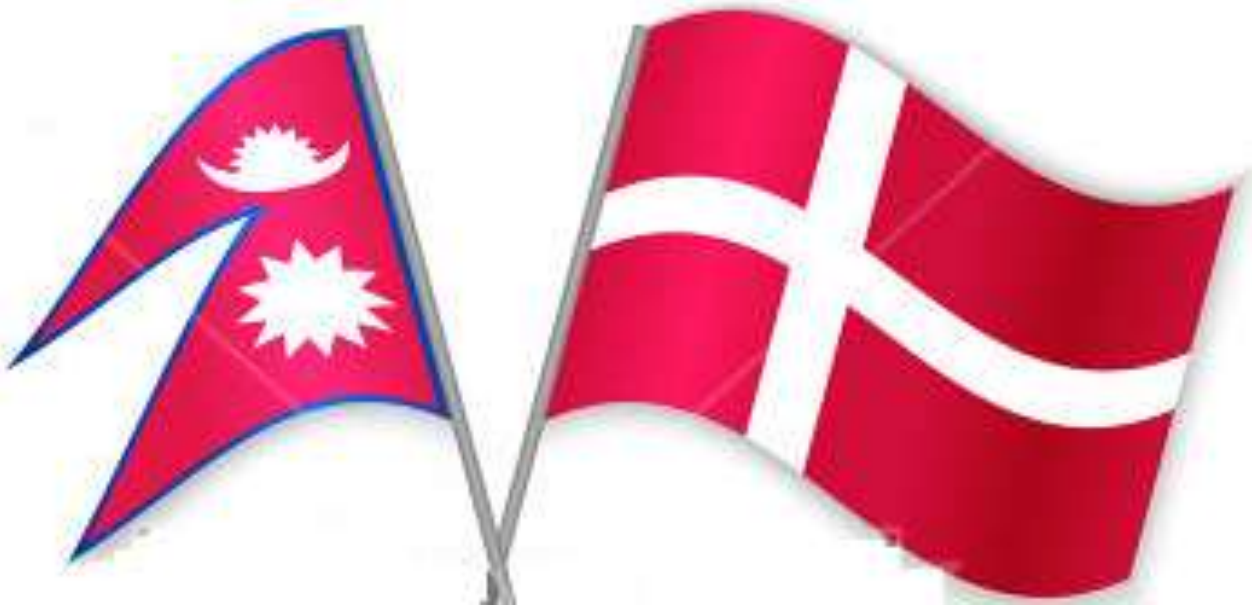
Concept and expected result of demonstration plot



Conclusions

- Low income of Madi valley farmers mainly due to low productivity of land
- Need to focus on increased the productivity of food through:

1. Improve soil fertility
2. Improve farmers‘ technical knowledge
3. Some support on irrigation and improved technology



THANK YOU