

# (Seed) Potato Production: Indonesia compared to the Netherlands

Opportunities, focus points & special practices for Indonesia

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# Seed potato production

## ■ Background

- Potato degenerates fast: pests and diseases
- Soil born pests/diseases (bacterial wilt; nematodes; ...)
- Air transferable pests/diseases (blight; viruses by aphids; ...)

# Seed potato production

## ■ Background

- Potato degenerates fast: pests and diseases
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# Seed potato production

- Healthy yield => start clean & stay clean:
  - Field selection
  - High quality seed
- High quality yield:
  - Special cultivation practice

# Seed potato production

- Different purpose for production: we want SEEDS!
- Special production with special focus points
- Seed production characteristics:
  - Many healthy tubers
  - Yield (all tubers) of right size => 35-55 mm or ..

# Healthy yield

## ■ Field selection

- No soil born diseases

=> scout area/fields;  
=> sample field

Dutch farmer  
**MANDATORY** field  
analysis nematodes



# Healthy yield

- Field selection:
  - Limited air transferable pests/diseases =>

high altitudes (above  
1200-1400 m a.s.l.)

Dutch seed potato  
area: North West





# Healthy yield: high seed quality



Plantlets?



Mini tubers?



G1, G2,...?



# High quality yield

## ■ Special cultivation practices:

- Shorter growing season => smaller tubers  
=> less infections

Dutch farmer: haulm killing **MANDATORY** when aphids arrive

- Active haulm killing => prevents late blight on tuber

Dutch farmer: haulm pulling best practice

- Late blight spray after haulm killing => prevents late blight on tuber

# High quality yield

## ■ Special cultivation practices:

- Lift potatoes after 2 to 3 weeks after haulm killing
  - => minimum rhizoctonia
  - => less pest infections
- Storage
  - => protect from tuber moth and cut worms
  - => cold storage or diffuse light storage

Dutch farmer cold storage for 7-8 months



# High quality yield

- Special cultivation practices:
  - Inspection => by independent organisation  
Dutch farmer MANDATORY
  - Certification => by inspection organisation  
Dutch farmer MANDATORY

# Economic analysis

## ■ Balance sheet components:

- Seed
- Fertilisers
- Pesticides
- Energy/diesel (e.g. tractor; storage; irrigation;..)
- Sales costs (e.g. inspection; certification;..)
- Miscellaneous (e.g. interests; soil sampling; insurance; additional materials; ..)
- Labour

# Economic analysis

Balance sheet **ware** potatoes (% of total costs):

	Indonesia	Netherlands
Component	Granola, Pangalengan	
Seed	34	24
Fertilizers	16	12
Pesticides	16	19
Energy/diesel	2	14
Sales costs	0	3
Miscellaneous	6	4
Labour	27	23

- Labour in Netherlands  $\approx$  26 hours/ha;  
Pangalengan  $\approx$  3000 hours/ha

# Economic analysis

- Balance sheet **seed** potatoes (% of total costs):

Component	Indonesia			Netherlands
	Granola, Pangalengan			G5-G7
	G2	G3	G4	
Seed	45	39	34	32
Fertilizers	21	21	28	5
Pesticides	8	9	9	15
Energy/diesel	2	2	2	7
Sales costs	-	-	-	3
Miscellaneous	5	5	4	4
Labour	21	24	23	34



# Economic analysis

- Return on investment =  $2,000,000/1,000,000 = 2$

	Indonesia	Netherlands
Granola, Pangalengan		
Ware	1.5	1.2
G2	2.5	
G3	2.1	
G4	1.7	
G5-G7	1.5	1.6

# Summary

- Start clean & stay clean
- How? Actions to be taken ....
- Is it worth it? You decide.....

Thanks for  
listening

Hope you are  
inspired to grow  
healthy and  
high quality seed  
potatoes soon!

