

Highway to the moon

**Data collection for economic
and environmental analysis**

Description of Work

- Material inputs + prices
- Equipment inputs + prices
- Labour inputs + prices
- Physical yields
- Quality classes + prices



Safe us from awful jobs

- Focus on:
 - material inputs
 - physical yields
- Solution for:
 - equipment use + prices
 - labour use + prices
 - material prices
 - product prices



Conceptual framework

¹⁾ including conservation biocontrol

2) including **exclosure netting**

Conceptual framework

BIOLOGICAL CONTROL operations ¹⁾		Material inputs				Equipment use				Labour use				
Date	Operation	Material name / type	Quantity	Unit	Price/un	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
nov						(for example)								
xxx	Spray BCA's	BCA	..	xx										
xxx	Install pheromone traps	Pheromone traps	..	xx										
xxx	Introduce natural enemies	Natural enemies	..	xx										
xxx	Sowing flower strips	Flower seed mixture	..	xx										
..														
okt														
¹⁾ including conservation biological operations		materials				equipment				labour				
MECHANICAL CONTROL operations ²⁾		Material inputs				Equipment use				Labour use				
Date	Operation	Material name / type	Quantity	Unit	Price/un	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
nov						(for example)								
xxx	Leaf shredding	not applicable	0	0		Leaf shredder								
xxx	Install enclosure netting	Enclosure nets										
..														
okt														
²⁾ including enclosure netting														
CHEMICAL CONTROL operations		Material inputs				Equipment use				Labour use				
Date	Operation	Material name / type	Quantity	Unit	Price/un	Equipment name / type	drifted	Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
nov						(for example)					(for example)			
xxx	Spray pesticide	Fungicide A	..	xx		Orchard sprayer	..				Family - skilled			
xxx	Spray pesticide	Fungicide B	..	xx		Orchard sprayer	..				Family - skilled			
xxx	Spray pesticide	Insecticide X	..	xx		Orchard sprayer	..				Family - skilled			
xxx	Spray pesticide	Fungicide C	..	xx		Orchard sprayer	..				Family - skilled			
..														
okt														
FRUIT SORTING operations		PHYSICAL YIELD + product quality				Equipment use				Labour use				
Date	Operation	Product name / type	Quantity	Unit	Price/un	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
						(for example)					(for example)			
xxx	Sorting Class I ⁺	class I ⁺ (export, low residue)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class I	class I (export quality)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class II	class II (medium quality)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class III	class III (industry quality)	..	ton		Sorting machine					Family - skilled			
..														

physical yield

Defining operations

Defining operations	Equipment 1	Equipment 2	Labour type	Hours/unit	Unit
Leaf shredding	tractor 40 kW	leaf shredder	family - unskilled	..	ha
Leaf removal	tractor 40 kW	orchard cleaner	family - skilled	..	ha
Seedbed preparation	tractor 60 kW	rotavator	family - skilled	..	ha
Sowing flower strips	tractor 40 KW	sowing machine	hired - skilled	..	ha
Install exclosure nets	tractor 40 kW	working platform	hired - unskilled	..	ha
Install pheromone traps	0	0	hired - unskilled	..	ha
Pest/disease monitoring	DSS-system	0	IPM-specialist	..	10 ha
Spray BCA	tractor	orchard sprayer	family - skilled	..	ha
Spray pesticide	tractor	orchard sprayer	family - skilled	..	ha
Introduce natural enemies	0	0	hired - unskilled	..	ha
Sorting Class 1 ⁺	sorting machine	0	family - skilled	..	ton
Sorting Class 1	sorting machine	0	family - skilled	..	ton
Sorting Class 2	sorting machine	0	family - skilled	..	ton
Sorting Class 3	sorting machine	0	family - skilled	..	ton

Sufficient to describe your WP5 experiments? Supplements welcome!

Parameters equipment

Equipment applied	Purchase value (€/unit)	Depreciation (%/year)	Interest rate (%/year)	Maintenance (%/year)	Diesel use (liter/hour)
Orchard tractor 40 kW
Orchard tractor 60 kW
Leaf shredder	not appl
Orchard cleaner	not appl
Rotavator	not appl
Sowing machine	not appl
Exclosure nets	not appl
Working platform	not appl
Orchard sprayer	not appl
Tunnel sprayer	not appl
DSS-computer	not appl
Sorting machine	not appl



Comments
encouraged!

Parameters labour

Labour categories	Wage (€/hour)
Family - skilled	..
Family - unskilled	..
Hired - skilled	..
Hired - unskilled	..
IPM-specialist	..



Comments
encouraged!

50% already completed

BIOLOGICAL CONTROL operations ¹⁾		Material inputs				Equipment use				Labour use				
Date	Operation	Material name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
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xxx	Sowing flower strips	Flower seed mixture	..	xx										
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¹⁾ including conservation biocontrol

MECHANICAL CONTROL operations ²⁾		Material inputs				Equipment use				Labour use				
Date	Operation	Material name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
nov						(for example)								
xxx	Leaf shredding	not applicable	0	0										
xxx	Install enclosure netting	Enclosure nets										
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okt														

²⁾ including enclosure netting

CHEMICAL CONTROL operations		Material inputs				Equipment use				Labour use					
Date	Operation	buff zone	Material name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
nov							(for example)								
xxx	Spray pesticide	..	Fungicide A	..	xx		Orchard sprayer		..						
xxx	Spray pesticide	..	Fungicide B	..	xx		Orchard sprayer		..						
xxx	Spray pesticide	..	Insecticide X	..	xx		Orchard sprayer		..						
xxx	Spray pesticide	..	Fungicide C	..	xx		Orchard sprayer		..						
..															
okt															

FRUIT SORTING operations		PHYSICAL YIELD + product quality				Equipment use				Labour use				
Date	Operation	Product name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
						(for example)								
xxx	Sorting Class I ⁺	class I ⁺ (export, low residue)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class I	class I (export quality)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class II	class II (medium quality)	..	ton		Sorting machine					Family - skilled			
xxx	Sorting Class III	class III (industry quality)	..	ton		Sorting machine					Family - skilled			
..														

equipment

labour

Completed Tasks



Focus on core business

BIOLOGICAL CONTROL operations ¹⁾			Material inputs				Equipment use				Labour use				
Date	Operation		Material name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
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¹⁾ including conservation biocontrol			operations materials												
MECHANICAL CONTROL operations ²⁾			Material inputs				Equipment use				Labour use				
Date	Operation		Material name / type	Quantity	Unit	Price/unit	Equipment name / type		Hours	Fuel/hr	Costs/hr	Labour name / type	category	Hours	Costs/hr
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xxx	Spray pesticide			..			Orchard sprayer	..				Family - skilled			
	..						Orchard sprayer	..				Family - skilled			
okt															
			physical yield												
FRUIT SORTING operations			PHYSICAL YIELD + product quality				Equipment use				Labour use				
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xxx	Sorting Class III		class III (industry quality)	..	ton							Family - skilled			
	..											Family - skilled			

Classes of operations

BIOLOGICAL CONTROL operations ¹⁾		Material inputs			
Date	Operation	Material name / type	Quantity	Unit	Price/unit
nov					
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xxx	Spray pesticide	Insecticide X	..	xx	
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FRUIT SORTING operations		PHYSICAL YIELD + product quality			
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xxx	Sorting Class III	class III (industry quality)	..	ton	
..					

Biological control,
including conservation biocontrol

Mechanical control,
including enclosure netting

Chemical control

Fruit sorting

Collection of prices

Pesticides crop researchers

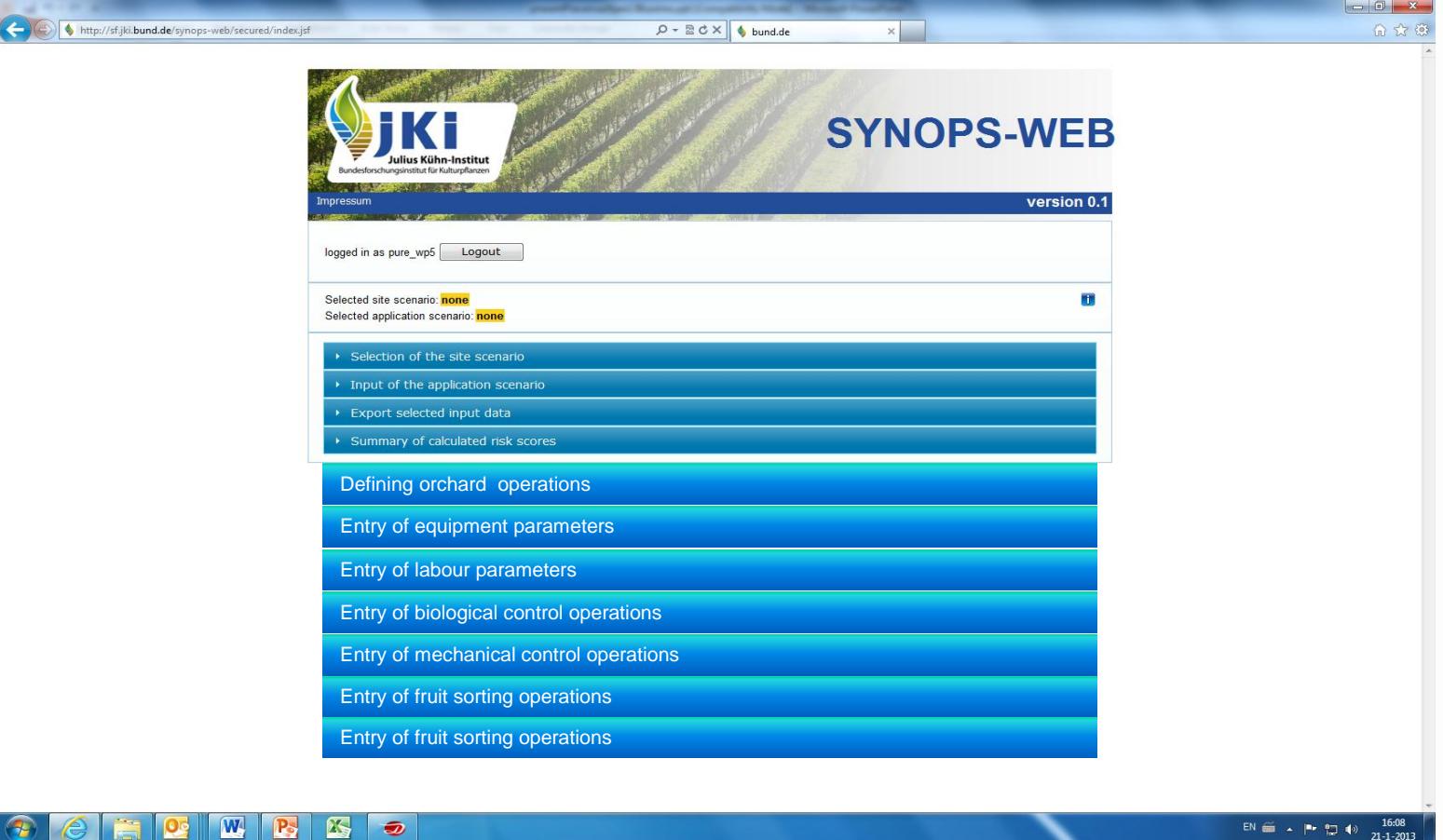
BCAs crop researchers

Equipment crop researchers +

Labour crop researchers +

Outputs IPTS and LEI

New bars in SYNOPS-WEB



The screenshot shows the SYNOPS-WEB application running in a web browser. The URL in the address bar is <http://sf.jki.bund.de/synops-web/secured/index.jsf>. The page header includes the JKI logo (Julius Kühn-Institut für Kulturpflanzen) and the text "SYNOPS-WEB version 0.1". The top navigation bar has links for "Impressum" and "Logout". Below this, a message states "Selected site scenario: **none**" and "Selected application scenario: **none**". A sidebar on the left lists several items with blue arrows: "Selection of the site scenario", "Input of the application scenario", "Export selected input data", and "Summary of calculated risk scores". The main content area is titled "Defining orchard operations" and contains a vertical list of operations: "Entry of equipment parameters", "Entry of labour parameters", "Entry of biological control operations", "Entry of mechanical control operations", "Entry of fruit sorting operations", and "Entry of fruit sorting operations". The bottom of the screen shows a taskbar with various icons and a status bar indicating "EN" and the date "21-1-2013".

Trying SYNOPS-WEB

- <http://sf.jki.bund.de/synops-web>
- user: pure_wp5
- pwd: pure_wp5
- Selection of the site scenario
- Input of the application scenario

Actions for Riva del Garda

- Jan + Marianne (economics)
 - ..
 - ..
 - ..
- Aude + Gabriele (DEXiPM)
 - ..
 - ..
 - ..
- Jörn + Martina (SYNOPS-WEB)
 - ..
 - ..
 - ..
- Aude + Herman + Imre + Vittorio
 - ..
 - ..
 - ..

Highway to the moon



See you in Riva del Garda