

## Finnish farm worker orientation studies and guidelines to the farm managers considering the vulnerable populations

Sacurima COST Action WG3 workshop - How to improve safety culture and risk management in vulnerable populations in agriculture? April 25, 2019, Magnus University, Kaunas, Lithuania

Dr. Jarkko Leppälä Natural Resources Institute Finland (Luke)



COST Association



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COST Association, International not-for-profit organisation/Association internationale sans but lucratif Register of legal Entities Brussels: 0829090573 Avenue Louise 149 | 1050 Brussels, Belgium t: +32 (0)2 533 3800 | f: +32 (0)2 533 3890 office@cost.eu | www.cost.eu

## **Sacurima COST Action - Background**

## Towards better safety culture in agriculture



Agriculture has been third in non-fatal work accidents numbers after mining and construction industries. In year 2013 there was 135 000 non-fatal work accidents in agriculture in EU.

## How to define what is good worker safety culture in Agriculture?

Agriculture has been one of the worst fatal accident records of any major employment sector – over 50 % of fatal work accidents worldwide (in EU~ 12-15 %)



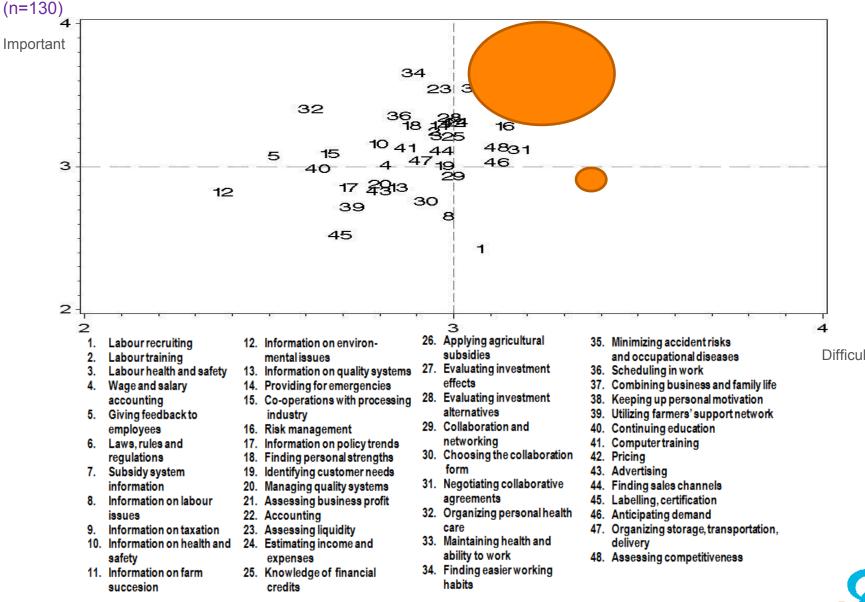


# Farm worker management and orientation studies in Finland

- Farmers' perceptions of necessary management skills in year 2007
- Farm safety and security management, year 2008
- Employee orientation guide in agri- and horticulture, year 2010
- Factors affecting occupational safety and health of foreign farm workers in Nordic countries, year 2012
- Farm worker management and welfare at work in agriculture, year 2013
- Farm machinery safety risk study, year 2015
- Systematic risk management on farms, year 2016 (Doctoral study)
- Machinery safety guide in agriculture, from 2017
- Safety culture and risk management in agriculture (Sacurima COST Action), from 2017 –
- Pilot study of farm relief workers safety culture and motivation, year 2018
- Safety culture message in agriculture, from 2018 –



## Farmers' perceptions of necessary management skills



Mattila, T. E. A., Kaustell, K. O., Leppälä, J., Hurme, T. and Suutarinen, J. 2007. Farmers' perceptions of necessar mahagement skills in Finland. Journal of Agricultural Education and Extension 43; a4 R287 ago institute Finland Jarkko Leppälä 2016

Difficulty

NATURAL RESOURCES INSTITUTE FINLAND

## Farm safety and security management (N=590)

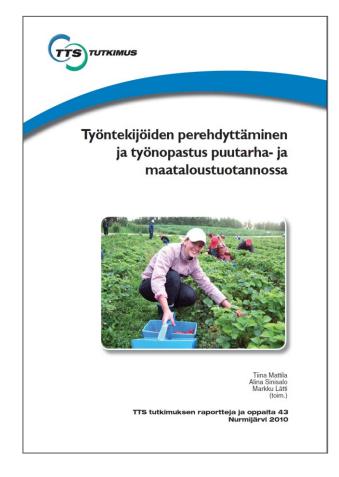
Injury event as dependent variable	Multivariable estimates 95% Confidence Limits			Final model estimates 95% Confidenc e Limits		
FOHS membership (vs. not membership)	1.49	1.00	2.22	1.29	0.78	2.10
Farm						
Farm size: field hectares < 40 (vs. ≥ 40)	0.26	0.09	0.80			
Beef cattle (vs. no beef cattle)	0.24	0.06	0.90			
Farm Management						
Quality management training (vs. no training)	1.46	1.00	2.12			
Computer used for farm management (vs. not used)	1.76	1.01	3.06			
Group B						
Risk perception; perceived risks: high (vs. low)						
njury risk	1.61	1.07	2.42			
Dependence on one person	1.68	1.04	2.71			
Dependence on few suppliers	1.90	1.01	3.55	2.55	1.30	5.01
Risk perception; actual incident or close call during past 3 years: yes (vs. no)						
Physical strain risk	2.75	1.63	4.62	2.64	1.50	4.63
Risk on farm family members	5.31	2.49	11.30	6.13	2.78	13.52
Dependence on one person	2.52	1.28	4.98	2.71	1.30	5.66
Water or energy supply risk	2.31	1.35	3.94	2.24	1.27	3.95
ves (vs. no)		0.25	0.74	0.41	0.23	0.73
		0.20	••••	••••	0.20	

Leppälä, J. etc. 2013. Effectiveness of occupational health service programmes in farmers' safety-inland and security risk management. IJAM vol 2, issue 3.

INSTITUTE FINLAND

## Employee orientation guide in agri- and horticulture

- In Finland 15 000 foreign workers yearly in agriculture on 2000 farms. About 28 000 seasonal workers (young people, less education etc.).



Orientation planning

Finding employees and recruiting

Employee reception and orientation to the farm in general

Employee work orientation

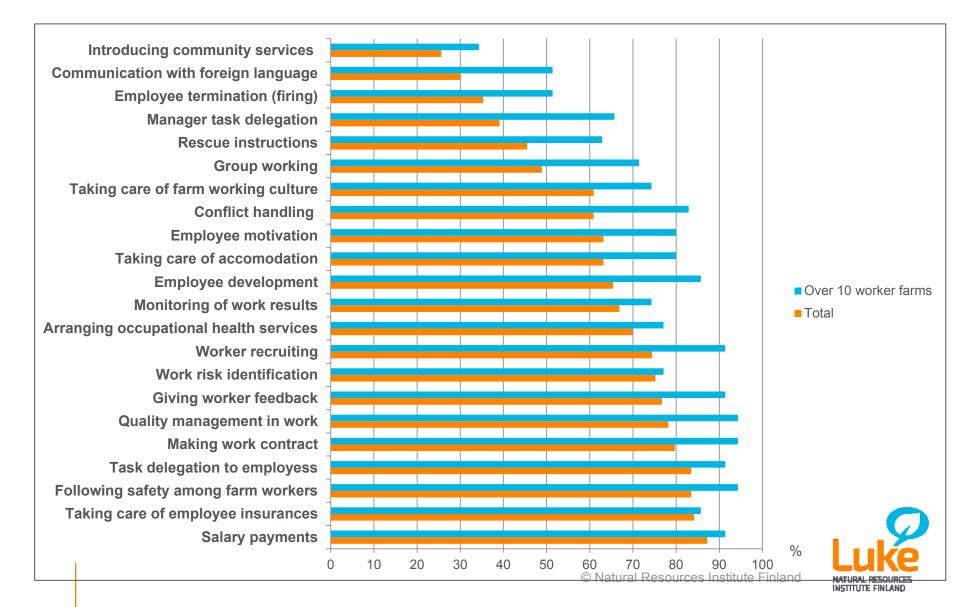
Monitoring of employee work

Management tools: contacts, addresses and phone numbers, orientation check list, machinery instructions and guidebooks, legislation books and documents, working contracts, salary calculators, quality and safety instructions, rescue instructions, services in nearby area, farm rules, health service contacts and instructions, internet services and information, social spaces, lockable closet for own stuff, instructions in employee's own language



## Farm worker management and welfare at work in agriculture – have had difficulties in managing the task

- Inquiry to farm employers in year 2011. Totally 230 farm employers responded. Respond rate was 25 %.



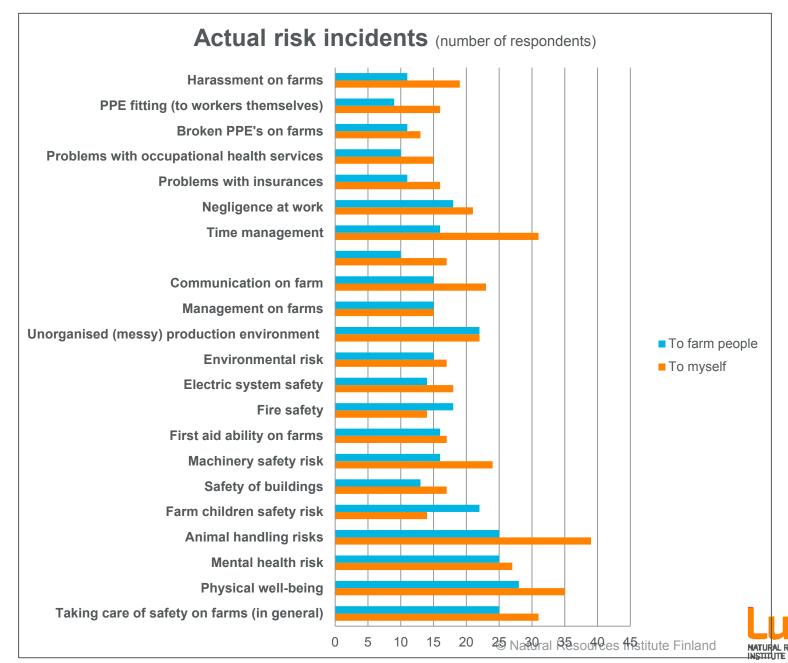
# Factors affecting occupational safety and health of foreign farm workers in Nordic

**COUNTRIES** (Heiberg, Mattila, Kaustell, Rautiainen 2012)

- Communication as a main issue. It is complicated by diverse attitudes towards safety among workers.
- Unclear role of safety as the responsibility, lack of language skills, lack of work experience and awareness of safety hazards, shyness and cultural differences leading to misunderstandings and underreporting of incidents.
- Homesickness was a special stress factor among foreign workers.
- Making money was clearly the first priority, and workers were motivated to work long days to increase their earnings.
- Tips for farm managers: experienced workers guiding and training newcomers can be used effectively with employer monitors that safe working procedures are followed. Discussion of health and safety issues can be activated and encouraged. Supporting the wellbeing of workers in general, like efforts to ease homesickness, may have a positive effect on safety as well.



#### Pilot study of farm relief workers safety culture and motivation



## Pilot study of farm relief workers safety culture and motivation

Farm work is physically stressing, which emphasizes the need to be in good health.

The greatest challenges and risks in farm relief worker work were busy work, tight work schedules, unsafe work environment in animal handling, negligence in work, poor communication on farm, poor safety management on farm, too long driving distances during the day, poor machinery and electric tool conditions and orientation on farms.

Orientation training on farms is increasingly important as technologies are changing, new automated systems are added, and if the farm relief worker and farmer have different native languages.



### Farm risk map (Leppälä, J. 2016. Systematic Risk Management on farms)

#### OUTSIDE IMPACTS INTO THE FARM

#### Finance and markets

Finance policy
 Financial markets
 Market competition
 Product demand and refining
 Product prices

#### Networks

Trade
Refiners
Contractors
Suppliers
Authorities
Research and education
Media
Advertising
Social relationships
Associations

#### Regulations

Subsidy policy
Laws and acts
Tax policy
Import and export policy
Global policies

#### Other outside impacts

Nuclear power accidents
Epidemic crisis
Natural disasters
Wild animals
Society level security crisis

#### ASSETS AND FINANCE

#### Farmyard property

□Robbery and vandalism □Order on the yard, utilities

#### **Buildings**

Condition and structures
 Fire and fire prevention
 Electrical installations, lighting

#### Land property

ProductivityAvailabilityLand use

#### Forest

Growth Losses Use

#### Animals

Animal welfare and breedingAnimal shelters and animal health

#### Investments

Planning and accountingPurchase information

#### Insurances

Taxes

□Insurance control

#### Other property acts

Property relationsContracts

#### PRODUCTS AND PRODUCTION QUALITY

#### **Production and economics**

Customer demands Plant production Animal production Production costs Solvency

**RISKS INSIDE THE FARM** 

#### Machinery and equipment capacity

 Machinery maintenance and dependability
 Electronic instrument condition
 Data processing
 Fuel and energy

#### Work organizing

 Working methods

 Know how

 Schedules

 Labour resources

 Contracting

 Collaboration

#### Logistics

Transportation arrangementsTraffic conditions, roads

#### **Other product functions**

 New methods and products
 Production image, branding
 State of emergency
 Farm production in natural and security crises, preparedness

#### **PEOPLE SAFETY**

#### Hazards in work environment

Noise
 Temperature conditions
 Accessways, high elevations
 Conditions of work
 Chemicals
 Air quality, dust and mould

#### **Machinery** safety

Machinery and equipmentHand and power toolsElectrical safety

#### Physical strain and welfare

Work strain
Work amount
Operation planning
Mental stress and welfare

#### Other hazards

Transportation and traffic
 Animal handling
 Forest and firewood work
 Visitors safety on farm
 Family safety

### IMPACTS FROM THE FARM

#### Customers

Products and services
 Delivery reliability
 Food safety
 Consumers

#### Environment

Waste waters
Solid wastes
Chemicals, fuels, oils
Cultivation and fertilizing
Material and energy
consumption
Landscape issues
Biodiversity
Permissions
Complaints from others
Other environmental issues

#### TOOLS FOR FARM MANAGEMENT AND RISK CONTROL

Production planning
 Farm risk management
 Farm quality systems
 Resourse management
 Task organizing
 Decision making tools

Bookkeeping and cost management
 Financial and investment planning
 Health and safety management
 Tax and insurance planning
 Environmental management
 Etc..

## Vulnerable populations and safety culture in Agriculture? - Discussion

In Finland there are 15000 foreign workers working yearly in agriculture – no data on refugees in agriculture?
In Finland women do more and more same farm works than men. Women injury rates have been half less than men.

- Big part of the farmers are coming old > farmers should start farming younger in the future. Average age of farmers is 51 in Finland. Machinery injury risk have found to be

higher in starting/young farmers.

- Young workers or children on farms - How to measure or monitor these farm populations? Is there any data? How many child have died on farms last years?

- In UK 2-3 children dies every year



(https://www.hsa.ie/eng/Your\_Industry/Agriculture\_Forestry/Further\_Information/Fatal\_Accidents/)



### **Elements of safety culture**

- The safety culture of an organisation is the product of
  - individual and group values, attitudes, perceptions, competencies, and patterns of behaviour
  - that determine the commitment to, and the style and proficiency of, an organisation's health and safety management.
- Organisations with a positive safety culture are characterised by
  - communications founded on mutual trust
  - shared perceptions of the importance of safety
  - confidence in the efficacy of preventive measures."

ACSNI Human Factors Study Group: Third report - Organising for safety. HSE Books (1993)

Good safety culture on farms sets safety as high priority. It is seen in farm people behavior, attitudes, practices and work activities, which are adopted to farm and farm work in a safe manner.

Leppälä & Van den Broucke 2018





# Implementing an effective safety culture involves

- Management commitment
- Visible management
- Good communications between all levels of employee
- Active employee participation
- Training
- Inspection
- Specific documents
- Learning organization Enforcement and advice

ACSNI Human Factors Study Group: Third report - Organising for safety. HSE Books (1993)





### Is this good Safety Culture?





## Thank you !

### Further information:

Jarkko Leppälä, Natural Resources Institute Finland (Luke), Maarintie 6, Espoo, 00076 Aalto, Finland frontname.lastname@luke.fj, tel. +358 29 532 6326

