

# GERMAN MACHINERY RING MODELS: EXPERIENCES AND LESSONS LEARNT

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# REASONS FOR FOUNDATION OF MACHINERY RINGS IN GERMANY

## Agricultural situation in Germany during the fifties:

- Specialization in agricultural production
- Division of labour in agricultural value chains was increasing
- **Industrialisation withdrew labour force from agriculture !**
- **New agricultural techniques had to replace labour force**
- New technical developments became necessary
- New technical developments became expensive
- Inefficient machinery utilization in small scaled farms
- **The answer was the idea of Machinery Rings**



# MACHINERY RINGS IN GERMANY

- First Machinery founded in 1958 in Bavaria
- 12 Area MR Accociations
- approx. 230 local MR
- approx. 192.000 Members
- 60% of farmers are organized
- 7.8 Mio. ha (65% of agricultural land)
- 1.5 Mrd. € annual turnover in 2015
- 3.000 employees
- Main focus in West Germany
- The smaller farms the more succesfull Machinery Ring



KBM e.V.  
Kuratorium Bayrischer Maschinenringe

BMR e.V.  
Bundesverband der Maschinenringe

MRD GmbH  
Maschinenringe Deutschland

EMR e.V.  
European National MR-Foundation



## WHAT DOES MACHINERY RING NOT MEAN?

- Company with own machines for own profit

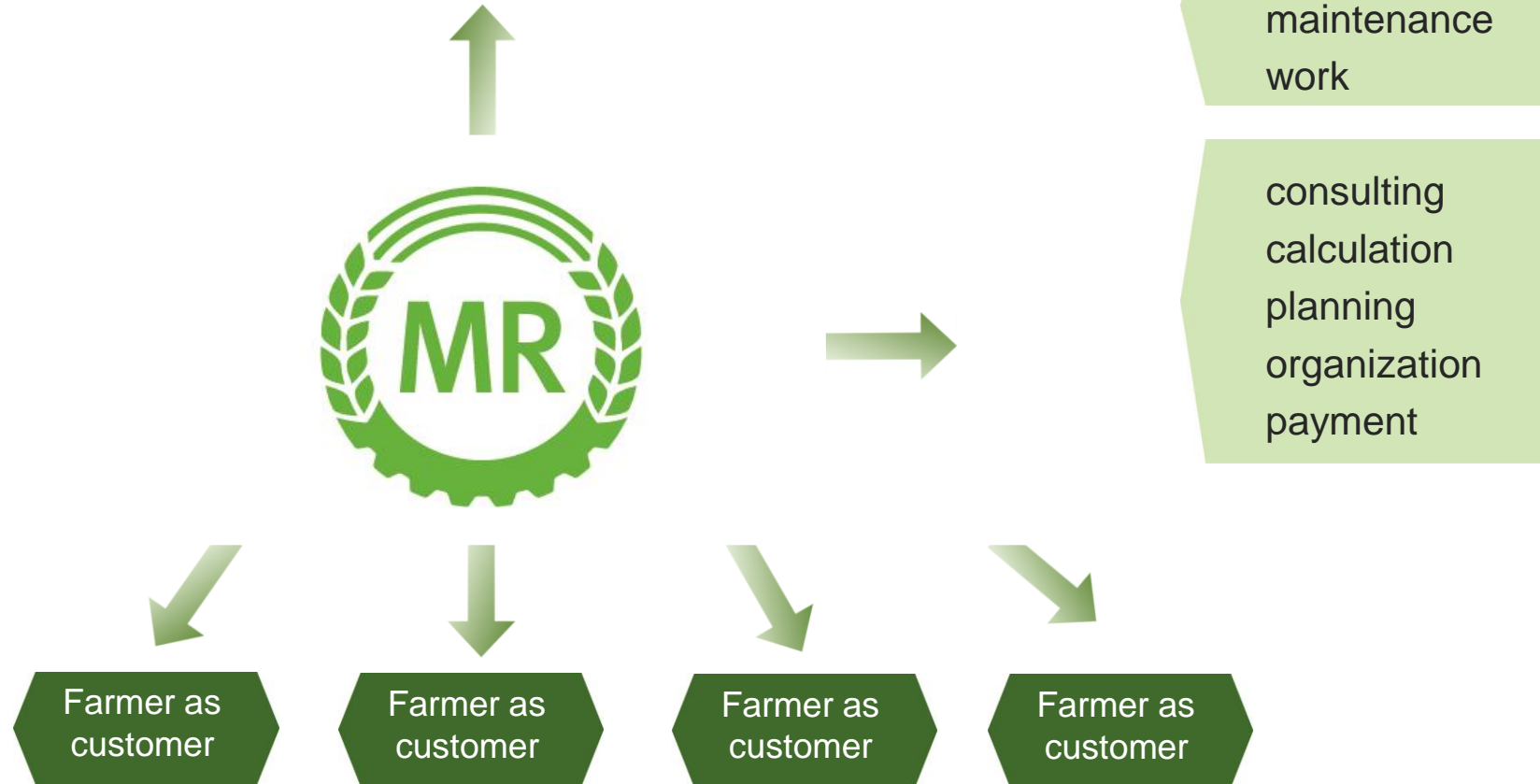
## WHAT MEANS MACHINERY RING?

- Aggregations organized by the farmers themselves
- Common or individual investments and mutual aid
- Efficient management of mechanization on individual farms with modern technology
- Structure for regional common projects in value chains
- Canvassing projects with new business for extra income to the members (farmers)
- Organization of farm help
- Modern center of different services to the members with professional knowledge
- Proposals as a functions of regional frame conditions
- Office with modern technique of communication
- Non profit organization



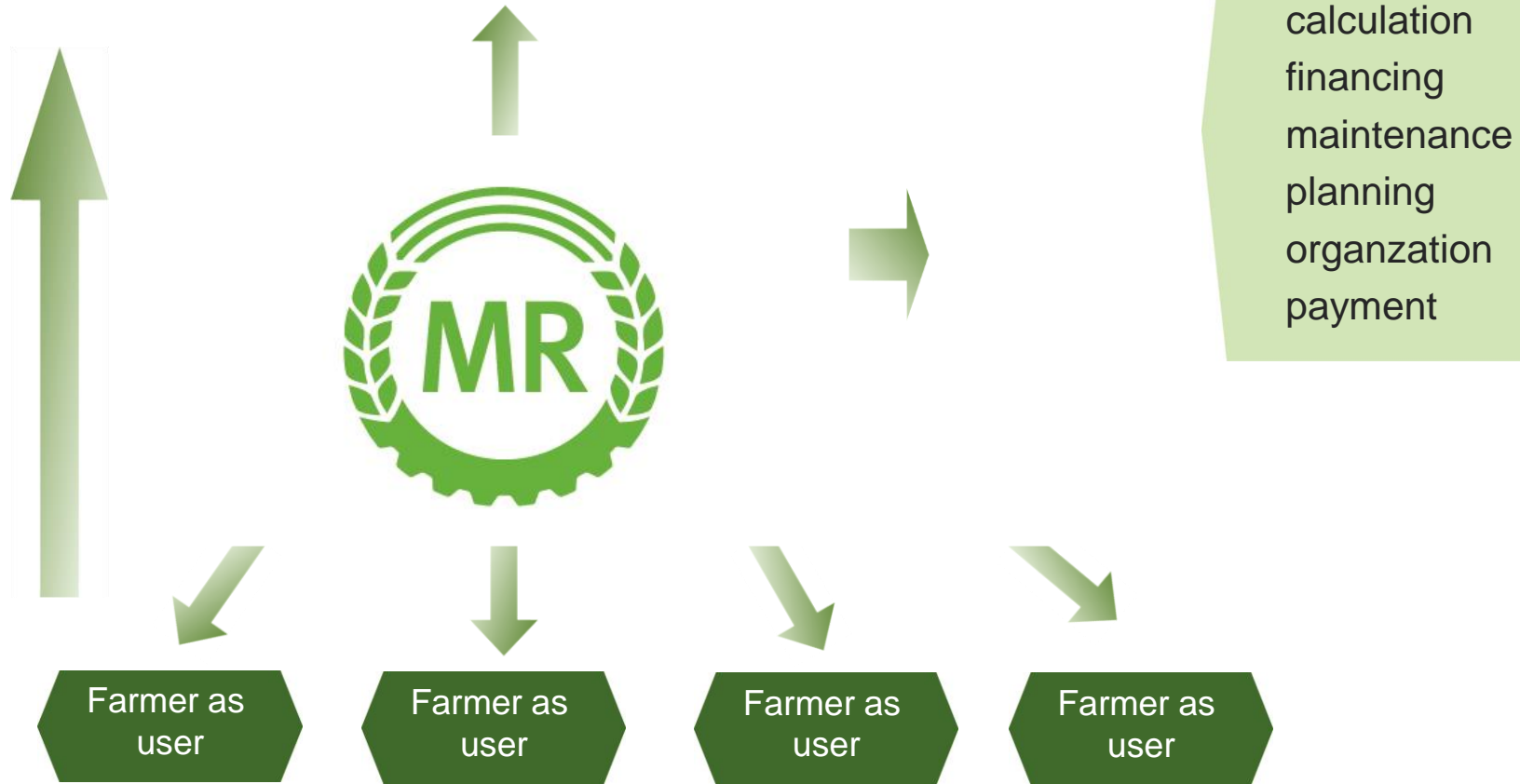
## INDIVIDUAL INVESTMENT

Farmer/Contractor as owner of machines



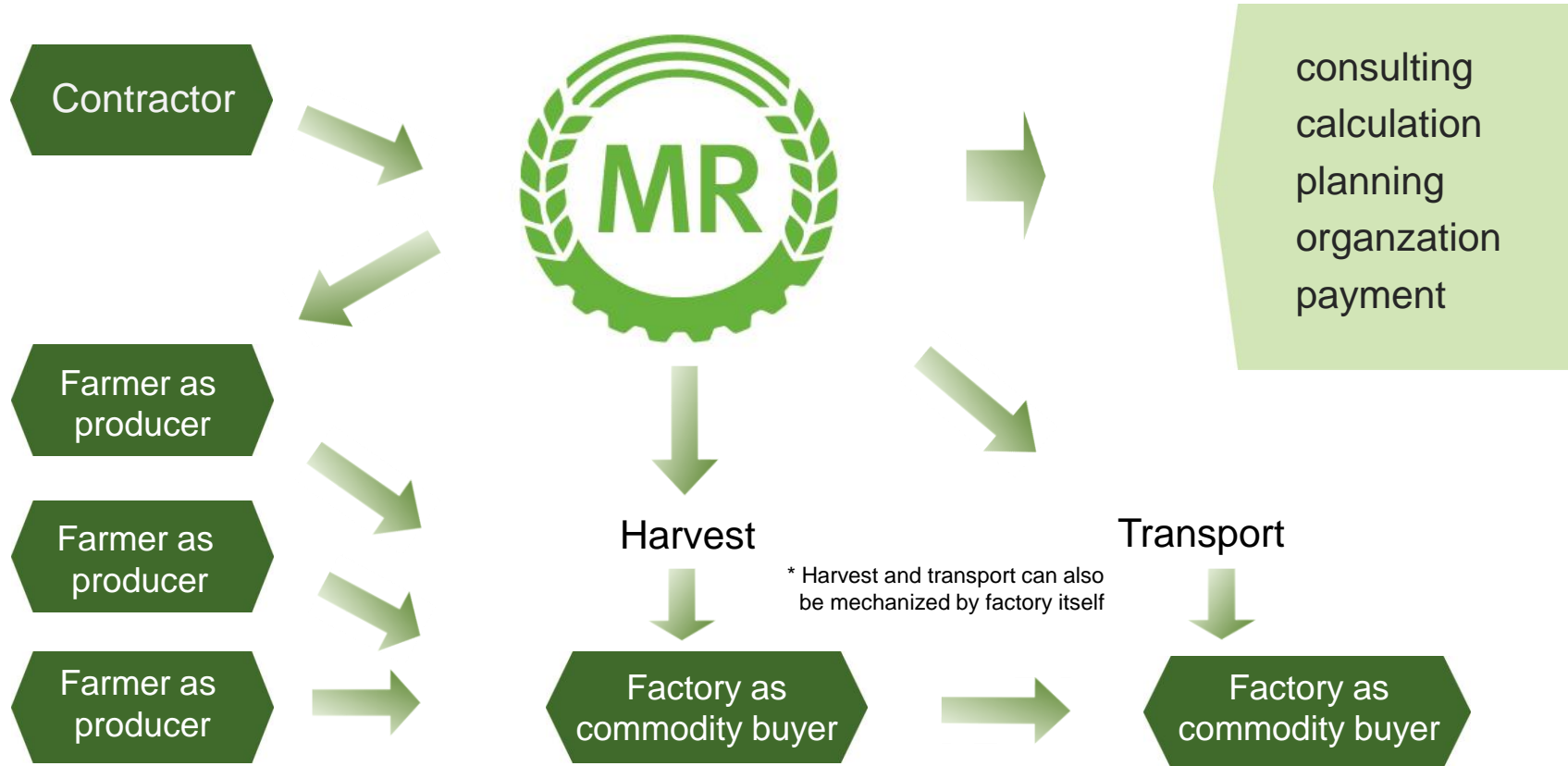
## GROUP/JOIN INVESTMENT

Different farmers as shareholders of machines



# VALUE CHAIN INVESTMENT

Different members in the value chain



# PLANNING COMBINES MR HARBURG

- 36.000 ha of arable land
  - 22.000 ha land for cereales and rape
  - Average size of fields: 7 ha
  - Available harvest days with moisture under 16%: 12
  - Average harvest hours per day: 12
  - Average performance of a combine in that area: 2 ha per hour
- 
- Result:
  - 140 – 150 hours or 280 – 300 ha per combine + harvest periode
  - Approximately 75 combines necessary with 250 HP and 6 mtr working width
  - Investment 15 Mio €





# RULES AND TRANSPARENCY

- Board only of farmers
- Professional manager as employee
- Annual meetings for rights and obligations
- Uniform price list (calculated on the threshold of utilization)
- Cashless payments
- Exhibition and excursions
- Practical screenings with new techniques and techniques from local farmers
- Personal and/or group consulting
- Solutions for finance
- Insurance services



# Budget Machinery Ring

**1.000 Members, Turnover 15 Mio €/year, six employees at the office**

Earnings	€/year	Expenses	€/year
Membership fee	120.000	Wages	250.000
Commission	300.000	Social insurance	100.000
Others	50.000	Taxes	50.000
(Subsidies)	?	IT	10.000
		Education	5.000
		Marketing	5.000
		Office	20.000
		Postage, Telephone	10.000
		Car, Traveling	10.000
		LMR, BMR	10.000
Total	470.000	Total	470.000



# MACHINERY RINGS IN VALUE CHAINS

Steps of value chains in agriculture

**Where can Machinery Rings give support?**

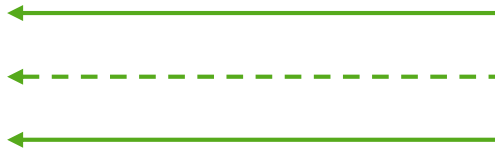
Design

Production

Selling

Delivering

Support





## **MACHINERY RINGS IN VALUE CHAINS**

Examples for value chains supported by Machinery Rings

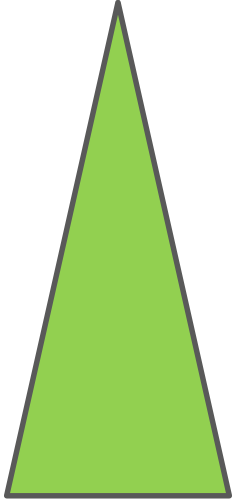
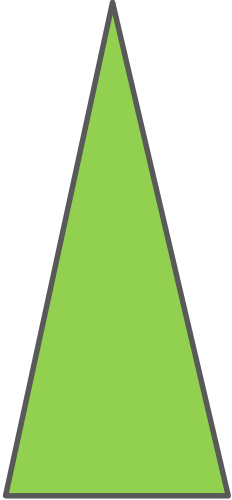
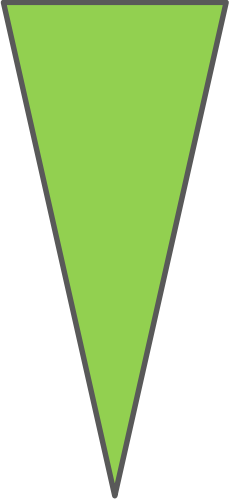
# MACHINERY RINGS IN VALUE CHAINS

Examples for value chains supported by Machinery Rings

- Sugar beet production
- Biogas production for electric power and heat
- Cereal grains
- Potatoe production for consumption or plant starch
- Milk production
- **Industry/Municipal services with agricultural equipment**



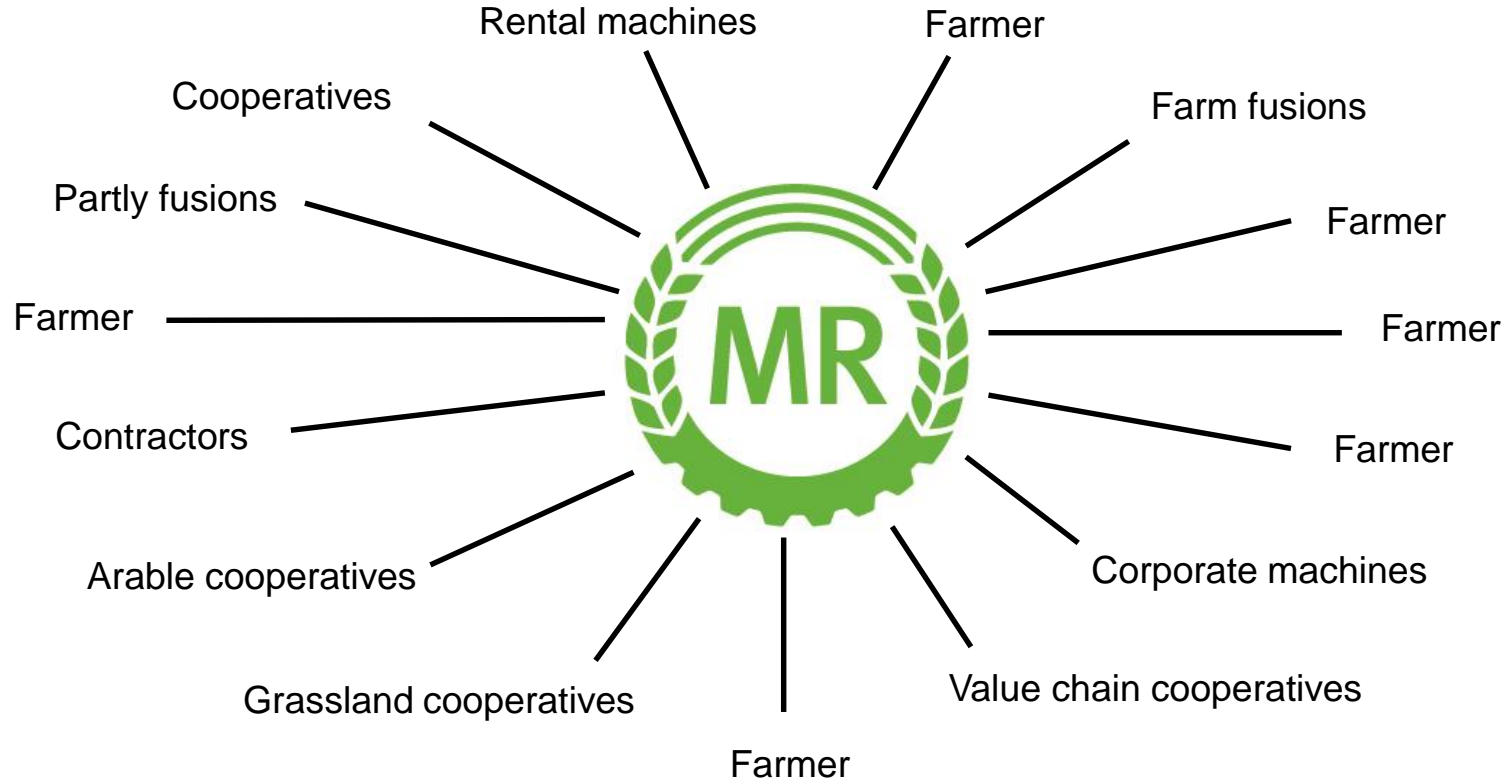
# MODELS OF MECHANIZATION

Form of organisation	Number of farmers	Legal commitment	Consulting demand	Individual freedom
Rental machines	> 50			
Machinery Ring	> 200			
Contractor	20 - 50			
Corporate machines	2			
Corporate machines	3 - 7			
Arable/grasland cooperative	2 - 10			
Value chain cooperative	2 - 50			
Partly fusion	2 - 3			
Farm fusion	2			
Cooperative	> 2			
Farm management providers	> 5			

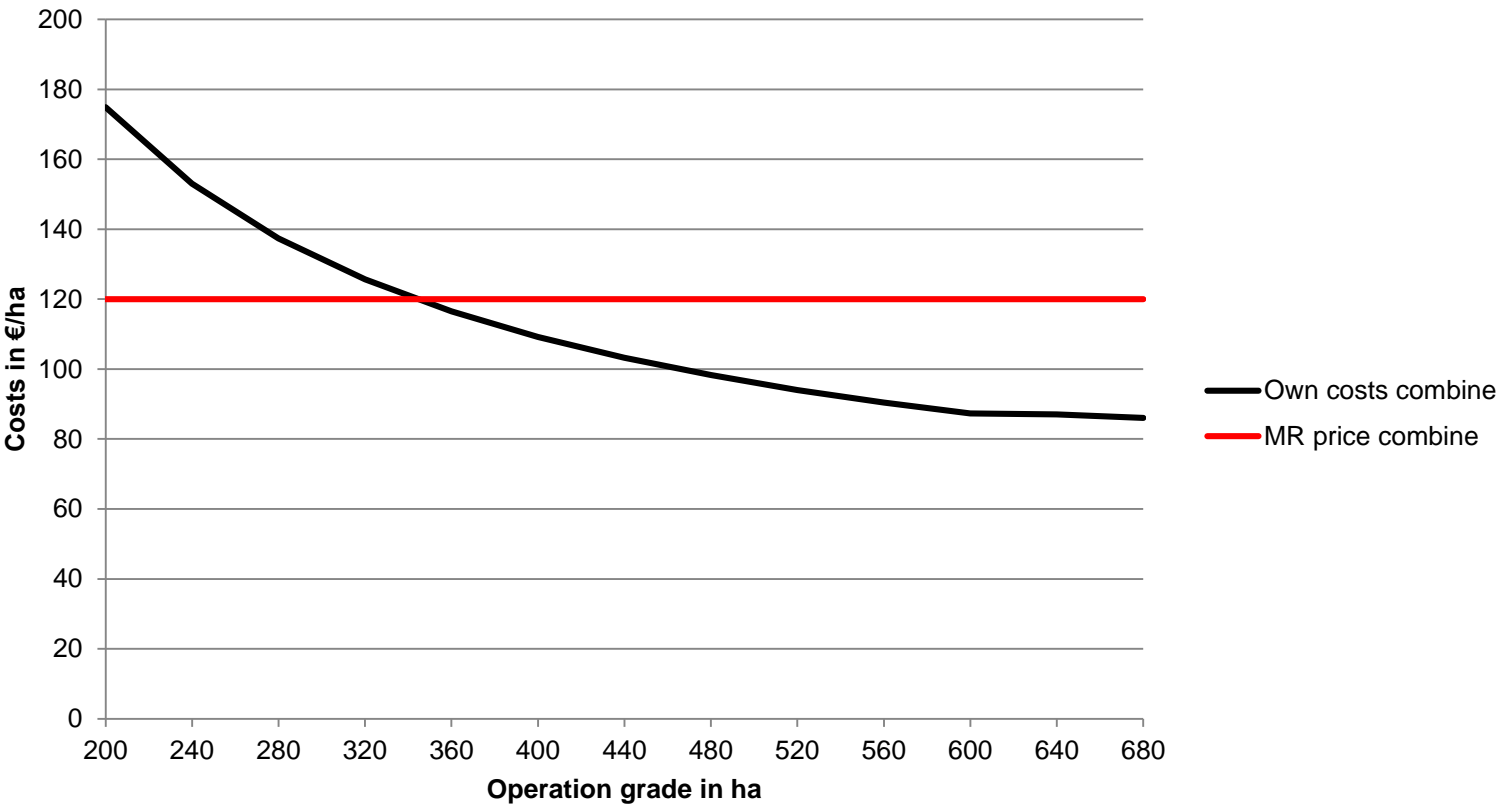




# MR IN RELATION TO OTHER MECHANIZATION MODELS



# COSTS OF COMBINE MR VS. OWN MECHANIZATION





# EXPERIENCES AND LESSONS LEARNT

- Machinery Rings in Germany are very successful
- Farmers must take the initiative to establish MR
- Motivated and well-trained staff is needed
- **Excellent MR-Manager !!!**
- Clear and transparent rules are important
- Economical and reliable business every day will convince farmers
- Farmers like to work together
- MR is a flexible response for modern mechanization and organization to changing agriculture challenges





## **MACHINERY RINGS IN AFRICA**

What is our idea?

# REQUIREMENTS FOR MACHINERY RINGS IN AFRICA

- Farmers must be convinced of this idea !!!
- Agricultural entrepreneurs !!
- Possibilities of education
- Good regulatory framework
- Good infrastructural conditions
- Liquid markets
- Access to markets of seeds, fertilizers, pesticides, techniques with after sales support
- Reliable financing system
- **Excellent Manager, excellent Manager, excellent Manager!**



# MACHINERY RINGS IN AFRICA

What is our idea?



- Evolution of exemplary Machinery Rings in different countries including models with collective mechanisation, contractors, farmers associations etc.
- Multifarious agricultural region
- Blending model with EU, German state and other named partners
- Support with german Machinery Ring managers
- Period at least three years
- Registration of basic parameters (education, production, technology, marketing)
- **Identification of demand for mechanization**
- Concepts for education, technology, financing
- **Working together with African MR-Manager!**



# WHO CAN BE PARTNER OF MACHINERY RINGS IN AFRICA ?

How can they give support for success?

- Agricultural education, applied research → Development aid organizations  
→ National states  
→ National farmers union etc.
- Infrastructure → National states
- General legal conditions → National states, EU
- Liquid markets and storage → National/International traders
- Technical support → Agricultural machinery industry
- Transparent subsidies for investment → National states
- Transparent allocations of credits → World bank or others?



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**Thank you for your attention!**

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