



MINISTERSTVO ZEMĚDĚLSTVÍ



Project info & outcomes

# AMOR

Project MoA

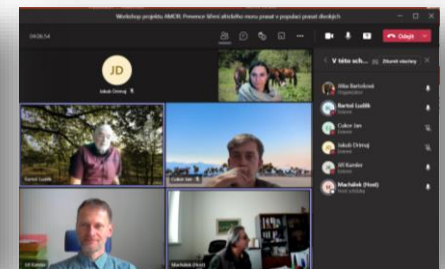
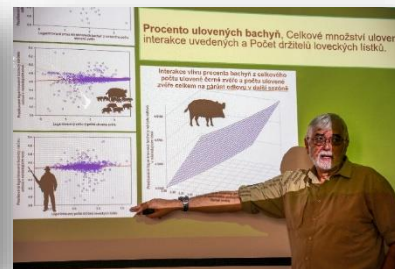
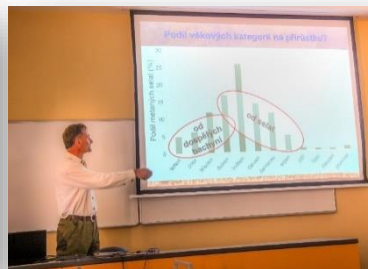
QK1920184 (2019-2021) Jitka Bartošová

**Technical and biological tools and procedures to prevent the African swine fever in population of free-ranging wild boar in the Czech Republic**

# Project team

---

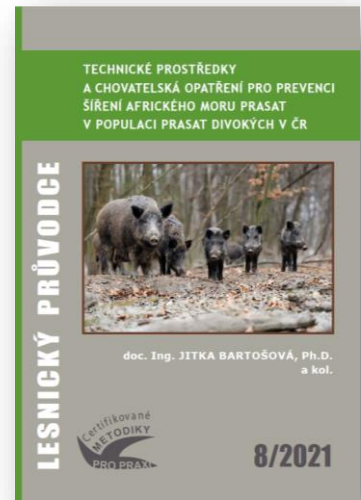
- VÚŽV – Institute of Animal Science, p.r.i. (prof. Ing. Luděk Bartoš, DrSc./doc. Ing. Jitka Bartošová, Ph.D.)
- VÚZT - Research Institute of Agricultural Engineering, p.r.i. (Ing. Antonín Machálek, CSc.)
- VÚLHM – Forestry and Game Management Research Institute, p.r.i. (Ing. František Havránek, CSc./Ing. Jan Cukor, Ph.D.)
- MENDELU – Mendel University in Brno – Faculty of Forestry and Wood Technology (prof. Ing. Jiří Kamler, Ph.D.)





# Project outcomes

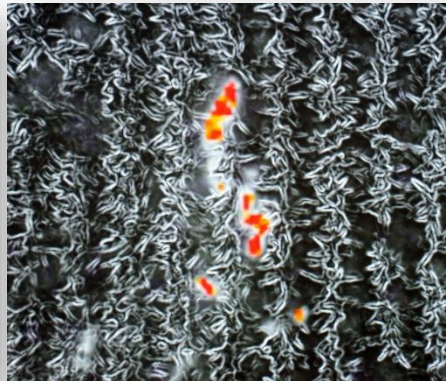
- scientific papers, applied outcomes
- certified methodology
- utility model, validated technology
- info for MoA, hunters and animal breeders
- collaboration with parallel project on ASF



# Work packages (4)

## 1) Technical and biological tools for preventive measures in wild boar – **spatial behaviour**

- localisation of individual and cadaver in the field (IR thermography, drones, dogs...)
- „access denied“ (fence, repellent...)
- baiting, food supply

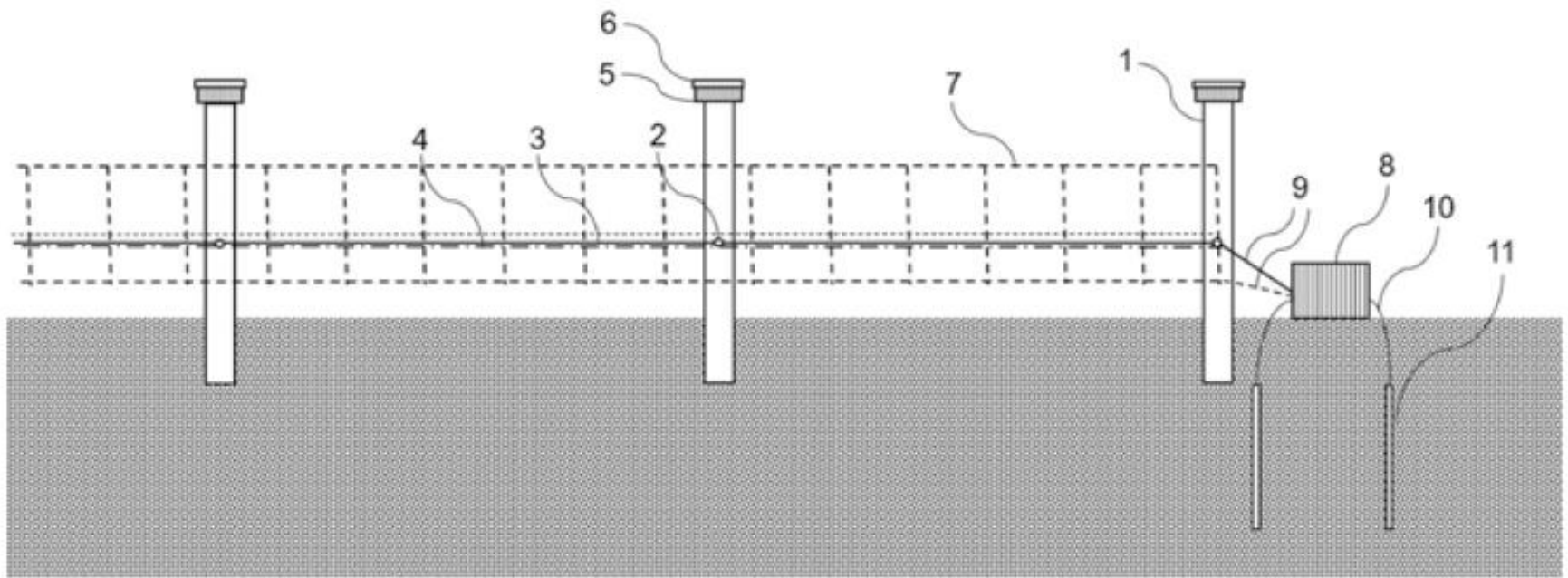


- Validated technology for searching wild boar cadaver (VÚZT, contract with Lesy ČR, s.p.)
  - various tools – selection depends on the area
  - using drones with loudspeakers for steering WB
- localisation of individuals and cadaver in the field (IR thermography, drones, dogs...)
  - „access denied“ (fence, repellent...)

- Acoustic repeller (VÚLHM)







Obr. 2: Návrh užitého vzoru kombinovaného elektrického ohradníku

(MENDELU)

- „access denied“ (fence, repellent...)
- Utility model: Fence preventing wild boar migration (MENDELU) – multi-level combined barrier
- wild boar (pig) highly sensitive to electric shock, but need to know – resist even to tempting item (food)
- often brake through a newly installed barrier

# Work packages (4)

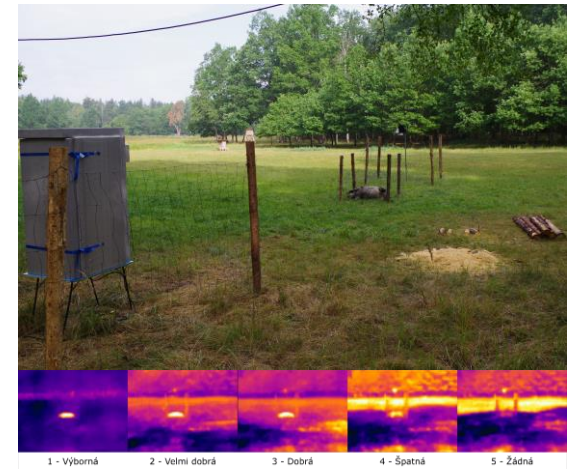
## 1) Technical and biological tools for preventive measures in wild boar – **spatial behaviour**

- BEST BAITING - NO BAITING (disserviceable)
  - increase in food offer, wild boar condition as well as local damage
  - **BUT** targeted baiting to hunt/trap/prevent ASF
- 
- baiting, food supply

# Work packages

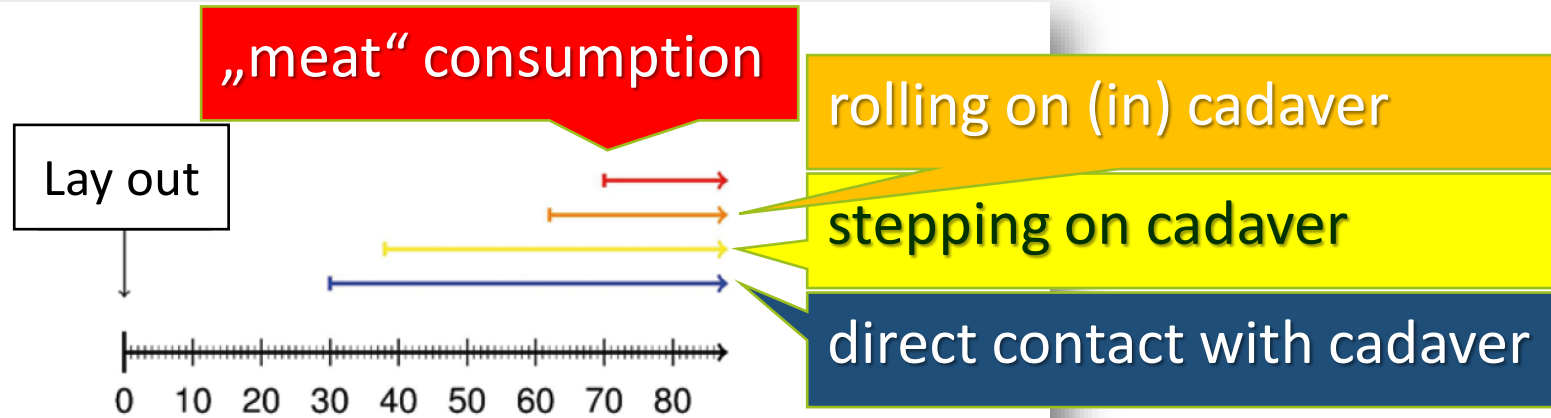
## 2) Role of WB cadaver in ASF spread

- „life“ of cadaver under various condition
- „life“ around cadaver (possible vectors of the virus)





# Behaviour of WB towards cadaver of certain age



Obr. 32: Vizualizace rozdílů v chování divočáků na časové ose ve dnech. Modrá šipka popisuje přímý kontakt s kadáverem, žlutá vstup na kadáver, oranžová „válení se“ na kadáveru a červená konzumaci svaloviny vyložených divočáků.

(certifikovaná metodika AMOR, VÚLHM)

- cannibalism in later stage of decomposition



- red fox – principal scavenger and vector



- WB sensitive to hunting pressure on baiting places
  - don't rest on hunting places regardless of catering
  - concentrate on places with low food abundance but low hunting (feed elsewhere)
- baiting and hunting effectivity on baiting places

„5. Ban supplementary feeding of wild boar. Attracting wild boar with food must be limited to research, population and disease control and strictly regulated.“

Final declaration, 13th International Symposium on Wild Boar and other Suids



13TH INTERNATIONAL SYMPOSIUM ON  
**WILD BOAR**  
& OTHER SUIDS  
SEVA | BARCELONA | 2022



# Work packages

---

## 3) Management/ASF measures and effects on WB behaviour and population dynamics

- baiting and hunting effectivity on baiting places
- effects of intensity and structure of hunting bags on population dynamics
- effects of human activities on WB behaviour, incl. Zlín
- survey of knowledge and opinion of hunters



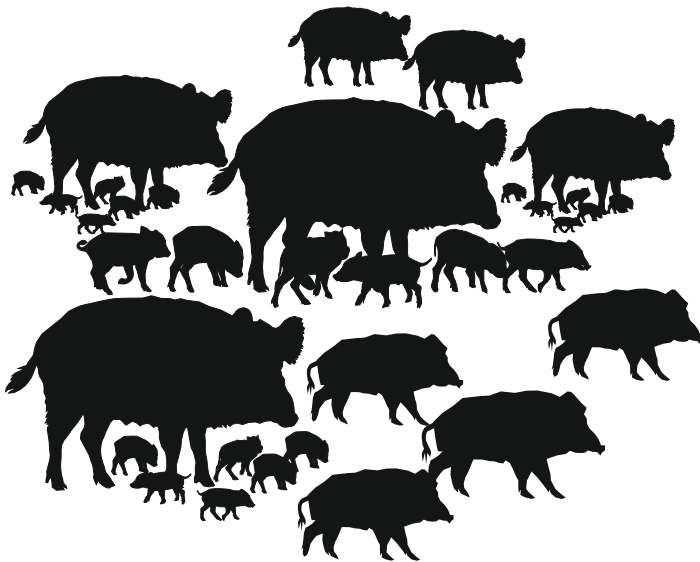


# Work packages

---

## 4) Wild boar biology

- reproductive biology and reproductive success
- application of behavioral ecology in WB management
- effective population reduction (global, local)



# CORRAL TRAPS: SMART AND EFFECTIVE REDUCTION/CONTROL OF WILD BOAR



Jitka Bartošová  
Luděk Bartoš



Catch  
me!

If you  
can...



foto Tomáš Rada

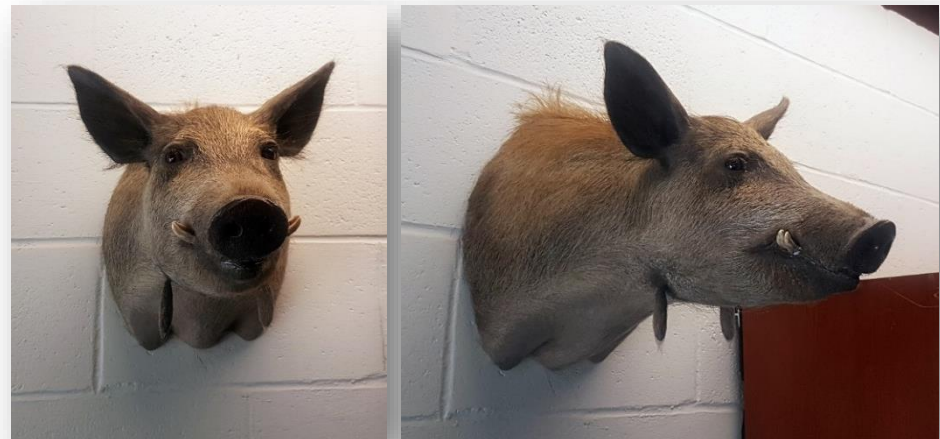


- Maria Theresa succeeded...



# U.S. inspiration

- feral pigs (hogs) of various origin
- must eliminate 70 - 75 % of the population to keep up with the hog annual reproductive capacity (up to 15 piglet/2 - 3 litter per year and female)
- out of sport hunting capacity → trapping systems
- **mobile corral traps** (managed on the federal level)



# Corral trap

---

- trapping the whole group (~30, up to several dozens)
  - prevention of increased movement of WB/hogs – especially important during ASF outbreak
  - low risk of „informer“ (no shoot-wounded individual, trapping the whole social group)
  - low risk of disruption of social structure that may accelerate population growth
- different types – grounded, suspended // solid, net
  - different activation of closing

# Corral traps

---



Grounded (terrestrial) corral trap Jager Pro Trap (photo archive of prof. Mike Mengak)



# Corral traps



Terrestrial corral trap  
(photo archive of prof. Mike Mengak)



# Corral traps



Trapping of the group to the net  
(photo archive of prof. Mike Mengak)



# Corral trap



- no drop-nets!
- „one way ticket“ for the animals
- cheap but fragile



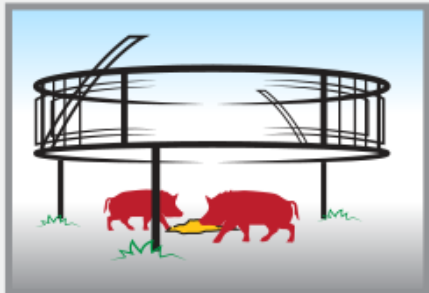


- old approach, 80 – 90 % reduction of population reported in 1993 already (Choquenot et al., *Wildlife Research*)
- + current technologies → precise and comfortable control of the trap (SMART)



Suspended trapping system (BoarBuster)

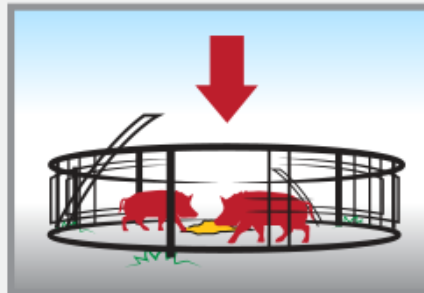




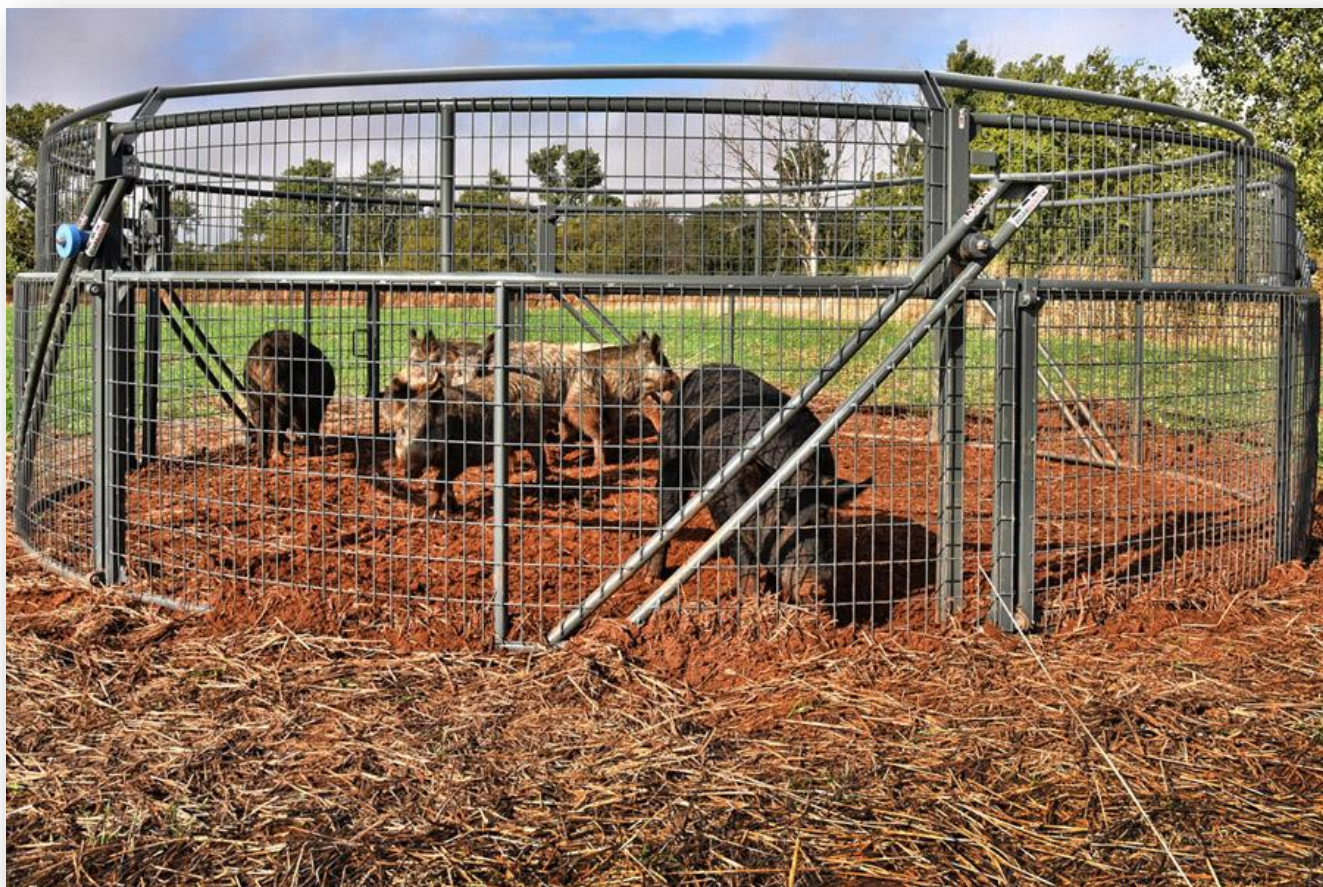
**1 SETUP & BAIT**



**2 ACTIVATE**  
(with any internet connected device)



**3 CAPTURE**







26 feral hogs captured  
April 8, 2014  
Love County, Oklahoma







# Demonstrational trapping system of Warnell School of Forestry and Natural Resources University of Georgia (dismantled)



photo Luděk Bartoš



# Trapping system UGA



Container (trap inside),  
relocation container (UGA)





# Corral traps

---

- scientific studies confirm high effectivity of group traps while lower time and financial costs
- capture rate ~ 90 % of population
- complete eradication – extra methods needed for cca 5 – 10 % individuals (shooting, „Judas’ pig“)

- McCann a Garcelon, *J Wildl Manage* 2008
- Fischer, ..., VerCauteren, *Scientific Reports* 2020
- Gaskamp a kol., *Animals* 2021

# Corral traps

---

- scientific studies confirm high effectivity of group traps, lower time and financial costs
- capture rate ~ 90 % of population
- complete eradication – extra methods needed for cca 5 – 10 % individuals (shooting, „Judas’ pig“)

- McCann a Garcelon, *J Wildl Manag* 2008
- Fischer, ..., VerCauteren, *Scientific Reports* 2020
- Gaskamp a kol., *Animals* 2021

Catch us!

**MISSING LEGISLATION AND  
METHODS OF FINALISATION  
OF WILD BOAR**





Thanks for  
attention!

doc. Ing. Jitka Bartošová, Ph.D.  
[bartosova.jitka@vuzv.cz](mailto:bartosova.jitka@vuzv.cz); tel. 267 009 598



foto Tomáš Rada

Certified methodology in pdf – free download:  
<https://www.vulhm.cz/aktivity/vydavatelska-cinnost/lesnicky-pruvodce>