

Table S1: The operational tool

1 - Characteristics of breeding and its management							
1. Housing and prophylaxis				2. Nutrition management			
Biosecurity measures	Indirect prophylaxis	Two cycles in the same housing facility	notes	Feed	Feed stocking	Double silo use	notes
		Regular disinfection			Pellet composition	Differentiated grinding of fibrous part	
		Rodent control program			Feeding program	Separation of medicated and non-medicated feed	
		Pest control program				Restricted	
		Presence of nets against birds				Ad libitum	
		Cleaning and removal of manure under cages			Presence of undesirable substances	Penicillins	
		Manure management				Ionophores	
		Carcass management (removal and disposal)				Mycotoxins	
	Movement of vehicles and people	Presence of vehicle disinfection system (e.g. arch)		Water	Source	Well bored into underground aquifer (known water chemical and physical characteristics)	
		Presence of a disinfection area				Aqueduct (known water hardness)	
		Filter zone for changing clothes			Distribution system	Purification systems for well water	
		Outside silos for unloading feed				Water tanks and watering lines sanitation (frequency, incrustation and mucilage removal check)	
		Entry register		3. Breeding sector			

	Introductio n of new breeders	The absence of pathology is certified		Managem ent of new breeders	Housing system management	Clean housing system	<i>notes</i>
	Semen purchase	The absence of pathology is certified				Cage type	
	Critical production moments	Sanitation				Type of ventilation, heating, watering systems	
		Weaning				Stocking density	
		Loading			Introduction of new animals	Quarantine cages	
		Before kindling				Prophylaxis	
	Physical hygiene methods with animals in the farm	Removal of manure			Feeding	Adequate daily feed intake	
		Pressure washer with warm water				Controlled feed intake	
		Pressure washer with detergents				Weight at first insemination	
	Physical hygiene methods without animals in farm	Blowers			Indirect prophylaxis	Before contacting other animals, future parents are vaccinated and housed in quarantine rooms	
		Pressure washer with warm water				Registered vaccine administration	
		Pressure washer with detergents				Autogenous vaccine administration	
		burners for cages and surfaces			Productive rhythm	Single band	
	Microclima te	Risk factors for disease onset	Quick temperature changes			Dual band	
			Warm and humid		Hygiene of equipment	Correct use of single-use material (e.g. needles.)	
		Control of microclimat	Carbon dioxide	Good inseminat ion practices	Semen purchase	Certified absence of pathology	

	e parameters (air speed, cooling, etc.)	Ammonia			Hormone management	Correct hormone dosage	
		Temperature				Heat induction hormones	
		Humidity				Ovulation induction hormones	
	Control systems	Sensors and control units		Kindling and nest managem ent	Hygiene	Setting up the nest with sterile materials	
			Cleanliness of the nest				
			Litter balancing		By parity order		
					Primiparous management		

2 - Diseases detectable on the farm

Diagnosis and selection of the most appropriate intervention											
1. Fattening sector: gastrointestinal pathologies				2. Fattening sector: respiratory and integumentary system pathologies				3. Breeding sector (reproducing does): respiratory and integumentary system pathologies			
Parameters considered	Mortality	notes	Intervention	Parameters considered	Mortality	notes	Intervention	Considered parameters	Parity order	notes	Intervention
	Morbidity				Morbidity				Reproductive cycle phase		
	Temperature				Visit (animal and environment checks)				Morbidity		
	Animals' age				Farm anamnesis				Visit (animal and environment checks)		
	Number of days to slaughter				Drugs used				Farm anamnesis		
	Decrease in food consumption				Number of days to slaughter				Drugs used		
Sampling	Sample type			Laboratory analysis	Anatomopathological examination			Laboratory tests	Bacteriological tests		
	Sample time (days after the problem onset)				Bacteriological tests				Strain characterization		
	Ongoing medication influence on bacteriological investigations				Respiratory and/or integumentary panel of tests				MIC		
	Sample size				MIC				Any additional test		
	Sampling points within the shed				Any additional test			Sampling	Sample type		

	Sample transport to the laboratory			Sampling	Sample type				Sample size		
Laboratory tests	Anatomopathological examination				Sample size				Sampling points within the shed		
	Bacteriological tests				Sampling points within the shed				Sample transport to the laboratory		
	Parasitological tests				Sample transport to the laboratory						
	MIC										
	Any additional test										