

Annex 3: Eligible items – Specification and Standard Cost

This annex details the required Specification and Standard Costs of eligible items

Cattle specific equipment

Item number	Standard cost	Item	Specification
SG1	10,200	Mobile cattle handling systems	Mobile system consisting of race, crush (manual or squeeze crush) and penning to provide a gathering pen and holding pen on an integrated (built in) road legal trailer. A minimum of ten gates/hurdles to be purchased as part of the mobile system. The crush must have an anti-backing facility at the rear of the crush operated from outside the race. This can either be a U shaped rotating rump bar operated from a wheel outside of the crush or a sliding gate operated from outside the crush. Hydraulically operated anti backing gates are also eligible. The crush must have a locking head yoke. The handling system must be of all metal construction. Wooden elements e.g. floors to the race or crush, gates or hurdles are not eligible under this item. All ferrous metalwork to be either galvanised or powder coated. Painted metalwork is not eligible.

Item number	Standard cost	Item	Specification
SG2	9,666	Fixed cattle handling systems	A corral system which provides a safe and effective holding area and race-way handling facility to attach to a cattle crush. The handling system does not include the crush and is not expected to be purchased as part of this item. The system should be designed and erected to suit the requirements of the individual site. To be eligible it must consist of: a minimum of two metal holding pens, one circular metal forcing pen between 2.4 and 5m radius (internal measurement) with sides covered in a smooth material to prevent cattle from seeing to the side, leading into a straight or a curved race between 3 and 5m in length with the sides of the race covered. A sliding closure gate which is fitted at either end of the race. The race must lead to a crush. The handling system will be of all metal construction. Wooden elements e.g. floors to the race or crush, gates or hurdles are not eligible under this item. All ferrous metalwork to be either galvanised or powder coated. Painted metalwork is not eligible. To be eligible, the system must be fixed to the ground. This should be a long term fixture such as concreting the supporting post into the ground or by bolting into the existing concrete floor.

Item number	Standard cost	Item	Specification
SG3	4,050	Cattle crush (automatic)	The crush must have an internal width of at least 720mm. The crush will have a fully automatic (self-closing) full length head yoke with auto reset facility. The sides of the crush must be able to be opened to give complete access to both sides of the animal. The crush must have an anti-backing facility at the rear of the crush operated from outside the race. This can either be a U shaped rotating rump bar operated from a wheel outside of the crush or a sliding gate again operated from outside the crush. All ferrous metal parts of the crush must be fully galvanized or powder coated. Painted crushes are not eligible. Crushes with wooden floors are not eligible.

Item number	Standard cost	Item	Specification
SG4	2,758	Cattle crush (manual)	The crush must have an internal width of at least 720mm. The crush must have a manually operated full length head yoke. The sides of the crush must be able to be opened to give complete access to both sides of the animal. The crush must have an anti-backing facility at the rear of the crush operated from outside the race. This can either be a U shaped rotating rump bar operated from a wheel outside of the crush or a sliding gate again operated from outside the crush. All ferrous metal parts of the crush must be fully galvanised or powder coated. Painted crushes are not eligible. Crushes with wooden floors are not eligible.

Item number	Standard cost	Item	Specification
SG5	10,360	Hydraulically operated Squeeze crush	Hydraulically operated squeeze crush with full length head yoke. The crush must have a sliding rear gate operated from outside of the crush and race to act as an anti-backing device. The sides of the crush must be able to open to give complete access to both sides of the animal. All ferrous metal parts of the crush must be fully galvanized or powder coated. Painted crushes are not eligible. Crushes with wooden floors are not eligible. Rotating/rollover foot trimming crushes are not eligible under this item. Pneumatically operated crushes are not eligible under this item. System must use a power driven hydraulic pump. Hand/manually pumped hydraulic systems are not eligible under this item.

Item number	Standard cost	Item	Specification
R2-SG62	4,794	Squeeze crush (Manually operated)	Manually operated squeeze crush with full length head yoke. The sides of the crush must be able to open to give complete access to both sides of the animal. The crush must have a sliding rear gate to act as an anti-backing device. The sliding gate must be operated from outside of the crush. All ferrous metal parts of the crush must be fully galvanized or powder coated. Painted crushes are not eligible. Crushes with wooden floors are not eligible.
SG6	542	Head scoop for cattle crush	Restricts the side to side movement of the animal's head providing increased safety for the animal and operator and helps prevent the animal from collapsing. All ferrous metal parts must be fully galvanized or powder coated. Painted metalwork is not eligible. Integrated head restraints supplied with a cattle crush as standard which cannot be purchased separately and retrofitted are not eligible under this item.

Item number	Standard cost	Item	Specification
SG9	6,166	Cattle auto ID shedding gate (auto drafting)	Gate linked to computer control/EID system to draft cattle into two or more groups automatically. Using either electronic tags, collars or ankle transponders to identify the animal. Must be able to operate automatically with digital weighing system. All ferrous metal parts must be fully galvanized or powder coated. Painted metalwork is not eligible.
SG10	659	Foot trimming add-on to crushes	Hoof trimming attachment consisting of: belly harness/support, front and rear leg winch with lifting strap and minimum of two hoof blocks. This item is intended to be purchased to allow adaptation of existing crush to be used for hoof trimming.

Item number	Standard cost	Item	Specification
SG11	4,400	Specialist foot trimming crush	The crush must be specially designed for foot trimming and not intended for other animal management purposes. With an internal width of at least 720mm, the crush will have a head yoke, rotating rump bar and with motorised winches. Must include belly harness/support lifting straps and a minimum of two hoof blocks. Rotating/Rollover crushes are not eligible. All ferrous metal parts of the crush will be fully galvanised or powder coated. Painted crushes are not eligible. Crushes with wooden floors are not eligible.
SG12	199	Calving detectors	Detector system linked to mobile device to alert when cow begins calving.
SG13	1,013	Cluster flush	System to back flush milking cluster to sanitise unit between cows. Cost is per cluster unit.
SG14	4,566	Automated footbaths for cattle	A footbath for cattle that will automatically fill, dose, flush and replenish
SG15	3,825	Heat detection system - base unit	Automated system for the heat detection in cows based on motion detection. Using either electronic ear tags, neck collars or ankle transponders to identify the animal See SG16.

Item number	Standard cost	Item	Specification
SG16	98	Heat detection system – ear tag collar or ankle band	Automated system for the heat detection in cows. Ear tag, neck collars or ankle bands to measure motion associated with oestrous behaviour. Cost is per neck collar/ankle band or ear tag. Note: for ear tags to be eligible they must have a life expectancy of at least five years, be reusable (transferable to another animal). Tags used for Cattle Tracing System (CTS) purposes are not eligible for funding. Bolus type transponders are not eligible under this scheme.
R2-SG63	1,095	Heat and service detector	Proximity based detection system using a collar detector worn by the bull and reusable electronic ear tags. System includes detection collar and a minimum of 50 reusable ear tags. The ear tag must have a life expectancy of at least five years and not be used for animal identification in connection with cattle tracing requirements of BCMS. Maximum two systems per application.
SG17	1,400	Real time milk analysis	Milk sensors that produce data on conductivity and milk constituents per cow in real time. Cost is per milking point. Devices which only measure milk volume and/or milking time are not eligible under this item.

Item number	Standard cost	Item	Specification
SG18	5,950	Hand-held automatic teat washing system	Hand-held automatic teat washing brush which can wash, disinfect, stimulate and dries all in one visit to the cow. Maximum of two per application.
SG19	13,871	Visual image analysis of cow body condition score	Camera based system which automatically assesses body condition score linked to EID.
SG20	306	Badger proof feed troughs	Cattle feed trough that includes rollers or other mechanisms, to reduce or eliminate the possibility of badgers making contact with feed. Cost is per trough.
SG21	110	Badger proof lick holders	Cattle mineral/supplement holder, which by design will eliminate the possibility of badgers making contact with the mineral/supplement. Cost is per holder.
SG22	1,286	Rotating cow brush	A purpose built swinging rotating cow brush with auto start stop.
R2-SG64	964	Swinging brushes for goats and calves	A purpose built swinging rotating brush with auto stop start design specifically for use by small animals including calves and goats.

Item number	Standard cost	Item	Specification
SG23	6,843	Auto cattle weighing equipment	Standalone equipment which automatically weighs cattle without human intervention, linked to EID. Purchased as a whole working unit, not parts. This comprises of a weigh platform (often with water trough), EID reader and weigh head.
R2-SG65	490	Calving gate	A calving gate that incorporates a gate within the frame to swing around to safely restrain a cow. To include an adjustable full length head yoke, a locking chain to stop backward movement, removable side rails or access panels within the swinging gate to allow protected access for medical treatment, assisted calving, suckling of calves or milking.
SG24	7,033	Calf milk pasteuriser and dispenser	Mobile milk pasteuriser and dispenser with minimum 150 litres capacity. With built in mixer, heater, temperature monitoring to aid pasteurising and remaining volume indicator. The system must be self-contained and fully mobile. With a rechargeable battery system providing power to aid mobility, maintain temperature during dispensing and aid milk dispensing.

Item number	Standard cost	Item	Specification
SG25	8,116	Auto calf feeder with washing facility	Programmable milk feeder for calves, capable of individually feeding and monitoring calf intake. Able to alert if calf is not drinking or drinking less than normal. Must automatically self-clean feeding tube and teat between each feeding. Capable of feeding 40 calves individually. Cost is for one programmable milk feeder and one feed station.
SG26	2,179	Additional feed station	Purchase of an additional feed station for programmable milk feeder for calves. Each feed station should be capable of feeding 40 calves individually. Maximum of 3 additional feed stations per application.
R2-SG66	1,466	EID panel reader for cattle	Static race reader, with antenna and bluetooth connection. Must be able to read HDX and FDX B tags. To be eligible under this item the reader must be permanently fixed to the race or cattle crush. Portable readers are not eligible under this item.

Sheep specific equipment

Item number	Standard cost	Item	Specification
SG27	7,487	Mobile sheep handling systems	Trailer mounted mobile sheep handling system capable of holding and handling a minimum of 250 sheep with the aim to allow farmers to handle sheep away from the main holding. The system must include a minimum of 20 hurdles to create a gathering pen, forcing pen and must include a minimum of two side pens. The system must include drafting and dosing race with the ability to fit a foot bath. The trailer must be integrated into the handling system and form part of the handling race. Trailers which are not integrated and could be used for other purposes are not eligible under this item. The integrated trailer must be road legal. The handling system must be of all metal construction. Wooden elements e.g. floors to the race, wooden gates or hurdles are not eligible under this item. All ferrous metalwork must be either galvanised or powder coated. Painted systems are not eligible.

Item number	Standard cost	Item	Specification
SG28	3,337	Fixed sheep handling systems	Fixed sheep handling system that should be designed and erected to suit the requirements of the individual site. The system must have a combined capacity in the race, forcing pen, and gathering pen of holding a minimum of 100 adult sheep. To be eligible the system must consist of: a gathering pen, forcing pen, drafting and dosing race, minimum of two side pens and the ability to fit plastic footbath in the race. The handling system must be of all metal construction. Wooden elements e.g. floors to the race, gates or hurdles are not eligible under this item. All ferrous metal work to be either galvanised or powder coated. Painted systems are not eligible. To be eligible the system must be fixed to the ground. This should be a long term fixture such as concreting the supporting post into the ground or by bolting into the existing concrete floor.

Item number	Standard cost	Item	Specification
SG29	4,832	Electronic weigh crate	Weigh crate with electronic weigh system. The weigh system will be a digital weighing device with the ability to record individual animal weights and track the live weight gains. If the reader relies on a mobile device to input access and record this information the mobile device must be purchased as part of this item. The system will be compatible for use with EID. Must have the ability to download data to computer or mobile device. A weigh crate must be purchased with this item. If you wish to use an existing crate or combine weighing with another item then you should not include this item in your application. Refer to SG7 and SG8 for weighing system components
SG30	3,273	Sheep handler	Clamp style sheep handler for efficiently dagging, dosing and sorting sheep. If you are considering applying for funding on this item please note it cannot also form part of SG27 'Mobile sheep handling systems'.

Item number	Standard cost	Item	Specification
R2-SG67	9,199	Automatic weighing and drafting crate for sheep	The system purchased must automatically read EID tags and automatically draft out animals based on current weight or any electronically saved data on the animal e.g. age, sex. The system must include: auto drafting crate, control system with fully automated entry and exit gates, weigh bars, panel reader and weigh head. Purchased as a whole working unit (single item), not parts. Refer to SG7 and SG8 for weighing system components.
R2-SG68	9,700	Sheep conveyor	Static twin belt conveyor designed for routine sheep work 3m minimum length.
R2-SG69	1,328	EID panel reader for sheep	Static/race reader, with antenna and bluetooth connection. Must be able to read HDX and FDX B tags. To be eligible under this item the reader must be permanently fixed to the sheep handling system. Portable readers are not eligible under this item.

Pig specific equipment

Item number	Standard cost	Item	Specification
SG31	2,100	Fixed handling system for pigs	Suitable for either indoor or outdoor production systems. Pig race consisting of sheeted hurdles and gates. This must be a system which provides a safe and effective race-way handling facility capable of being connected to a weighing facility; either an individual crate or a weighing platform. The system can be erected to suit the requirements of the individual site. The system must consist of the following minimum specification: 2m x 1m hurdles lined with a smooth sheeted material capable of cleaning and disinfection (Qty:10), 2m wide drafting gate in frame 50mm x 50mm, also sheeted, race joiner, coupling pins (Qty:20). All items should be constructed as a minimum from galvanised steel but preferably in stainless steel, which is lighter, significantly stronger and resistant to corrosive attack from acidic disinfectants. Wooden elements e.g. gates or hurdles are not eligible under this item. To be eligible the system must be fixed to the ground. This should be a long term fixture such as concreting the supporting post into the ground or by bolting into the existing concrete floor.

Item number	Standard cost	Item	Specification
SG32	2,900	Electronic pig weighing and sorting facility	To be used in conjunction with an integral Electronic Data Management System. Automatic electronic system for sorting pigs by weight using digital weighing. With the ability to record live weights for individual pigs and auto drafting to sort into specific weights or physical characteristics. Suitable for use in both indoor and outdoor production systems. The facility will have a computer or mobile device interface to an integral electronic data management system. Capable of weighing pigs from 7kg to 250kg. System consists of a weigh crate, weigh platform and two auto segregation gates.
SG33	387	Enclosed piglet creeps with heat pads	Made from glass-reinforced plastic (GRP) insulated panels, suitable for effective cleaning and disinfection. Pads must be thermostatic controlled with the temperature sensor either in the pad, or creep area. The power cable is protected from animal damage by a flexible stainless-steel tube. Each unit purchased must include heat pad and creep. Heat pads or creeps on their own are not eligible.

General livestock specific equipment

Item number	Standard cost	Item	Specification
SG7	1,700	Electronic Weigh System (all species)	Digital weighing device with the ability to record and display on screen individual animals' weights, track the live weight gains and access recorded information on an individual animal e.g. breeding and movements. If the electronic weighing system relies on a mobile device to input, access and record this information the mobile device must be purchased as part of this item. Must have the functionality to operate with EID readers and operate auto drafting systems. It must also have the ability to be connected to a computer or mobile device to download collected information. Weigh bars are not included in this item they are a separate item see SG8. Group and automatic average animal weighing systems not eligible under this item.

Item number	Standard cost	Item	Specification
SG8	1,150	Weigh bars and weigh platforms for weighing livestock	Electronic load bars or electronic weigh platform to operate with digital weigh heads/readers for use with cattle crushes, sheep or pig crates. Load bars must be HD type load bars. The system must be capable of weighing up to 2000kg. Non electronic weighing systems are not eligible. Digital weigh heads/readers are a separate item see SG7.
R2-SG70	1,433	Positive pressure tube ventilation systems	The system is aimed at improving natural ventilation pushing clean fresh air into the building, using an internal horizontal inflatable polythene (or similar type material) ventilation tube stretching the length of the building, with holes cut to direct the air where needed. The cost must include a wall mounted fan which draws fresh air into the building, a controller and an internal inflatable tube (eg polythene), all designed for agricultural use.
R2-SG71	255	Cameras for monitoring livestock	Internet Protocol (IP) camera for monitoring livestock. Outdoor rated IP66 with Pan Tilt and Zoom (PTZ), day and night vision. Infrared range of 50m minimum, 18x zoom minimum. 1080 pixels minimum. Must be compatible with online viewing app for smart phone or tablet.

Item number	Standard cost	Item	Specification
R2-SG72	7,397	Grassland sward lifters	Minimum three legs with adjustable depth control (at least to 300mm) via the legs or packing rollers. Machine must have cutting disc in front of and a packing roller behind each leg, shearbolt or mechanical reset on each leg.
R2-SG73	667	UV Water treatment system	For the treatment of water to be used in the feeding of livestock or irrigation of horticultural crops. To be eligible each unit will consist of a single bulb in-line UV filter, with auto shut off in case of power or bulb failure, to prevent untreated water from leaving the unit. Each unit must be capable of treating at least 30 litres per minute @30mJ/cm² or above (55 Watt power consumption). System must be Water Regulations Advisory Scheme (WRAS) approved. Maximum 10 units per application.
SG34	1,222	EID Hand held recorder device	Electronic Identification (EID) handheld device with radio frequency identification (RFID) technology for individual reading and recording of animals. The reader must have the ability to record information on breeding, births, weights, treatments and movements as a minimum. If the reader relies on a mobile device to input, access and record this information the mobile device must be purchased as part of this item. The reader must be capable of exporting data to a computer based software package for the active monitoring of livestock.

Item number	Standard cost	Item	Specification
SG35	550	EID Hand held device (stick reader)	EID hand held device (stick reader) with RFID technology for individual reading of animals. Must be capable of scanning tags and storing tag data, with the ability to connect wirelessly to mobile phones or other devices. Must be able to read HDX and FDX B tags.
SG36	850	Auto EID drench gun	A drenching gun that wirelessly communicates with a weigh head or stock reader to automatically adjust the dosage of drench or pour on, depending on the animal's weight. Must include wireless technology to allow the downloading of accurate medicine reports to a computer or mobile device.
R2-SG74	850	Auto vaccination gun for administration of vaccines and medicines to livestock	A vaccination or dosing gun that wirelessly communicates with a weigh head or stock reader, automatically adjusting the dosage of vaccine or medicine required based on the animals weight records. Must include wireless technology to allow downloading of accurate vaccination reports to computer or mobile device. Maximum two per application.

Item number	Standard cost	Item	Specification
SG37	550	Pasture plate meter (hand-held)	A hand-held device to assess grass cover by measuring total height and the number of measurements taken. The device must have the capability of storing measurements taken from separate paddocks and for the data to be downloaded to a computer or mobile device. Plate meters that are not able to store data electronically for later download are not eligible
SG38	2,650	Pasture plate meter (trailed)	A trailed device to assess grass cover by measuring total height and the number of measurements taken. The device must have the capability of storing measurements taken from separate paddocks and for the data to be downloaded to a computer or mobile device.
SG39	240	Solar powered electric fencer energiser	Solar powered electric fencing energiser with integrated solar panel and battery. Energiser providing at least 0.15 joules output. Purchased as a whole working unit (single item), not parts.
SG55	12,000	Robotic silage pusher	Robotic system with intelligent software and programmable for the intended feed passage. The equipment must have the capability to detect the distance from the feed barrier along with the amount of feed in the passage.

Item number	Standard cost	Item	Specification
R2-SG75	13,500	Robotic slurry pusher/collector	Robotic system with intelligent software and sensors to allow the robot to navigate independently throughout the passageways. It must have built in sensors to avoid contact with the livestock. Cost includes robot and charging station.

Precision farming inc. arable and horticulture specific equipment

Item number	Standard cost	Item	Specification
R2-SG76	1,303	GPS light bar	GPS guidance system using light bar to aid guidance. Linked to smart phone or tablet to create, recognise and load field boundary information. Provide field boundary measurements. It must have a minimum capability of straight and curved guidance modes. With minimum pass to pass accuracy of 20cm.
R2-SG77	1,855	GPS assisted steer	Assisted steering system linked to GPS to enable auto steering to be used on older tractors. For the system to be eligible it must include electric, hands-free, assisted steering system, with installation onto steering wheel or replacement of steering wheel with assisted steering device. Applications for software or activation codes only are not eligible.

Item number	Standard cost	Item	Specification
SG41	4,730	Yield monitoring	An electronic device to connect to a combine or forage harvester to monitor crop yield during harvest. It will provide information on harvesting rate, with total and partial area (field) yield of crop. Must include purchase of yield sensor for combine or forage harvester, in-cab display and software for downloading to computer. Applications involving only the purchase of software or activation codes for existing sensors and displays are not eligible. If you are not intending to purchase an in-cab display but use an existing display you should not include this item in your application. You cannot use a display included in SG42 for this item. You must purchase yield sensors and in-cab display.

Item number	Standard cost	Item	Specification
SG42	4,625	Variable rate controller for sprayers and fertiliser spreaders	An electronic device to connect to an existing sprayer or fertiliser spreader for the purposes of changing the rate of application automatically without operator input. The regulation system will work from either a pressure or a flow sensor and provide sectional control. The system must be able to record application rates applied and download to computer. The system must include variable rate controller, in-cab display and software. Applications involving only the purchase of software or activation codes for existing control systems are not eligible. If you are not intending to purchase an in cab display but use an existing display you should not include this item in your application. You cannot use a display included in SG41 for this item. You must purchase a variable rate controller and in-cab display.
SG43	4,506	Flow rate monitoring of slurry	An electronic device to measure and record application of slurry. The system purchased must include slurry flow rate meter and in-cab display/controller. The system purchased must be able to be linked to GPS to provide an accurate electronic record of slurry application by volume to specific field areas.

Item number	Standard cost	Item	Specification
SG44	22,500	Measuring nitrogen levels in crops using light reflectance	Tractor mounted sensor to determine the nitrogen status of the crop using light reflectance to enable real time variable rate Nitrogen fertiliser application. The system must include sensor and linkage to the variable control on the fertiliser spreader to enable automatic control of the application rate of nitrogen fertilizer.
SG54	24,000	Direct drill 3m	Direct drill for precision drilling of arable and cover crops, using either tines or discs to produce the seeding slot. To be eligible the drill must have a minimum drilling width of 2.9m, must have no cultivation or seed bed preparation equipment in front of the seeding slot mechanism and the seed must be placed in the seeding slot. The drill must be able to drill through a fully established growing cover crop of at least 15cm in height. The following are not eligible; Cultivators with over-seeders or broadcasters, minimum till drills, strip till drills, grassland over-seeders and grassland broadcasters.
R2-SG78	4,880	Cover crop roller 3m	Front tractor mounted roller system to terminate and or bruise cover crops ahead of direct drill. Minimum of 3m width.
R2-SG79	10,850	Cover crop roller 6m	Front tractor mounted roller system to terminate and or bruise cover crops ahead of direct drill. Minimum of 6m width.

Item number	Standard cost	Item	Specification
R2-SG81	1,557	Chlorophyll meter	Hand held device to instantly measure and log chlorophyll content of individual plant leaves to assist in detecting yield-limiting deficiencies or costly over fertilising.
R2-SG82	6,121	Fruit ripeness spectrometers	Hand held device for use in orchards to determine produce quality and harvest timing. Uses Near Infra-Red (NIR) to determine and measure Dry Matter (DM), total soluble solids, titratable acidity, and colour to determine ripeness.
R2-SG83	11,940	Mobile vertical frost fans for vineyards and horticulture	Selective Inverted Sink (SIS) fans for use in vineyards and on stone and soft fruit farms to prevent frost damage. The vertical axis fans must be mobile. Horizontal, tower or permanently sited fans are not eligible.

Resource management specific equipment

Item number	Standard cost	Item	Specification
SG45	21,500	Trailing shoe slurry system including macerators	Trailing shoe slurry applicator, minimum 6m working width. To fit to slurry tanker or attach to flexible pipe/umbilical system. Includes macerator, stone traps and pipework to connect to tanker or umbilical system.
SG46	10,000	Dribble bar	Dribble bar applicator, minimum 6m working width. To fit to slurry tanker or attached to flexible pipe/ umbilical system.
SG47	22,169	Shallow injection systems	Injection system to incorporate slurry under the soil surface. To fit to slurry tanker or attach to flexible pipe/umbilical system. Minimum working width 3m. Includes macerator, stone traps and pipework to connect to tanker or umbilical system.
SG48	3,418	Hose reeler umbilical	Umbilical hose reeler for slurry application, random or compartmentalised trailed or mounted. Must include a minimum of 400m of hose.
SG49	11,162	Trailed compartmented reeler	Trailed compartmented reeler for slurry application. Must include a minimum hose length of 1600m.

Item number	Standard cost	Item	Specification
SG50	6,950	Heat recovery unit to pre heat water for existing hot water system	System to utilise the heat energy released by the milk refrigeration system used for cooling milk before entering the bulk tank. Energy recovered used to preheat water for existing hot water system. Cost includes connection to existing refrigerant system, connection to water supply, heat recovery tank with minimum 300 litre water capacity and connection to existing hot water system.
R2-SG84	2,450	Plate heat exchanger (PHE) for cooling milk (plate cooler)	Gasket plate heat exchangers to pre cool milk before entering the bulk tank using cold water. Minimum continuous flow rate of milk 5,000 litres per hour. Other types of heat exchangers are not eligible, e.g. tube heat exchangers.
SG51	4,585	Variable speed drive on vacuum pump for use in dairies	Funding is towards the purchase of a variable speed drive for use with vacuum pumps to allow pumps to only perform work when required, thereby saving energy over continuous running systems.

Item number	Standard cost	Item	Specification
SG52	3,393	Improving efficiency of existing plate heat exchanger (PHE), for cooling milk (plate cooler) through maximising water usage	Control equipment to regulate cold water flow to match the flow of warm milk through existing plate cooler. To reduce water usage and maximise cooling efficiency of system, saving both electricity and water. The system installed under this item will include: flow sensor, automatic control system, solenoid valve, and storage tank (min 300 litres capacity) of warmed water for use elsewhere on the farm. This item does not include the purchase of a plate cooler, you should apply under SG84 for funding towards a plate cooler
SG53	4,996	Hydraulic ram pumps (water)	Pump working by hydraulic pressure to raise clean water. Must include: the pump plus sediment chamber, pump chamber, drive pipe, distribution pipe, 5,000 ltr (minimum) header tank and return pipe. System assumes 20 ltr/min flow, 3m head with 10 - 20m lift, 300m delivery pipe and two spurs.

Other general specific equipment

Item number	Standard cost	Item	Specification
SG57	6,075	Controls for continuous grain dryer	Continuous dryer control system designed to continuously monitor the running of bulk grain. Dryer controls can be accessed by mobile phone.
SG58	17,050	Grain stirrers	Grain stirrers installed within a flat store which move across the grain on a gantry.
SG59	2,687	Digital weather station	A system/station that has the minimum functionality to record barometric pressure, temperature, humidity, rainfall, wind speed and direction, solar radiation, UV levels, soil moisture and soil temperature. The system must be able to link wirelessly to a computer. The cost includes the station, mounting facilities and sensors for above functionality. Excludes installation costs, service costs, annual licence fee for software and calibration.
SG60	220	Wide area network equipment to connect devices on farm	Wireless network repeaters or wireless bridges to extend an existing wireless network to enable devices to connect for agricultural use. Must operate in the 5.1-5.8GHz range. Must be IP 64 rated (water/dust).
SG61	610	Fibre optic networking equipment	Fibre optic networking cable (50 m lengths) plus media convertors to enable devices to connect for agricultural use.

Item number	Standard cost	Item	Specification
R2-SG85	1,234	Thermal image camera	Handheld colour thermal camera or tablet with an IR detector generating images of at least 18,000 pixels to provide high degree of resolution. The device must display temperature scale on screen with still and video recording facilities. Device must include or come with viewing screen. Images must be downloadable to computer or mobile device for storage and further analysis.
R2-SG86	279	Portable carbon dioxide analyser	Portable gas analyser for use in checking and recording levels of carbon dioxide in crop stores and livestock buildings. Must include visual and audio alarms accuracy of plus or minus 40ppm or less. Must be able to store data for later download using wifi, or USB connection to computer or tablet.
R2-SG87	204	Portable ammonia analyser	Portable gas analyser for use in checking and recording levels of ammonia in livestock buildings. Must include visual and audio alarms. Must be able to store data for later download via wifi, or USB connection to computer or tablet.

Annex 4: Eligible items by sector

This annex details the eligible items by agricultural sector

item Number	Item	Dairy	Beef	Sheep	Pig	Goat	Deer	Buffalo	Poultry	Arable	Horticulture
SG1	Mobile cattle handling systems	Yes	Yes	No	No	No	No	Yes	No	No	No
SG2	FiYesed cattle handling systems	Yes	Yes	No	No	No	No	Yes	No	No	No
SG3	Cattle crush (automatic)	Yes	Yes	No	No	No	No	Yes	No	No	No
SG4	Cattle crush (manual)	Yes	Yes	No	No	No	No	Yes	No	No	No
SG5	Hydraulically operated Squeeze crush	Yes	Yes	No	No	No	No	Yes	No	No	No
SG6	Head scoop for cattle crush	Yes	Yes	No	No	No	No	Yes	No	No	No
SG7	Electronic weigh system (all species)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
SG8	Weigh bars and weigh platforms for weighing livestock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
SG9	Cattle auto ID shedding gate (auto drafting)	Yes	Yes	No	No	No	Yes	Yes	No	No	No
SG10	Foot trimming add-on to crushes	Yes	Yes	No	No	No	No	Yes	No	No	No
SG11	Specialist foot trimming crush	Yes	Yes	No	No	No	No	Yes	No	No	No
SG12	Calving detectors	Yes	Yes	No	No	No	No	No	No	No	No

item Number	Item	Dairy	Beef	Sheep	Pig	Goat	Deer	Buffalo	Poultry	Arable	Horticulture
SG13	Cluster flush	Yes	No	No	No	No	No	Yes	No	No	No
SG14	Automated footbaths for cattle	Yes	Yes	No	No	No	No	Yes	No	No	No
SG15	Heat detection system - base unit	Yes	Yes	No	No	No	No	No	No	No	No
SG16	Heat detection system – ear tag collar or ankle band	Yes	Yes	No	No	No	No	No	No	No	No
SG17	Real time milk analysis	Yes	No	Yes	No	Yes	No	Yes	No	No	No
SG18	Hand-held automatic teat washing system	Yes	No	No	No	No	No	No	No	No	No
SG19	Visual image analysis of cow body condition score	Yes	Yes	No	No	No	No	No	No	No	No
SG20	Badger proof feed troughs	Yes	Yes	No	No	No	No	Yes	No	No	No
SG21	Badger proof lick holders	Yes	Yes	No	No	No	No	Yes	No	No	No
SG22	Rotating cow brush	Yes	Yes	No	No	No	No	Yes	No	No	No
SG23	Auto cattle weighing equipment	Yes	Yes	No	No	No	No	Yes	No	No	No
G24	Mobile calf milk pasteuriser and dispenser	Yes	No	No	No	No	No	No	No	No	No
SG25	Auto calf feeder with washing facility	Yes	Yes	No	No	No	No	Yes	No	No	No
SG26	Additional feed station	Yes	Yes	No	No	No	No	Yes	No	No	No
SG27	Mobile sheep handling systems	No	No	Yes	No	Yes	No	No	No	No	No

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SG28	FiYesed sheep handling systems	No	No	Yes	No	Yes	No	No	No	No	No
SG29	Electronic weigh crate	No	No	Yes	Yes	Yes	No	No	No	No	No
SG30	Sheep handler	No	No	Yes	No	Yes	No	No	No	No	No
SG31	FiYesed handling system for pigs	No	No	No	Yes	No	No	No	No	No	No
SG32	Electronic pig weighing and sorting facility	No	No	No	Yes	No	No	No	No	No	No
SG33	Enclosed piglet creeps with heat pads	No	No	No	Yes	No	No	No	No	No	No
SG34	EID hand held recorder device	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
SG35	EID hand held device (stick reader)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
SG36	Auto EID drench gun	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No
SG37	Pasture plate meter (hand-held)	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No
SG38	Pasture plate meter (trailed)	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No
SG39	Solar powered electric fencer energiser	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
SG41	Yield monitoring	No	No	No	No	No	No	No	No	Yes	Yes
SG42	Variable rate controller for sprayers and fertiliser spreaders	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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SG43	Flow rate monitoring of slurry	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	No
SG44	Measuring nitrogen levels in crops using light reflectance	No	No	No	No	No	No	No	No	Yes	Yes
SG45	Trailing shoe slurry system including macerators	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
SG46	Dribble bar	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
SG47	Shallow injection systems	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
SG48	Umbilical hose reeler for slurry application	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
SG49	Trailed compartmented reeler for slurry application	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
SG50	Heat recovery unit to pre heat water for existing hot water system	Yes	No	Yes	No	Yes	No	No	No	No	No
SG51	Variable speed drive on vacuum pump for use in dairies	Yes	No	Yes	No	Yes	No	No	No	No	No
SG52	Improving efficiency of plate heat exchanger (PHE), for cooling milk (plate cooler) through maximizing water usage	Yes	No	Yes	No	Yes	No	No	No	No	No

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SG53	Hydraulic ram pumps (water)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SG54	Direct drill 3m	No	No	No	No	No	No	No	No	Yes	Yes
SG55	Robotic silage pusher	Yes	Yes	Yes	No	No	No	No	No	No	No
SG57	Controls for continuous grain dryer	No	No	No	No	No	No	No	No	Yes	No
SG58	Grain stirrers	No	No	No	No	No	No	No	No	Yes	No
SG59	Digital weather station	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SG60	Wide area network equipment to connect devices on farm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SG61	Fibre optic networking equipment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2-SG62	Squeeze crush (manually operated)	Yes	Yes	No	No	No	No	Yes	No	No	No
R2-SG63	Heat and service detector	Yes	Yes	No	No	No	No	Yes	No	No	No
R2-SG64	Swinging brushes for goats and calves	No	Yes	No	No	Yes	No	Yes	No	No	No
R2-SG65	Calving gate	Yes	Yes	No	No	No	No	Yes	No	No	No
R2-SG66	EID panel reader for cattle	Yes	Yes	No	No	No	Yes	Yes	No	No	No
R2-SG67	Automatic weighing and drafting crate for sheep	No	No	Yes	No	Yes	No	No	No	No	No

item Number	Item	Dairy	Beef	Sheep	Pig	Goat	Deer	Buffalo	Poultry	Arable	Horticulture
R2-SG68	Sheep conveyor	No	No	Yes	No	No	No	No	No	No	No
R2-SG69	EID panel reader for sheep	No	No	Yes	No	Yes	No	No	No	No	No
R2-SG70	Positive pressure tube ventilation systems	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
R2-SG71	Cameras for monitoring livestock	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No
R2-SG72	Grassland sward lifters	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No
R2-SG73	UV Water treatment system	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
R2-SG74	Auto vaccination gun for administration of vaccines and medicines to livestock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
R2-SG75	Robotic slurry pusher/collector	Yes	Yes	No	Yes	No	No	Yes	No	No	No
R2-SG76	GPS light bar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2-SG77	GPS auto steer	No	No	No	No	No	No	No	No	Yes	Yes
R2-SG78	Cover crop roller 3m	No	No	No	No	No	No	No	No	Yes	No
R2-SG79	Cover crop roller 6m	No	No	No	No	No	No	No	No	Yes	No

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R2-SG81	Chlorophyll meter	No	No	No	No	No	No	No	No	Yes	Yes
R2-SG82	Fruit ripeness spectrometers	No	No	No	No	No	No	No	No	No	Yes
R2-SG83	Mobile vertical frost Fans for vineyards and horticulture	No	No	No	No	No	No	No	No	No	Yes
R2-SG84	Plate heat exchanger (PHE) for cooling milk (plate cooler)	Yes	No	Yes	No	Yes	No	Yes	No	No	No
R2-SG85	Thermal image camera	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2-SG86	Portable carbon dioxide analyser	No	No	No	Yes	No	No	No	Yes	Yes	Yes
R2-SG87	Portable ammonia analyser	No	No	No	Yes	No	No	No	Yes	No	No