Australian Government
Department of Agriculture, Water and the Environment

Smart Farming Partnerships Program (round 2): successful applicants

Recipient legal entity name	Consortium members	State	Location	Project/activity title	Purpose of the grant	Total funding ($) (GST excl.)
Scolexia Pty. Ltd.	Scolexia Pty Ltd University of Southern Queensland Department of Jobs, Precincts and Regions - Agriculture Victoria Research branch University of Western Australia Department of Agriculture and Fisheries, Queensland The University	VIC	Moonee Ponds	Pilot to Paddock (P2P) - Innovative on-farm water, energy and nutrient technologies and practices for Australian Dairy, Egg, Pork and Cropping industries	This project develops, demonstrates and promotes innovative water, energy and nutrient technologies, practices and products derived from waste to increase the productivity and profitability of the Australian dairy, pork, chicken and cropping industries whilst increasing resilience to climate change and lowering environmental impacts from reduced farm inputs, nutrient losses and GHG emissions. Selected farms in Victoria, South Australia, Western Australia and Queensland will demonstrate improved water quality and availability, optimisation of biogas for energy production and enhanced fertiliser formulations and soil improvers from manure products. The project builds on the established partnerships of the successful National Agricultural Manure Management Program and will utilise rare or new research techniques including robotic growth accelerator trials, photographic 3D scanning of nutrient supply and growth promoting rhizobacteria and novel solid separation technology.	2,954,400
The Dja Dja Wurrung Clans Aboriginal Corporation	Dja Dja Wurrung Clans Aboriginal Corporation La Trobe University	VIC	Bendigo	Djandak Dja Kunditja (Country Healing its Home)	To successfully grow Kangaroo Grass (*Themeda triandra*) on farm in an agricultural cereals context. Kangaroo Grass is a native perennial grass with attributes that have demonstrated resilience to climate change, which is reinforced by Dja Dja Wurrung knowledge including the	1,819,587

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	Department of Environment Land Water and Planning Federation University Victorian Agriculture Research North Central Catchment Management Authority				effects of variable temperatures and rainfall. Kangaroo Grass varies in genetics, yield and ploidy within and across populations. Using science based evidence to select best yielding varieties for application to varying climates (temperature variability, soil moisture and rainfall variability), the project will aim to increase the grain yield and the overall resilience of cropping systems. The grant will research the applicability of Kangaroo Grass seed to modern sowing technologies (e.g. air seeding) and crop layouts (plant separation in width and rows), soils suitability and improvements and requirements for modern technologies with seed stripping (harvesting), cleaning and storage.	
La Trobe University	La Trobe University Vanguard Business Services Pty Ltd Odonata.org Ltd Tiverton Agriculture Impact Fund Sensand Technologies Pty Ltd Department of Environment Land Water & Planning (Arthur Rylah Institute) Bush Heritage Australia Birchip Cropping Group Trust for Nature Landcare Australia Limited	VIC	Bundoora	Farm-scale Natural Capital Accounting - Increasing environmental sustainability, climate resilience and profitability by creating a virtuous cycle from paddock to market	This project will address a critical gap in the promotion of sustainable farm practices. For 50 farms across NSW, VIC and TAS, the project will integrate farm-scale financial, production and environmental performance into farm-scale Natural Capital Accounts (NCA). Producers will gain verifiable information about the value of natural assets (e.g. soil carbon, vegetation, biodiversity) which will stimulate and reward sustainable practices. Importantly, the accounts will be underpinned by validated ecological models. A key output will be a user-friendly platform, enabling other properties to generate and interpret their own farm-scale NCA, coherent with United Nations environmental-economic accounting. The data will be scalable, enabling information to be aggregated from individual properties to national accounts, empowering producers to leverage environmental performance for market access, and providing investors with information on the sustainability and profitability of farming entities.	2,495,888

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Commonwealth Scientific and Industrial Research Organisation	Commonwealth Scientific and Industrial Research Organisation Private Forests Tasmania Greening Australia Limited University of Tasmania	ACT	Acton	Perennial prosperity	This Grant will look at disrupting the paradigm impeding the adoption of agroforestry systems. Despite well-known benefits of agroforestry, adoption on-farm has remained low. Integrating trees into farming practice builds on-farm natural capital, increases the flow of ecosystem services and increases enterprise productivity and profitability. This project will apply natural capital accounting to integrate the flow of services associated with agroforestry assets into enterprise accounts, by integrating the ecological and financial balance sheets for agroforestry systems that aim for both commercial and environmental returns. The project will establish best-practice demonstration plantings in partnership with innovative enterprises and their advisors to build knowledge, awareness and capability around enterprise-scale agroforestry and natural capital accounting. This will build confidence within the agricultural sector around the integration of trees into agricultural landscapes for both ecological and financial returns.	3,968,902
Horticulture Innovation Australia Limited	Horticulture Innovation Australia Limited Applied Horticultural Research Pty Ltd Australian Banana Growers Council Ltd AUSVEG Ltd Nursery and Garden Industry Australia Ltd Nursery and Garden Industry Australia Ltd Hitachi Consulting Australia Ltd Freshcare Ltd	NSW	Sydney	Digital remote monitoring to improve horticultures environmental performance	The $13.2 billion Australian horticulture industry produces food and ornamental plants for the domestic and export markets in fragile ecosystems linked to the Great Barrier Reef, the Murray-Darling and coastal lake systems. Horticulture has developed industry Best Management Practice (BMP) codes to protect these environments, however adoption is low due to the complexity of compliance and limited value of the data. Technology developments now provide cost effective tools to continuously monitor farm environmental indicators to quantify baseline performance, monitor and measure improvements, inform business decision making, drive good environmental stewardship and help to build strong markets. The project will	2,929,000

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	Growcom Australia				establish four pilot demonstration smart farms in the Great Barrier Reef catchment using a digital dashboard to integrate sensor and other data to remotely monitor environmental performance and drive adoption of BMP codes nationally.	
Farmlink Research Limited	Farmlink Research Limited Department of Industry Holbrook Landcare Group Australian National University Central West Farming Systems Inc.	NSW	Temora	Future proofing the soils of southern and central NSW from acidification and soil organic carbon decline	Increasing soil acidity and declining Soil Organic Carbon affects over half of the agricultural soils in southern and central NSW, and threatens the viability and resilience of farming systems. Current acid soil management practices are based on outdated models that are failing to prevent the widespread development of subsurface acidity in contemporary cropping and pasture systems. This urgently needed project brings together an expert team from three farming system groups (grower engagement/extension), the NSW DPI (agronomy/soil science) and ANU (computer modelling/visualisation) to develop a new, accurate acidification model using innovative machine learning methods. Model outputs will be used to develop a free online decision support system and API protocols for integration with existing digital platforms. These tools will provide updated liming recommendations and interactive scenario forecasting which will ultimately result in more sustainable soil management and productive farming enterprises.	2,509,570
Meat & Livestock Australia Limited	Meat & Livestock Australia Limited University of Queensland World Wide Fund for Nature Australia	NSW	North Sydney	Verifiable sustainability beef credentials and practice change modules	The project will propel the Australian Beef industry towards sustainable land management through development and roll-out of an innovative national online sustainability framework, offering verifiable Sustainability Credentials. Five Sustainability Credentials and supporting Modules will enable broad-acre graziers to assess their on-farm performance and practices against sustainability standards. The Credentials will utilise remote sensing information of farms so that participating graziers can verify their practices verified against	3,731,605

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					the standards. The five Sustainability Credentials are: 1. Vegetation retention and enhancement 2. Grass Cover and Soil Conservation, 3. Biodiversity Stewardship, 4. Carbon Accounting, 5. Drought Resilience. Farmers will be able to opt in to have their practices verified against the five sustainability standards and demonstrate their performance in order to both improve practices and access emerging international markets requiring evidence of sustainable production.	
Commonwealth Scientific and Industrial Research Organisation	Commonwealth Scientific and Industrial Research Organisation North Australian Indigenous Land and Sea Management Alliance Ltd Mimal Land Management Aboriginal Corporation Aak Puul Ngantam Ltd South Cape York Catchments Inc. James Cook University Charles Darwin University Kinéis	ACT	Acton	Landscape scale herd management of unmanaged cattle and buffalo in northern Australian indigenous estate to support economic development, landscape restoration and protection of cultural and environmental assets	This project will address the significant challenge of creating enterprise from largely unmanaged stock in vast northern Indigenous estates whilst protecting the outstanding natural and cultural values of the region. The project will pair innovative data-driven planning tools with training in best-practice ethical mustering and handling methods to help landowners at all stages of production. Planning will be supported through herd-scale satellite tracking (greater than 1000 animals) in partnership with industry leader, Kinéis. Combining high-resolution satellite imagery, herd tracking and transport data we will develop an interactive planning tool that monitors and optimises operations in real time. Our project will provide an unprecedented spatial data set to support data driven planning at multiple scales. The project will mobilise this data for planning with 3D interactive models that allow land owners to explore management scenarios on a 3D scale model of their property and at regional scales.	4,000,000
Eyre Peninsula Agricultural Research Foundation Incorporated	Eyre Peninsula Agricultural Research Foundation Incorporated	SA	Minnipa	Creating a new paradigm for resilient and profitable farming on the Eyre Peninsula using data to improve on-	EPARF and LEADA, working with EP farmers, their advisers and researchers, aim to increase the productive potential of the region's soil and water resources. This will assist in developing more resilient and profitable farming on the Eyre Peninsula in a changing and more variable climate. The project will use information being	3,288,800

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	Lower Eyre Agricultural Development Association Inc. Commonwealth Scientific and Industrial Research Organisation Department of Primary Industries and Regions Eyre Peninsula Natural Resources Management Board			farm decision-making	generated through the regional soil moisture probe network, satellite imagery and yield potential models (e.g. APSIM, Yield Prophet), plus how researchers and farm advisers can best work with farmers to make informed decisions. The project will address the gap between the data generation and decision making, underpinned by innovations in agronomy and livestock management. This proposal will focus on the productive potential of the region's soil and water resources whilst ensuring long term protection and enhancement of the region's natural resource base.	
Invasive Animals Ltd	Invasive Animals Ltd Commonwealth Scientific and Industrial Research Organisation State of NSW/Department of Industry/Department of Primary Industries State of Queensland/Department of Agriculture and Fisheries State of South Australia/Primary Industry and Regions SA State of Victoria/Department of Jobs, Precincts and Regions CSIRO (Atlas of Living Australia)	ACT	Bruce	Computer Vision Weeds ID App and WeedScan Community Management and Communication System	This project will produce Australia's first real-time, easy to use automated identification of national, State and regional priority weeds (new, emerging and established), as well as an on-line system to better enable cooperative community-led weed management. The project will: 1. develop and test with community groups a computer vision weed identification app based on artificial intelligence and machine learning arising from recent successful proof of concept work; and 2. develop and promote a tailored, fit for purpose community weed management, alert, reporting and communication system, WeedScan, adapted from the award winning FeralScan platform to include new functions. Outputs will seamlessly link into State/Territory weed information and App platforms and the pending national Weeds Australia platform. Adoption will be high - based on market research, experience with FeralScan (greater than 20,000 users), high level of user engagement in trials, and promotion and application through State collaboration members.	1,974,870

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South West Catchments Council (Inc.)	South West Catchments Council (Inc.) Curtin University Avocados Australia Limited Department of Primary Industries and Regional Development	WA	Bunbury	Transforming pollinator management using eDNA to improve productivity in avocado orchards in the SW of Western Australia	Pollination of avocados in Western Australia is currently considered to be sub-optimal due to a lack of suitable pollinators. This project will identify key pollinators in avocado orchards in the South West Catchments region of WA, and develop and disseminate information about management practices to enhance numbers of pollinators in the orchards. The project will use innovative environmental DNA (eDNA) biodiversity assessment techniques to identify insect pollinators, the extent to which they pollinate avocado flowers and whether they pollinate effectively across the whole orchard. Adaptive management practices will include enhancement of available habitat and other resources required by pollinators and improved use of pesticides to reduce negative impacts on pollinator numbers, resulting in improved fruit set and productivity in the industry.	510,788