GOVERNMENT OF MALTA

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Agriculture Research & Innovation Hub

Co-funded by the European Union

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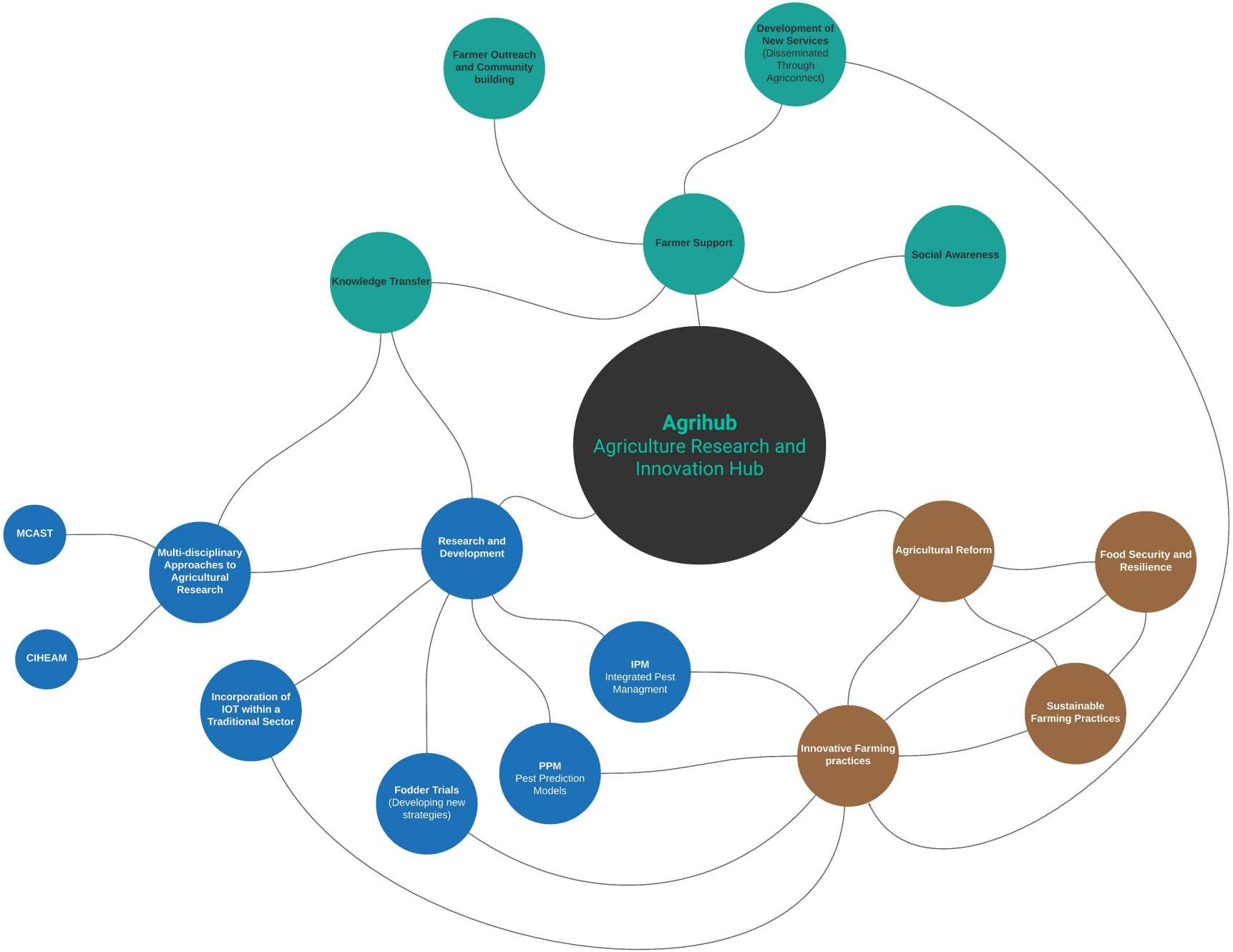
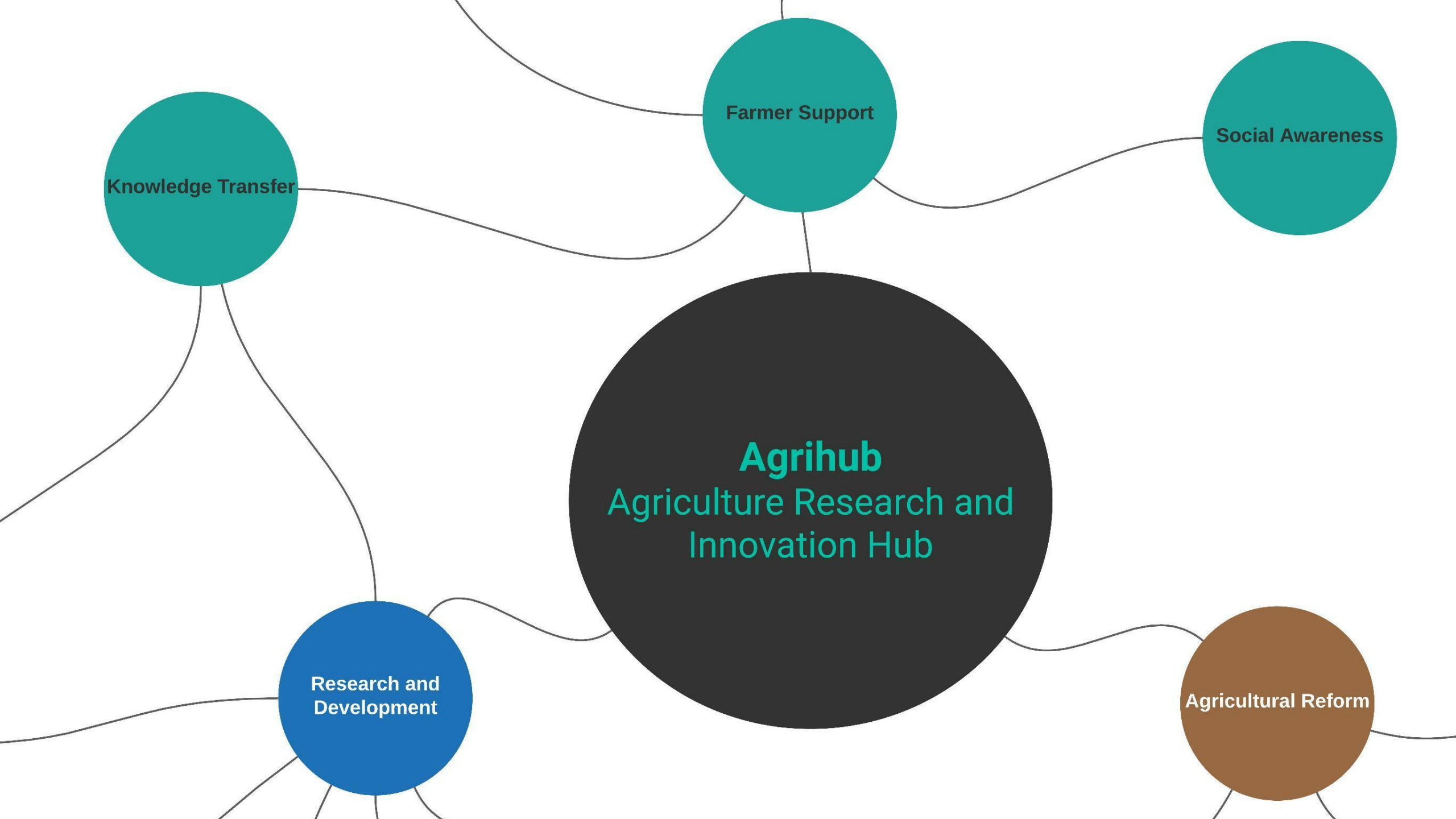

Agrihub
Agriculture Research and Innovation Hub
Farmer Outreach and Community building
Development of New Services (Disseminated Through Agriconnect)
Farmer Support
Social Awareness
Knowledge Transfer
MCAST
Multi-disciplinary Approaches to Agricultural Research
CIHEAM
Research and Development
Incorporation of IOT within a Traditional Sector
Fodder Trials (Developing new strategies)
PPM Pest Prediction Models
IPM Integrated Pest Managment
Agricultural Reform
Food Security and Resilience
Sustainable Farming Practices
Innovative Farming practices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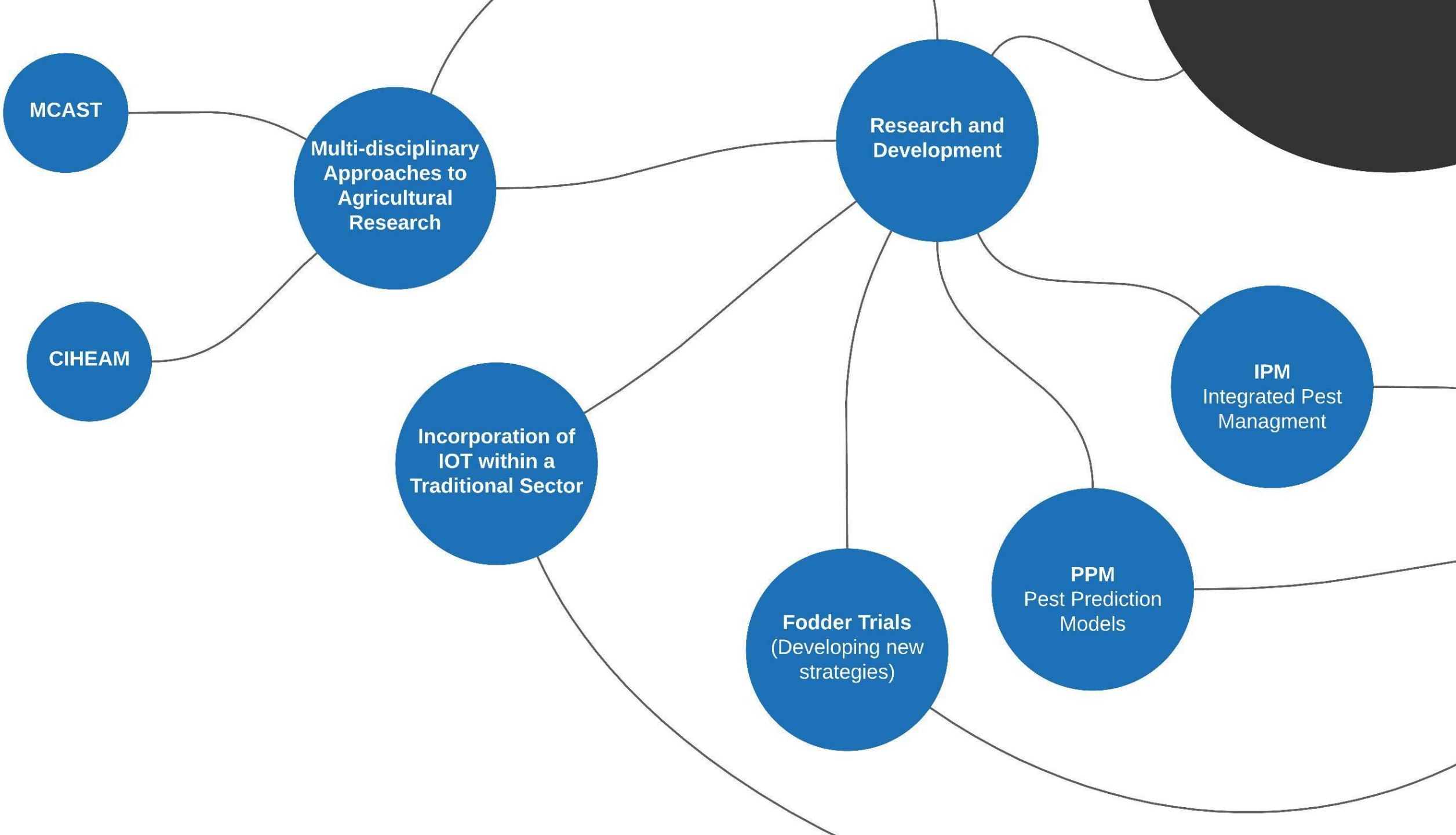
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PPM
Pest Prediction Models

Research within AgriHub is carried out through a multidisciplinary team of Researchers across multiple entities.

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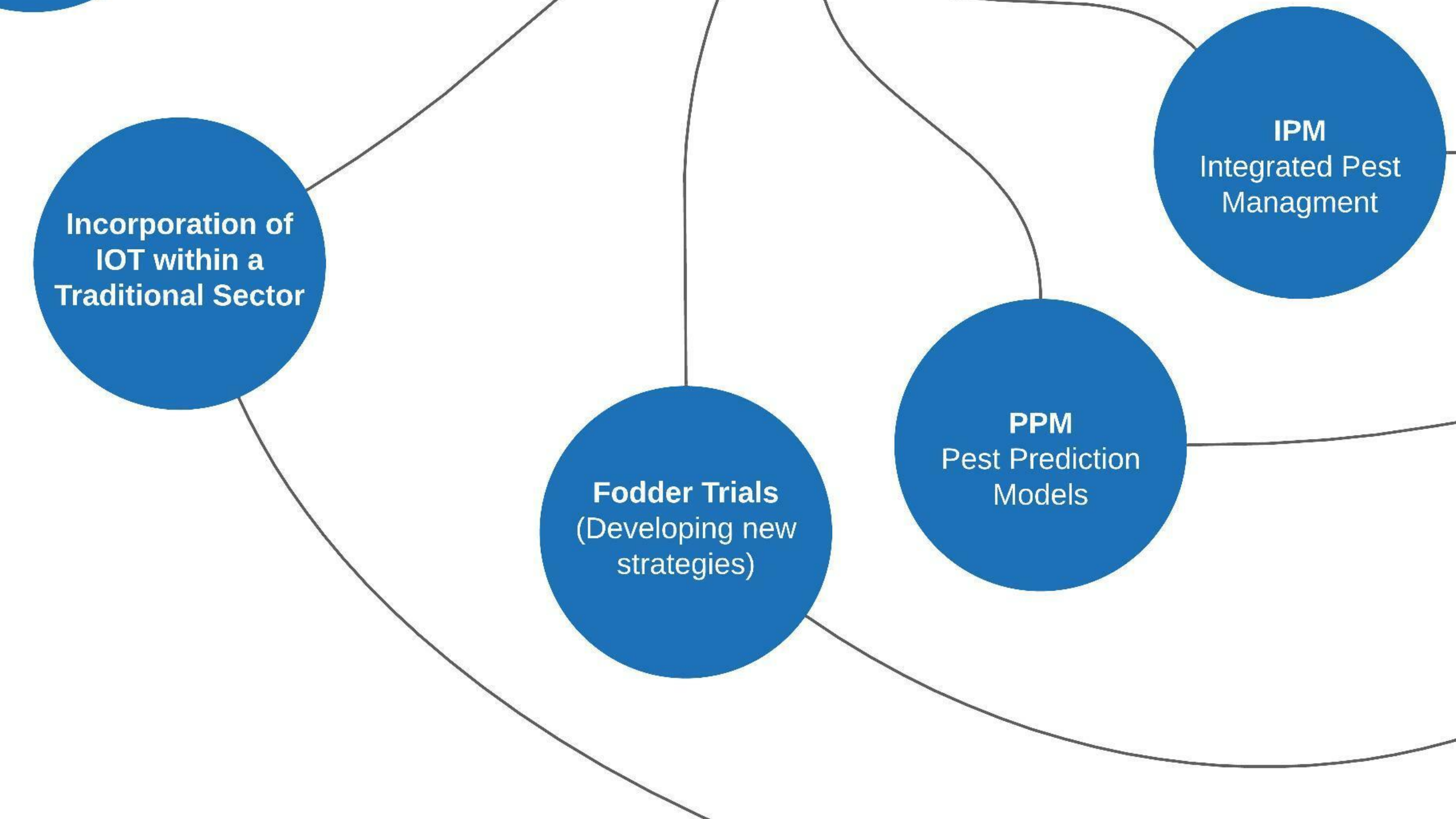
- Agronomy
- Phenology
- Environmental Engineering
- Agribusiness
- Geospatial Science
- ICT
- Farmers' first hand knowledge through knowledge transfer mechanisms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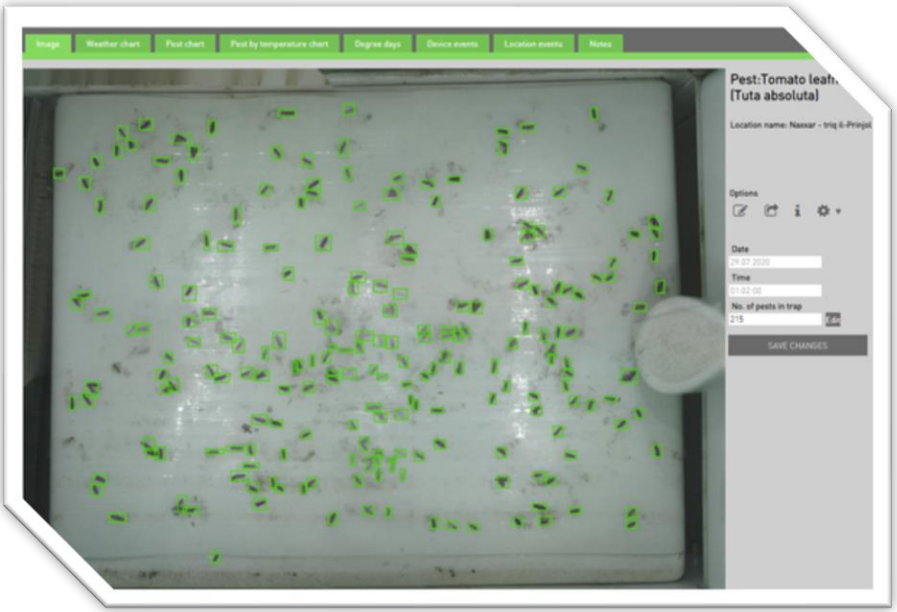
Incorporation of IOT within a Traditional Sector

Agrihub aims to introduce information technology within a traditional agricultural sector.

Pest Monitoring Stations across the islands within pilot fields.

Equipped with **AI** and Machine learning capabilities

Thought to Identify target pests and record capture counts



Why Monitor Pests?

- Pest management
- Studying pest population dynamics

Fodder Trials (Developing new strategies)

The **Fodder Trials** aim at the Production of good quality fodder for livestock within the local scenario

Examining which fodder and protein crops can be cultivated in Malta:

- Substitute fodder imported locally by feed mills and importers
- Improved resilience of the livestock sector thanks to locally-produced, high-quality fodder
- Reduced carbon footprint due to reductions in importation
- Introduce price stability due to the volatile nature of fodder import costs.

PPM
Pest Prediction Models

PPM for 5 target pests:

- ***Tuta Absoluta***
- ***Bactrocera Oleae***
- ***Lobesia Botrana***
- ***Phthorimaea Operculella***
- ***Ceratitis Capitata***

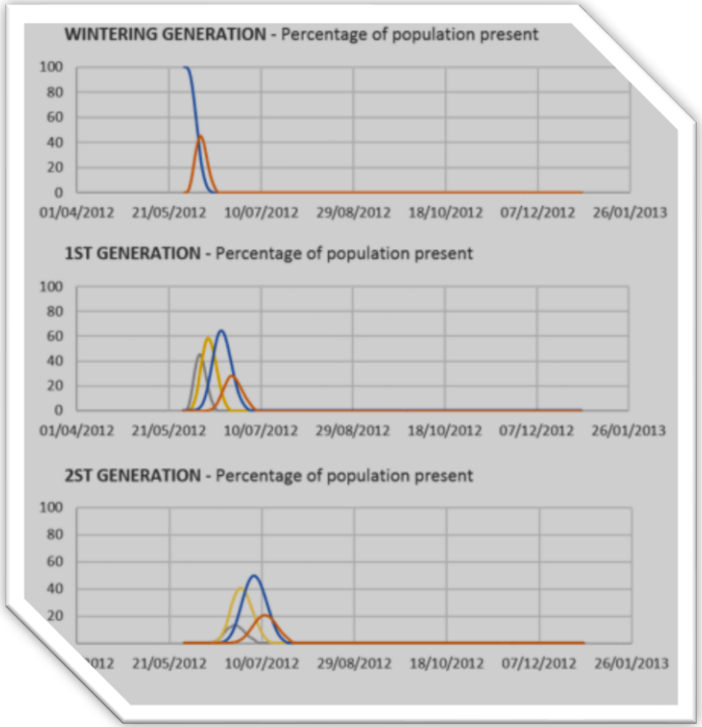
Pest Prediction Models are statistical projections for how pest populations react to environmental changes such as Weather and Climate.

Pest populations dynamics are affected by 3 major environmental factors:

- Temperature
- Atmospheric humidity
- Soil humidity

Monitoring of micro-climate data just above crop foliage thanks to weather stations across the islands

When conditions are ideal for pest infestations, a farmer would be able to access an online platform to observe forecast conditions.



IPM
Integrated Pest Managment

IPM refers to Integrated Pest Management and ensures that the most cost effective, environmentally friendly, and socially acceptable ways of managing pests, weeds, and diseases are carried out.

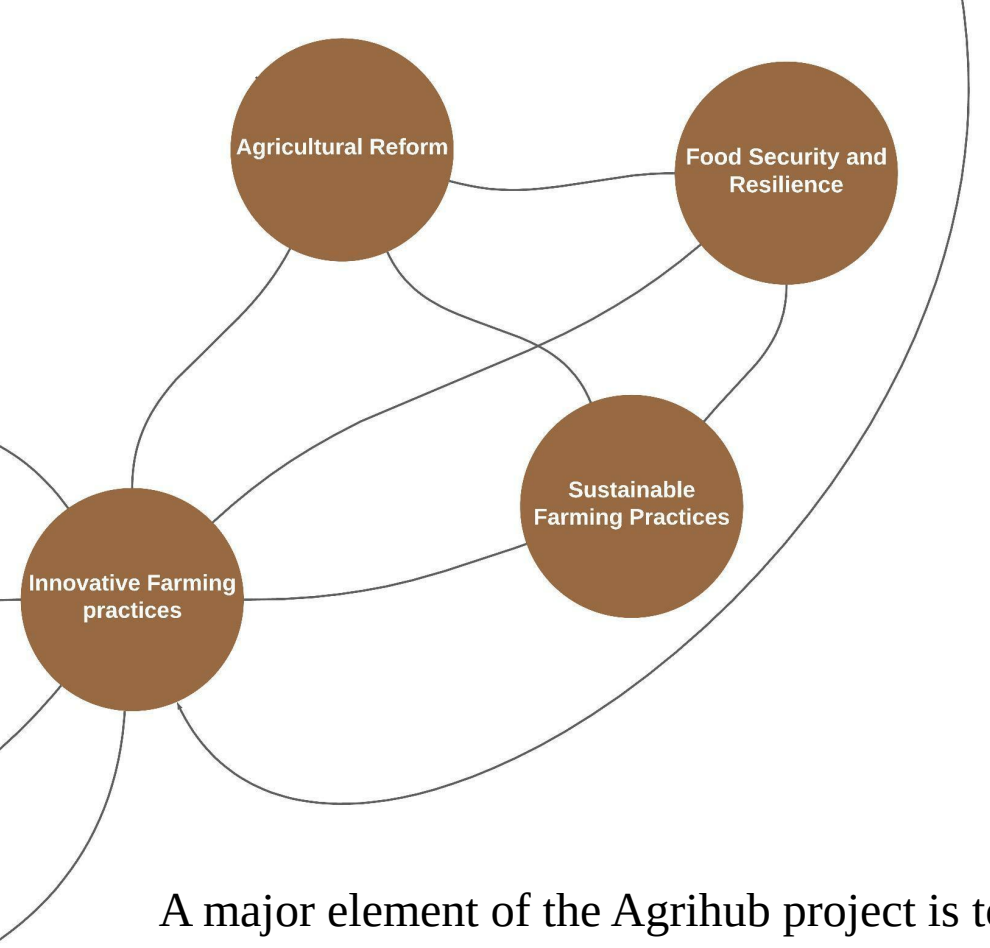
- Reduce unnecessary agricultural Inputs
- Use precise methods of pest control to limit environmental collateral (such as the destruction of benign insects)
- Takes on a holistic approach to pest management

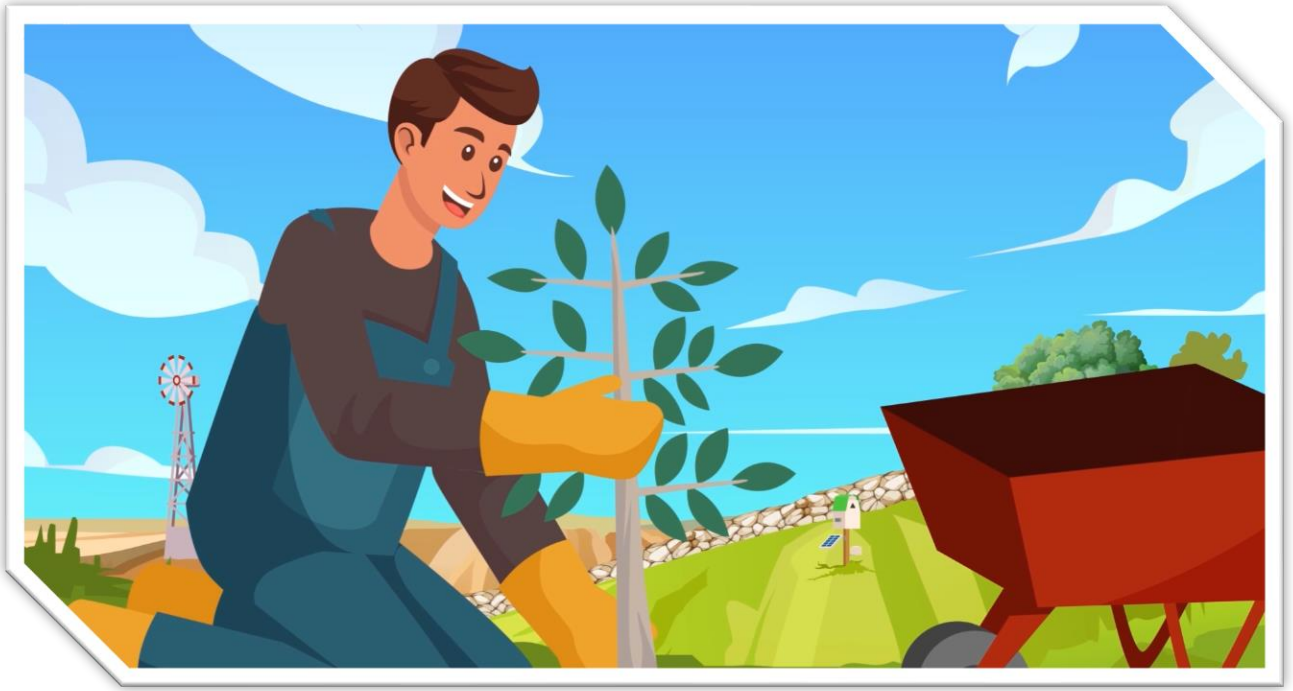
The Agriculture Directorate is in the processes of developing IPM guidelines that will cover the major pests and diseases of over 20 different crops and fruit trees

IPM
Integrated Pest Managment

As Part of the methodology in introducing these Integrated Pest Management Guidelines, The directorate is in the process of conducting field trials across the islands.

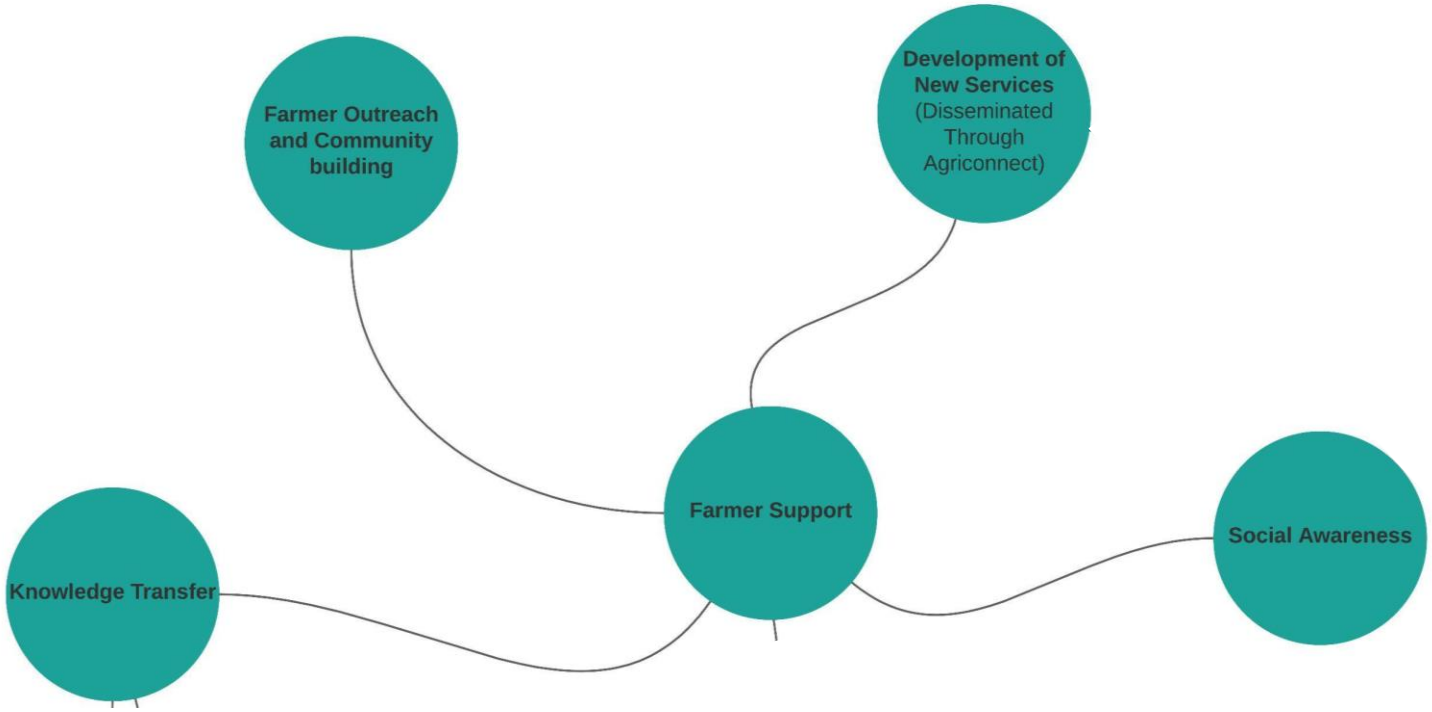
- This is done to test the effectiveness of these guidelines against real-world conditions.
- Trials are being conducted at Ghammieri as well as across multiple private plots across the islands.
- Farmers allocate 1 tumolo of land which is cultivated according to guideline practices and is heavily monitored by both the Agriculture Officers conducting site visits throughout the season as well as AI pest monitoring traps.

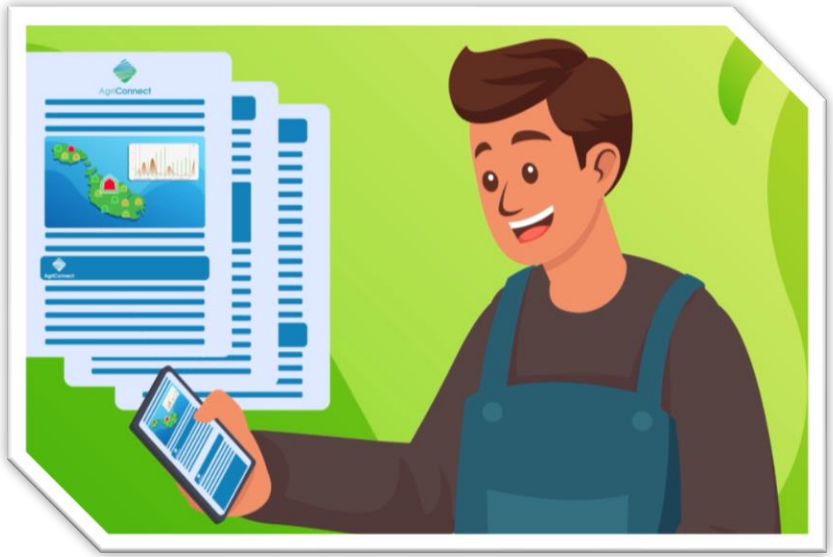




A major element of the Agrihub project is to motivate **Agricultural Reform** whereby the innovative farming practices being developed at Agrihub, help to bring about improvements within the sector across all spheres of **sustainable development**.

This is achieved through collaboration and knowledge-exchange with other departments within the Directorate, specifically **Agri-Policy** as well as other entities such as **MCCAA** and the **Plant Protection Directorate**



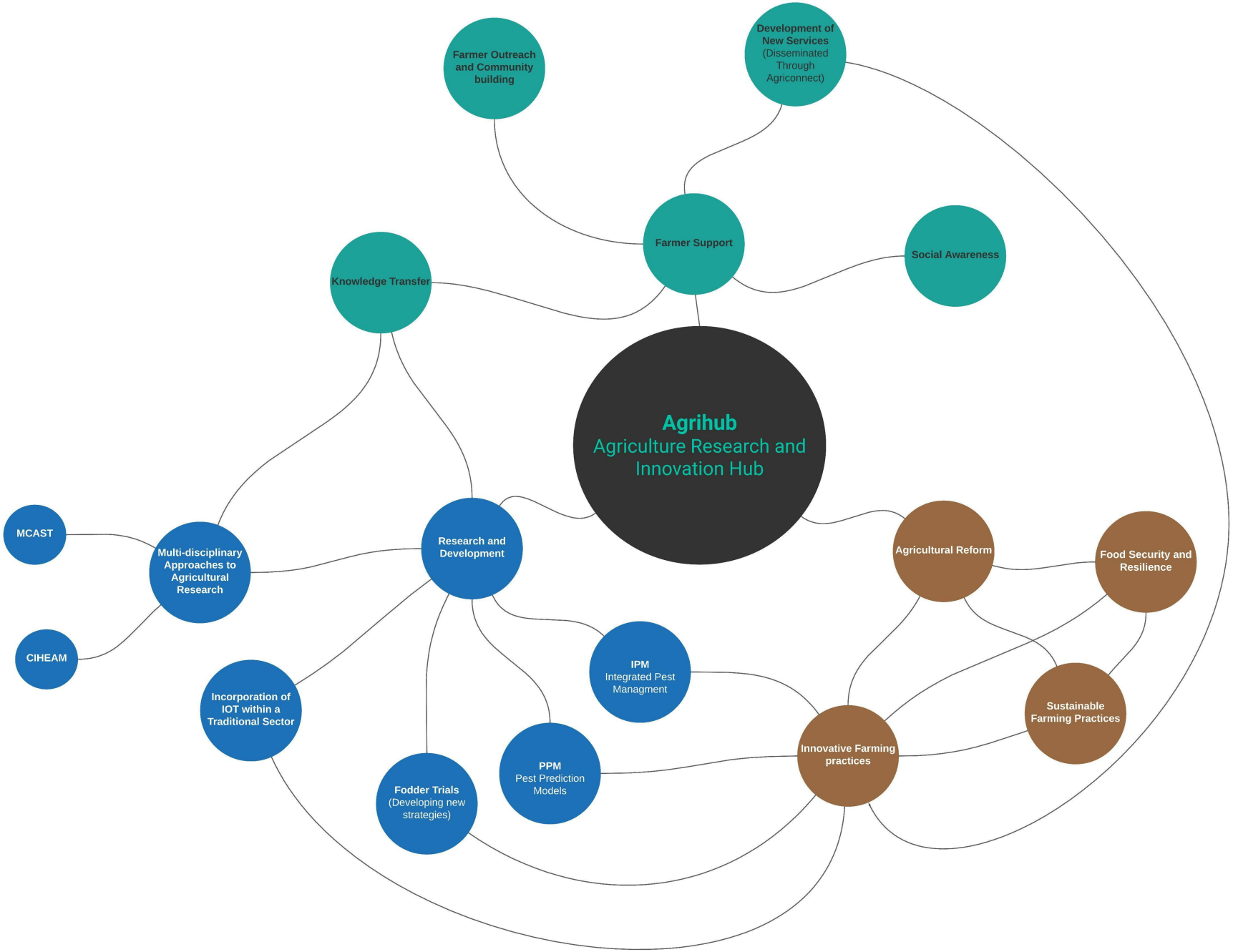


The third and most crucial aspect of Agrihub is **Farmer support**.

Agrihub moves away from the concept of **'research for the sake of research**' but rather aims to provide innovative services for farmers in support of **sustainable production**.

This is done through **Agriconnect** – The Agriculture Directorate's Extension Service.

Agrihub's **Research Branch** has in place **Knowledge Exchange mechanisms** that allow for the transfer of **Agricultural expertise** between **Farmers**, **Agronomists** and **Researchers**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