Conclusion:

- **Policymakers** should integrate AI into CAP eco-schemes and rural development programs, while clarifying ethical standards.
- **VET providers** should adopt and expand AI4Agri training resources, tailoring them to diverse learner needs.
- **Farmers and advisors** should engage in training and explore cooperative models for shared AI services.
- **Technology providers** should co-design affordable, user-friendly solutions aligned with sustainability goals.

AI in agriculture is not a luxury, but a necessity for Europe's sustainable future. By investing in infrastructure, skills, finance, data governance, and ethical standards, Europe can ensure that AI becomes a tool for sustainability, competitiveness, and resilience – accessible to all farmers, not just a few.

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AI4Agri Policy Recommendations

**AI4Agri
Developing green and digital skills
towards AI use in agriculture**

Project Number: 2023-1-PL01-KA220-VET-000160825

Context:

European agriculture faces increasing pressure to balance productivity with sustainability and climate goals. Artificial Intelligence (AI) offers significant potential for efficiency, resilience, and environmental stewardship, yet adoption remains uneven. Persistent barriers include weak rural infrastructure, high investment costs, limited digital literacy, fragmented data governance, and ethical concerns.

AI4Agri project addressed these challenges by combining research, training, and policy dialogue in four partner countries (Poland, Sweden, Cyprus, Greece). Its outcomes include:

- a comprehensive needs analysis on AI adoption,
- a curriculum and seven e-learning modules for VET learners,
- pilot training with 83 participants,
- national and transnational policy roundtables, identifying common challenges and solutions.

Key Policy Challenges:

- **Infrastructure Deficit**: Rural areas often lack broadband and 5G, preventing farmers from accessing AI platforms.
- **High Costs**: Upfront investment in AI tools is prohibitive for small and medium-sized farms.
- **Skills Gap**: Many farmers and advisors lack digital competences; older generations remain sceptical.
- **Data Fragmentation**: Lack of interoperable governance frameworks limits effective use of agricultural data.
- **Ethical and Legal Uncertainty**: Farmers lack clarity on data rights, liability, and transparency of AI tools.

Policy Recommendations:

To unlock the potential of AI in agriculture and ensure inclusiveness, sustainability, and competitiveness, the following actions are recommended:

1. **Invest in Rural Digital Infrastructure**
- Expand EU Digital Innovation Hubs into rural areas.
- Provide demonstration farms, shared infrastructure, and advisory services.

2. **Create AI-Specific Financial Support**
- Introduce microgrants and subsidies for smallholders and cooperatives.
- Support cooperative ownership or leasing schemes to reduce entry costs.

3. **Mainstream AI in Skills and Training**
- Embed AI4Agri curriculum and modules into CAP knowledge-transfer measures and Erasmus+ VET programs.
- Promote blended and peer-to-peer learning to bridge generational divides.

4. **Establish an EU Agricultural Data Governance Framework**
- Develop a "Green Deal Data Space for Agriculture" to ensure open, interoperable, and ethical use of agricultural data.
- Safeguard farmers' rights over their data and promote transparency of AI algorithms.

5. **Introduce "Green AI by Design" Standards**
- Require AI tools to be energy-efficient, transparent, and environmentally responsible.
- Align agricultural AI adoption with the EU AI Act and sustainability policies.

6. **Ensure Policy Coherence Across Levels**
- Align CAP Strategic Plans with EU digital and green priorities.
- Encourage cross-ministerial coordination at the national level (agriculture, digitalisation, education).