AOFS Data Governance, Ethics & Research Partner Positioning

The **Afritic Open Farming Standard (AOFS)** balances **robust farm operations** with the **opportunity for applied research and collaboration**. This document outlines AOFS principles for data governance, ethical research, and institutional cooperation.

1. Core Principles

- **Farmer-Centric Operations:** AOFS prioritizes the safety, autonomy, and livelihoods of farmers above all.
- **Operational Integrity:** All research and analytics activities must **never compromise the core irrigation and farm control functions**.
- **Transparency & Accountability:** All data collection, storage, and research activities are **fully documented and auditable**.
- **Offline-First Design:** AOFS functions independently of internet connectivity; all research data must respect this operational baseline.
- **Collaborative Inclusivity:** AOFS actively welcomes partnerships with **universities, research institutes, NGOs, and public agencies**.

2. Data Governance

- **Ownership:** Farmers and farm operators retain full authority over their operational data.
- **Consent-Based Sharing:** Data contributed to research or GAKD is **explicitly authorized by farm operators**.
- **Privacy & Anonymization:** Shared datasets are **aggregated, anonymized, and privacy-preserving** to prevent identification of individual farms or operators.
- **Access Control:** Research partners receive access only to data explicitly shared for research purposes.
- **Audit Trails:** Every data point, measurement, and decision is **timestamped and logged**, allowing full traceability.

3. Ethics & Responsible Research

- Research must be **embedded in real operational contexts**, not separate demonstration plots.
- All experiments and analysis must **respect safety and fail-safe constraints**.
- Results and recommendations are **validated before operational deployment**.
- Data usage must support **sustainable agriculture, humanitarian impact, and food security**, never commercial exploitation.
- AOFS encourages **co-development of solutions with local communities**, ensuring research benefits are shared locally.

4. Collaboration with Institutions

- AOFS provides a **stable production baseline** for applied agricultural research.
- Partner organizations may:
    1. Conduct **long-term observational studies** on crops, soils, and water use
    2. Implement **comparative studies across regions** using standardized data
    3. Develop **evidence-based operational improvements**
    4. Train local operators and share knowledge through capacity-building programs
- Research activities are **incremental, non-intrusive, and reversible**, ensuring operational sovereignty at all times.

5. Direct Feedback from Research Partners

Farms that **voluntarily choose to share their operational data without anonymization** may receive **more direct, actionable feedback** from AOFS research partners.

Benefits include:

- Tailored guidance and optimization recommendations based on **actual farm conditions**
- Collaboration on **specific improvements** relevant to crops, water management, or irrigation strategies
- Support for **capacity building and localized training**

Key points:

- Participation is **fully optional and consent-based**
- Farms retain **full control over what data is shared and with whom**
- Direct feedback does **not compromise operational safety or farm autonomy**
- Farms can revert to **anonymized participation at any time**

6. Benefits to Research Partners

- Access to **real-world operational data** from off-grid, water-scarce, and climate-stressed farms
- A **shared research platform** compatible across regions and farm scales
- Opportunities for **cross-institutional collaboration** and publications
- Direct contribution to **GAKD**, enhancing global agricultural knowledge
- Alignment with **humanitarian and sustainable agriculture goals**

7. Summary

AOFS provides a **dual-purpose framework**: 1. A **production-grade, fail-safe farm control system** for farmers 2. A **research-enabling platform** for universities, NGOs, and public institutions

All cooperation is governed by principles of **safety, ethics, transparency, farmer consent, and**

privacy. Through AOFS, research and innovation can **enhance agriculture under real-world constraints** while maintaining the **resilience and livelihoods of farming communities**.

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