Ghana Tilapia Seed Project (TiSeed) Impact Pathway Diagram



**Assumptions and Risks**

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|  | **Assumptions** | **Risks** |
| A | * There is institutional / political commitment to invest in the breeding program * ARDEC is able to retain staff after they have been trained | * ARDEC has insufficient funding to continue the breeding program * The Akosombo strain is not resistant to new diseases |
| B | * The multiplication is a profitable business model * Hatcheries are convinced about the quality of the broodstock being released | * The Akosombo strain is not resistant to new diseases * Lack of trust from hatcheries in the broodstock quality released by ARDEC |
| C | * Hatcheries are willing and able to invest in quality upgrading and participate in the project * Fisheries Commission will implement the tiered accreditation system * Farmers recognize the value of certified seed | * The Akosombo strain is not resistant to new diseases |
| D | * See C | * Water quality issues require prohibitive investments |
| E | * The right issues are being addressed in the accreditation and quality upgrading process * Hatcheries are able to train and retail qualified staff | * Hatcheries / farmers are unwilling or perceive too much risk to invest |
| F | * Hatcheries / farmers are willing and able to invest in and experiment with new business models * Business models piloted are feasible and financially sustainable options * Women and youth are interested to be involved in tilapia farming / business models | * Hatcheries / farmers are unwilling or perceive too much risk to invest |
| G | * Farmers are willing and have time to be part of trainings / capacity development activities * Hatcheries are able to develop feasible business models that include advisory services * (medium-size) Farmers are willing to pay for advisory services | * Farmers do not trust information provided and/ or the source of information |
| H | * Farmers have the finances and other resources available to implement the advice * (Small) farmers see fish farming as a business | * Fish farming is a minor livelihood activity * Demand for tilapia will drop * The expectations for the new races or varieties are overestimated creating farmer's disappointment or lack of trust * The quality seed delivered perform worse than what they were using before |
| I | * See H | * See H |
| J | * See H * A feasible business model can be set up in a location where farmers are more dispersed | * See H |
| K | * The quality seeds perform as expected * Quality feed is available | * External factors such as disease, market, weather, natural disaster, water quality limit productivity * Production conditions vary across farmer-type and environment leading to varying outcomes * The quality seed delivered perform worse than what they were using before |
| L | * Tilapia prices remain stable or increase * Women and youth are able to engage in aquaculture businesses * Productivity increases lead to more employment | * Tilapia prices drop * Currency depreciation leads to higher input costs and low profitability * There is a lack of availability of raw materials for feed |