



Tropentag, September 17-19, 2018, Ghent

“Global food security and food safety:  
The role of universities”

## Vertical Integration in Fish Culture Business in Rivers State, Nigeria: Panacea for Food Security

DUMKA BENSON

*Federal College of Education (Technical), Omoku, Dept. of Agricultural Education, Nigeria*

### Abstract

The study examined vertical integration in fish culture business as panacea for food security in Rivers State, Nigeria. The characteristics and integrated activities of vertically integrated and non-vertically integrated fish culture farms were compared. The vertically integrated fish culture farms produce feeds, fingerlings and dry fish using smoking kiln, while the non-vertically integrated fish culture farms buy feeds and fingerlings from independent suppliers and dry fish using fire wood. Data for the study were obtained from 37 vertically integrated and 119 non-vertically integrated fish culture farms. Purposive sampling was used for the vertically integrated, while multi-stage sampling was used for the non-vertically integrated fish culture farms because of the availability of a farmer list. Data were analysed using descriptive statistics, budgetary and profitability indices. The farms differ amongst others in their mode of operation. The average cost of N11 and N19 was incurred per fingerling as well as N1,987 and N4,423 per bag of feed by the vertically integrated and non-vertically integrated fish culture farms, respectively. The average cost of N314 and N477 per kg of fish produced was incurred by vertically integrated and non-vertically integrated fish culture farms. The vertically integrated fish culture farms could sell fresh fish at N440 per kg and still make equal profit as the non-vertically integrated fish culture farms that sold fresh fish at N600 per kg. The vertically integrated fish culture farms processed fish at lower cost than the non-vertically integrated fish culture farms which make fresh fish economical and affordable, thus enhancing food security.

**Keywords:** Aquaculture, food security, Nigeria, panacea, vertical integration