

An innovative methodology for evaluating farm activities and choosing an efficient model of sustainable farming has been developed using and based on two documents provided in Lithuanian: “*Methodology for Sustainable Farming*” and “*Production, Economic and Social Indicators of Methodology*”. Below are the content elements of these documents.

### **Methodology for Sustainable Farming**

#### INTRODUCTION (p. 4)

1. EVALUATION OF ECONOMIC, ENVIRONMENTAL AND MANAGERIAL INDICATORS (Sources and significance of accounting data; The essence of economic indicators, their definition and evaluation; The essence of environmental indicators, their definition and evaluation; The essence of managerial indicators, their identification and evaluation; Opportunities to increase the efficiency of investments in agricultural machinery; Determining the optimal crop structure; Sustainable farming model for farmers' farms; A model of sustainable farming for agricultural companies and enterprises) (p. 6).
2. ANALYSIS OF PHYSIOLOGICAL CHARACTERISTICS AND SOIL PROPERTIES OF CROPS BASED ON DISTANCE HYPERSPECTRAL SCANNING METHODS (Technical system components; Equipment calibration and preparation for data registration; Flight planning and implementation Hyperspectral data processing and preparation for analysis; Preparation of data for processing; Image processing and creation of individual hyperspectral data cubes in the *CubeCreator 2100 software environment*; analysis and display of hyperspectral data; preparation of data for processing; results of spectrometric studies of soil properties; results of spectrometric studies of physiological characteristics of plants; results of experimental verification of research results) (p. 43).
3. User's Guide for Loading Field Data (p. 90)
4. SUMMARY (p. 95)

### **Production, Economic and Social Indicators of Methodology**

1. EVALUATION OF PRODUCTION, ECONOMIC AND SOCIAL ECONOMIC PERFORMANCE INDICATORS (Sources and significance of accounting data) (p. 3).
2. SIGNIFICANCE, OBJECTIVES AND OBJECT OF FARM ACTIVITY EVALUATION (Legal regulation of business evaluation; Concept, object and objectives of farm (business) evaluation; Land evaluation. Land and land lease market and their factors) (p. 6)
3. PRINCIPLES AND METHODS OF DETERMINATION OF FARM ACTIVITY EVALUATION Principles of farm activity evaluation; Farm activity evaluation methods; Financial analysis methods (p. 9)
4. THE ESSENCE OF ECONOMIC INDICATORS, THEIR DETERMINATION AND EVALUATION (p. 12)
5. RATIONAL FARM SIZE (Recommended minimum areas of rational land-ownership) (p. 14)

6. ANALYSIS OF LABOUR RESOURCES (Labour and labour resources in agriculture and their characteristics; Composition of labour resources in agriculture, indicators of use; Labour productivity, its indicators and ways of its increasing; Peculiarities of evaluation of labour resources in agriculture; Factors and methods of increasing labour productivity) (p. 14)
7. ANALYSIS OF ECONOMIC EFFICIENCY OF FARM ACTIVITY (Efficiency (turnover) indicators of total and fixed assets of the farm, their analysis; Efficiency indicators (turnover) of current assets of the farm, their analysis; Indicators of the level of farm expenditure, their analysis) (p. 20)
8. ANALYSIS OF PRODUCTION AND SALES (Production volume indicators; Analysis of production structure and range; Analysis of production quality and production seasonality; Analysis of production factors influencing production volume; Analysis of sold production volume (p. 24)
9. EXPENDITURE ANALYSIS (Determination of material and energy resource needs and expenditure) (p. 29)
10. PROFIT ANALYSIS (Directions of profit analysis; Results of product sales; Analysis of factors affecting profit) (p. 38)
11. ANALYSIS OF RELATIONSHIP BETWEEN KEY ECONOMIC INDICATORS (PRICES, PROFIT EXPENSES, ETC.) (Analysis of the relationship between expenses, output and profit. Calculation of the break-even point; Calculation of the break-even point according to the degree of utilization of production capacity and production of various assortment; Analysis of factors affecting the break-even point; Analysis of the relationship between expenses, prices and sales volume) (p. 42)
12. ANALYSIS OF FARM ASSETS (Analysis of fixed assets of the farm; Analysis of current assets of the farm) (p. 45)
13. ANALYSIS OF CREDIT RESOURCES (Loan repayment and interest payment methods) (p. 49)
14. RISK ANALYSIS AND MANAGEMENT (Analysis of risk and uncertainty concepts; Risk analysis methods; Risk management process; Risk mitigation measures) (p. 50)
15. MANAGEMENT SOLUTIONS: INTEGRATED EVALUATION OF FARM ACTIVITY (p. 54)
16. MANAGEMENT SOLUTIONS: FARM ACTIVITY PLANNING (Objectives and tasks of agricultural business planning; Types and stages of preparation of business plans; Use of modern information sources in planning; Strategic planning of farm activities; Investment needs assessment and financing sources; Interest) (p. 57)
17. FORECASTS AND THEIR APPLICATION (Forecasting; Dynamic Lines) (p. 63)
18. MODELING AND OPTIMIZATION OF ECONOMIC ACTIVITY (The essence of modelling) (p. 65)