

International Journal of Advanced Research in Computer and Communication Engineering

# ANALYSIS OF CROP YIELD ESTIMATION RATIO OF COCONUT BASED ON FERTILIZATION IN TERMS OF CROP AGE

# Ms.J.J.Srirethanya<sup>1</sup>, Mr.P.Sakthimurugan<sup>2</sup>, Ms. N. Rakshana<sup>3</sup>

Student, Kaamadhenu Arts and Science College, Sathyamangalam<sup>1</sup>

Assistant Professor, Dept. Of. CA & IT, Kaamadhenu Arts and Science College, Sathyamangalam<sup>2</sup>

Student, Kaamadhenu Arts and Science College, Sathyamangalam<sup>3</sup>

**Abstract:** Two on-farm experiments were carried out in the coconut belt of southern Ghana from 2006 to 2009 to evaluate growth of young coconut plantings and yield of old coconut fields and their nutrient status under coconut-cassava intercropping system. For plantation managers, simulation modeling of perennial crops has enormous potential for providing data .we provide updates on the info crop- coconut project model and its application to the cultivation of coconuts variety of tropical and subtropical climates the model is based on the info crop crop model ,which simulates a variety of crops.

#### **INTRODUCTION :**

Coconut is a tropical and subtropical perennial crop that is mostly farmed in India, Philippines ,Malaysia , Sri lanka , and the India ocean and south pacific islands. Coconut is multipurpose palm that plays an important in many cultures. The economies of these countries, which have a farming population of 10 million people India's communities the annual demand for coconut based products is expected increase. The year 2020 .As a result ,its critical to locate enhanced varieties , as well as irrigation and nutrient optimization management . Experimentation on crop growth and development in a systematic manner and yield in a variety of agro climatic condition with the use of using traditional procedures and technologies is costly ,time consuming ,and inefficient . for a perennial crop like co culture, huge experimental areas required. However, there is currently no comprehensive model that can mimic coconut growth ,development ,and yield under various situation. We tried to create ,calibrate, and evaluate a simulation model of the entire 60 year economic life of coconut. Our goals were to (1)discuss the construction ,calibration ,and validation of the info crop coconut model for coconut ;and (2) utilise this model to asses prospective yields in various Agroclinatic zones throughout India. The coconut crop model info crop was created in a generic crop model created in India for modelling grow the and yield of annual crops in the tropics and subtropics.

#### PREPARATION OF LAND AND PLANTING :

Prepare the land by contour terracing or bonding on slopes and in locations with undulating terrain .In low lying areas, mounds of at least 1 m above water level must be built at the planting site. seedlings are planted on field bunds in recovered 'kayal' regions. A pit size of 1mx1mx1m is recommended in loamy soils with low water tables. Take larger pits of 1.2m\*1.2m\*.2m in laterite soils with underlying rocks. The size should not exceed 0.75m\*0.75m\*0.75m in sandy soils.





# International Journal of Advanced Research in Computer and Communication Engineering

Impact Factor 7.39 💥 Vol. 11, Issue 5, May 2022

#### DOI: 10.17148/IJARCCE.2022.11511

#### SOIL AND CLIMETE

The coconut palm thrives in a wide range of climatic and soli conditions .Its is mostly a tropical plant that grows best between the latitudes of 20 N and 20S.the Ideal temperature and humidity8 for coconut 60% humidity. Up to 600metres above mean sea level, the coconut palm thrives plantations of profitable coconut can be formed around the equator, up to a height of roughly 1000 m above MSL. Palms can withstand a wide range of rainfall intensity and dispersion. However, for healthy growth and increased yield, a well distributed rainfall of about 200cm per year is ideal. irrigation is essential in locations when rainfall is insufficient and distributed unevenly.

#### CARE OF YOUNG PALMS

Palms that are young require special attention. during the summer, the transplanted seedlings should be appropriately setered and irrigated. Stake the young plants to keep them from being uprooted by the wind. Irrigate the seedling twice a week throughout the dry summer months during the first two years after planting . the transplanted seedlings must be shaded.

#### CYCLE OF COCONUT GROWTH



#### SPACING ANS SYSTEMS OF PLANTING

The planting system ,soli type, and other factors affect spacing .On general, for different planting systems in sandy and laterite soils, the following spacing is advised.

Planting system	Spacing
Triangular	7.6m
Square	7.6x7.6m, 8x8m, 9x9 m
Single	6.5m in rows - 9m between rows.



### International Journal of Advanced Research in Computer and Communication Engineering

# Impact Factor 7.39 ∺ Vol. 11, Issue 5, May 2022

#### DOI: 10.17148/IJARCCE.2022.11511



#### TIME AND PLANTING

In the commencement of the south west monsoon, seedlings can be transplanted . if irrigation facilities are available ,begin panting at least a month before the monsoon so that seedlings can establish themselves before heavy rains arrive .planting can also be done before the northeast monsoon arrives .after the monsoon has passed ,transplanting may be done in low lying areas that have been inundated during the monsoon.

#### **CULTIVARS AND HYBRIDS**

It is necessary to irrigate. Hybride and cultivars coconut cultivars can be divided into two categories: tall and dwarf. the west coast tall varieties are the most widely grown tall cultivars .in comparison to the tall, the tall, the dwarf type is shorter in stature and has a shorter life span. The two most common hybrids are tall\*dwarf(t\*d)and dwarf\*tall(d\*t).the hybrids were produced by Kerala agriculture university and Tamil Nadu agriculture university and released for commercial cultivation in ten different combinations .under the right management conditions ,they can produce a lot of fruit. other tall cultivars under cultivation include Laccadive ordinary Andaman ordinary, Philipines, java, cochin, china, Kappadam, and others.

#### TALL CULTIVARS





International Journal of Advanced Research in Computer and Communication Engineering

Impact Factor 7.39 💥 Vol. 11, Issue 5, May 2022

DOI: 10.17148/IJARCCE.2022.11511



DWARF CULTIVARS





International Journal of Advanced Research in Computer and Communication Engineering Impact Factor 7.39 ∺ Vol. 11, Issue 5, May 2022

DOI: 10.17148/IJARCCE.2022.11511



Hybrids



#### **GROW OF YOUNG COCONUT**

With a coconut that is still young the growth of young coconuts, as evaluated by collar girth and cumulative leaf number, was significant (p0.1)effect system of intercropping a comparison of the collar(table2)shows that there a significant difference .difference in sole coconut(P0.01)(with a median girth of 53.30cm)and inter cropped coconut (mean girth of 43.80cm).collar girth(collar girth).coconut and fertilized cassava intercropped (mean 42.05cm)was substantially different (P0.05).



## International Journal of Advanced Research in Computer and Communication Engineering

# Impact Factor 7.39 $\,$ $\,$ $\,$ Vol. 11, Issue 5, May 2022 $\,$

DOI: 10.17148/IJARCCE.2022.11511

#### CONCLUSION

The study's findings show how important aspects in the decision making process, such as statics reporting ,are in determining the surplus/deficit production and ,as a result, their impact on the coconut market economy. For example, the average coconut productivity for the state of Karnataka as a whole, which was mush below the national average before 2010 -11, witnessed a sharp increase from 2011-12 onwards. The fundamental explanations for such high increases are being investigated . data collection ,estimate ,and reporting are important factors that influence the decision making process for the sector's development and progress.

#### REFERENCE

- 1. Adams, R.M., C. Rosenzwig, R.M. Peart et al. 1990. Global climate change and US agriculture. Nature 345:219-224.
- Addiscott, T.M. and A.P. Whitmore. 1987. Computer simulation of changes in soil mineral nitrogen and crop nitrogen during autumn, winter and spring. J. Agric. Sci. 109:141–157..
- J. Agric. Meteorol. 48:811–814. Aggarwal, P.K., N. Kalara, S. Chander and H.C. Pathak. 2004. INFOCROP—A generic simulation model for annual crops in tropical environments. Indian Agric. Res. Inst., New Delhi, 132 p.
- AICRP (All India Coordinated Research Project on Palms). 2003. Annual report. CPCRI, Kasaragod, Kerala, India, 133 p. AICRP (All India Coordinated Research Project on Palms). 2004. Annual report. CPCRI, Kasaragod, Kerala, India, 132 p.
- 5. AICRP (All India Coordinated Research Project on Palms). 2005. Annual report. CPCRI, Kasaragod, Kerala, India, 96 p. AICRP (All India Coordinated Research Project on Palms). 2006. Annual report.
- 6. CPCRI, Kasaragod, Kerala, India, 96 p. Angus, J.F., M. Stapper and J.R. Donnelly. 1993. Simulation models for strategic and tactical management of crops and pastures. J. Agric. Meteorol. 48:775–778. Cecil, S.R. and H.H. Khan. 1993. Nutritional requirement of coconut and coconut based farming systems in India. In Advances in Coconut Research and Development. Eds. M.K. Nair, H.H. Khan, P.
- Gopalasundaram and E.V.V. Bhaskara Rao. Oxford & IBH, New Delhi, pp 257–275. Child, R. 1974. Coconuts, 2nd Edn. S. Longman, London, 335 p. Corley, R.H.V. 1983. Potential productivity of tropical perennial crops. Exp. Agric. 19:217–237.
- 8. Dhanapal, R., H.P. Maheswarappa, P. Subramanian and A.K. Upadhyay. 2003. Influence of drip irrigation on growth, nut characters and yield of coconut in littoral sandy soil. Coconut Res. Dev. 18:1–23.
- Dhanapal, R., H.P. Maheswarappa and P. Subramanian. 2004a. Influence of drip irrigation on growth, nut characters and yield of coconut (Cocos nucifera) on laterite soil. Coconut Res. Dev. 19:32–38.
- 10. Dhanapal, R., H.P. Maheswarappa, C.V. Sairam, P. Subramanian and A.K. Upadhyay. 2004b. Influence of drip irrigation on growth and yield of coconut (Cocos nucifera) on laterite soil. J. Plant. Crops 32:26–30.
- Foale, M.A. 1993. Physiological basis for yield in coconut. In Advances in Coconut Research and Development. Eds. M.K. Nair, H.H. Khan, P. Gopalasundaram and E.V.V. Bhaskara Rao