

International Multidisciplinary
Research Journal

Golden Research
Thoughts

Chief Editor
Dr.Tukaram Narayan Shinde

Publisher
Mrs.Laxmi Ashok Yakkaldevi

Associate Editor
Dr.Rajani Dalvi

Honorary
Mr.Ashok Yakkaldevi

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Regional Editor

Dr. T. Manichander

International Advisory Board

Kamani Perera
Regional Center For Strategic Studies, Sri Lanka

Mohammad Hailat
Dept. of Mathematical Sciences,
University of South Carolina Aiken

Hasan Baktir
English Language and Literature
Department, Kayseri

Janaki Sinnasamy
Librarian, University of Malaya

Abdullah Sabbagh
Engineering Studies, Sydney

Ghayoor Abbas Chotana
Dept of Chemistry, Lahore University of
Management Sciences[PK]

Romona Mihaila
Spiru Haret University, Romania

Ecaterina Patrascu
Spiru Haret University, Bucharest

Anna Maria Constantinovici
AL. I. Cuza University, Romania

Delia Serbescu
Spiru Haret University, Bucharest,
Romania

Loredana Bosca
Spiru Haret University, Romania

Ilie Pinteau,
Spiru Haret University, Romania

Anurag Misra
DBS College, Kanpur

Fabricio Moraes de Almeida
Federal University of Rondonia, Brazil

Xiaohua Yang
PhD, USA

Titus PopPhD, Partium Christian
University, Oradea, Romania

George - Calin SERITAN
Faculty of Philosophy and Socio-Political
Sciences Al. I. Cuza University, Iasi

.....More

Editorial Board

Pratap Vyamktrao Naikwade
ASP College Devrukh, Ratnagiri, MS India Ex - VC. Solapur University, Solapur

Iresh Swami
Ex. Prin. Dayanand College, Solapur

Rajendra Shendge
Director, B.C.U.D. Solapur University,
Solapur

R. R. Patil
Head Geology Department Solapur
University, Solapur

N.S. Dhaygude
Ex. Prin. Dayanand College, Solapur

R. R. Yaliker
Director Management Institute, Solapur

Rama Bhosale
Prin. and Jt. Director Higher Education,
Panvel

Narendra Kadu
Jt. Director Higher Education, Pune

Umesh Rajderkar
Head Humanities & Social Science
YCMOU, Nashik

Salve R. N.
Department of Sociology, Shivaji
University, Kolhapur

K. M. Bhandarkar
Praful Patel College of Education, Gondia

S. R. Pandya
Head Education Dept. Mumbai University,
Mumbai

Govind P. Shinde
Bharati Vidyapeeth School of Distance
Education Center, Navi Mumbai

G. P. Patankar
S. D. M. Degree College, Honavar, Karnataka

Alka Darshan Shrivastava
Shaskiya Snatkottar Mahavidyalaya, Dhar

Chakane Sanjay Dnyaneshwar
Arts, Science & Commerce College,
Indapur, Pune

Maj. S. Bakhtiar Choudhary
Director, Hyderabad AP India.

Rahul Shriram Sudke
Devi Ahilya Vishwavidyalaya, Indore

Awadhesh Kumar Shirotriya
Secretary, Play India Play, Meerut (U.P.)

S. Parvathi Devi
Ph.D.-University of Allahabad

S.KANNAN
Annamalai University, TN

Sonal Singh,
Vikram University, Ujjain

Satish Kumar Kalhotra
Maulana Azad National Urdu University



"ANALYSIS OF RAINFALL"

Bhandwalkar Tushar Rajendra

M.S. Kakade College Someshwarnagar, Tal. Baramati, Dist. Pune.

ABSTRACT

Agriculture is an important sector of Indian economy as it contributes about 17% to the total GDP and provides employment to over 60% of the population. Therefore, agriculture plays an essential role in the process of economic development of less developed countries like India. Besides providing food to nation, agriculture releases labour, provides saving, contributes to market of industrial goods and earns foreign exchange. Agricultural development is an integral part of overall economic development. In India, agriculture was the main source of national income and occupation. Agriculture and allied



activities contributed nearly 50 percent to India's national income. Around 60 percent of total working population was engaged in agriculture. These confirm that Indian economy was a backward and agricultural based economy at the time of Independence.

KEY WORDS: Agriculture , process of economic development , agriculture releases labour, provides saving.

1. INTRODUCTION

Now the agriculture field is very important in India. Therefore, I select the topic related to agriculture. The six stages of the plant life cycle include germination, seedling stage, vegetative growth, pre-flowering stage, flowering and seed stage. The six stages are the procedures, through which a plant develops, mature, reproduce and die. The important step in plant growth is germination. This is prime and basic step. So. I concentrate on the germination. If the germination is healthy, then the plant growth will be better.

In recent years, the use of statistically designed experiments is greatly expanded into many new application areas of agriculture, engineering science and product and process improvement. Design of experiment provide a systematic and scientific approach for assessing extent and nature of influence of one or more controlled input factors on the response variable understudy. In factorial designed, study the effect of two or more effect simultaneously. One of the disadvantages of factorial experiments is that they can get large very quickly with several levels each of several factors. One technique for reducing the size of the factorial to more manageable levels is fractional replication. Now, as the number of factors is to be increased, then the number of treatments is increased. Due to this the experimental error will be increased and the precision will be decreased. Now, to increase the precision by decreasing the experimental error. In such a situation, the fractional factorial design is used.

Data Table

Av. Annual rainfall(mm)

Distict Aurangabad-Mumbai-Pune

Months	Aurangabad	Mumbai	Pune
Jan	3.8	1.7	22.5
Feb	2.5	1.5	22.0
Mar	5.0	0.6	14.5
Apr	3.0	9.8	20.6
May	35.9	30.0	28.5
Jun	140.9	171.4	83.7
Jul	166.0	171.0	184.0
Aug	166.9	139.5	227.0
Sep	175.9	141.7	119.6
Oct	87.3	85.8	16.0
Nov	14.1	21.5	5.6
Dec	12.0	7.4	10.9
Total	813.3	781.9	755.4

Distict Aurangabad

Hypothesis:- $H_0: \mu_1 = \mu_2$ or $H_0: \mu_1 \neq \mu_2$

By R-Software

>x=c(3.8,2.5,5.0,3.0,35.9,140.9,166.0,166.9,175.9,87.3,14.1,12.0)

>y=c(1.7,1.5,0.6,9.8,30.0,171.4,171.0,139.5,141.7,85.8,21.5,7.4)

> t.test(x,y,var.equal=T)

> t.test(x,y,var.equal=T)

Two Sample t-test

data: x and y

t - 0.088086, df= 22,

p-value = 0.9306

alternative hypothesis: true difference in means is not equal to 0.95 percent confidence interval

58.98967 64.22300

sample estimates:

mean of x mean of y

67.77500 65.15833

Decision- If P-value is greater than level of significance than accept H_0 .

Conclusion- Hence we conclude that the annual rainfall in Aurangabad and Mumbai city is consistent.

Distict-Mumbai

Hypothesis:- $H_0: \mu_1 = \mu_2$ or $H_0: \mu_1 \neq \mu_2$

By R-Software

>x=c(3.8,2.5,5.0,3.0,35.9,140.9,166.0,166.9,175.9,87.3,14.1,12.0)

>y=c(22.5,22.0,14.5,20.6,28.5,83.7,184.7,227.0,119.6,16.0,5.6,10.9)

> t.test(x,y,var.equal=T)

Two Sample t-test

data: x and y

t = 0.15777, df = 22, p-value = 0.8761 > = 0 . 0 5

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-58.39765 68.01432

sample estimates:

mean of x mean of y

67.77500 62.96667

Decision- If P-value is greater than level of significance

P-value= 0.8761 > = 0 . 0 5 accept HO at 5% level of significance reject otherwise

Conclusion- Hence we conclude that the annual rainfall in Aurangabad and pune city consistent.

Distict -Pune

Hypothesis:-H0: $\mu_1 = \mu_2$ or H0 $\mu_1 \neq \mu_2$

By R-Software

> x=c(1.7,1.5,0.6,9.8,30.0,171.4,171.0,139.5,141.7,85.8,21.5,7.4)

> y=c(22.5,22.0,14.5,20.6,28.5,83.7,184.7,227.0,119.6,16.0,5.6,10.9)

> t.test(x,y,var.equal=T)

Two Sample t-test

data: x and y

t = 0.073207, df = 22, p-value = 0.9423

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-59.89598 64.27931

sample estimates:

mean of x mean of y

65.15833 62.96667

Decision- If P-value is greater than level of significance

P-value= 0.9423 > = 0 . 0 5 accept HO at 5% level of significance reject otherwise Conclusion- Hence we

conclude that the annual rainfall in Mumbai and pune city is consistent

SUGGESTIONS

- + We can Suggest to farmers from Aurangabad Mumbai & pune district to plan their work of fanning before month of May
- + We can Suggest to Farmers from Aurangabad District to plan their work of Farming before Month of June to September.
- + We can Suggest to Farmers from Mumbai District to plan their work of Farming before Month of June to September.
- + We can Suggest to Farmers from Pune District to plan their work of Farming before Month of July to September

REFERENCES

- Time series & R-Software - P. G. Dixit
- Internet

Publish Research Article

International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Book Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- * International Scientific Journal Consortium
- * OPEN J-GATE

Associated and Indexed, USA

- ✦ EBSCO
- ✦ Index Copernicus
- ✦ Publication Index
- ✦ Academic Journal Database
- ✦ Contemporary Research Index
- ✦ Academic Paper Database
- ✦ Digital Journals Database
- ✦ Current Index to Scholarly Journals
- ✦ Elite Scientific Journal Archive
- ✦ Directory Of Academic Resources
- ✦ Scholar Journal Index
- ✦ Recent Science Index
- ✦ Scientific Resources Database
- ✦ Directory Of Research Journal Indexing

Golden Research Thoughts
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.oldgrt.lbp.world