







### 2ND INTERNATIONAL CONFERENCE ON 2nd INNOVATION OF SCIENCE AND INNOVATION OF SCIENCE AND INNOVATION OF SCIENCE AND INT (ICISTSD) DEVELOPMENT (ICISTSD)

#### "Strategic Innovation for the Acceleration of the Sustainable Life Resilience"

**Invited Speakers** 

Bali, September 9th 2022



Prof Lal Mervin Dharmasiri University of Kelaniya Sreanka



Indonesia

Prof. Dr. Ir. I Ketut Arnawa, M.P

Universitas Mahasaraswati Denpasar

Indonesia

Fakultas Pertanian dan Bisnis

Dr. Ir. I Ketut Sumantra, MP Reda Kachmar, PhD MP2WL Pascasarjana Universitas Mahasaraswati Denpasar



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Public	: USD 150	- IDR 2.250.000

#### PUBLICATION

All accepted paper will be published in the American Institute of Physic (AIP) Proceeding indexed by Scopus.

**Keynote Speakers** 

Ir. Bambang Susantono, MCP., MSCE., Ph.D Ketua Badan Otorita IKN (On Confirmation)

#### CONFERENCE TOPICS

- Sustainable regional planning, tourism, community development and policy
- Disaster prevention and management
- Environmental engineering and management
- Sustainable material and infrastructure
- Smart transportation management
- Sustainable agriculture and food sovereignty
- Supply chains and circular economy
- Agriculture smart farming
- Medical and health sciences
- Pharmaceutical sciences
- Pharmacy practicis and clinical pharmacy

#### **IMPORTANT DATES**

Registration : July 8th - September Abstract submission : July 8th - August 12th 2022 Full paper submission : July 15th - September 30th 2022 : August 15th - September 2nd 2022 Video submission Conference date : September 9th 2022

#### CONFERENCE FEE

- Participant Only: Free Registration With Conference Package (E-certificate and Speaker's presentation): IDR 25.000
- · Presenter:

**Presenter Only** 





2nd International Conference on Innovation of Science and Technology for Sustainable Development (ICISTSD)

Bali, September 9th 2022

Organized by: Regional Planning Development and Environmental Management Study Program Postgraduate Program, Universitas Mahasaraswati Denpasar



The 2nd International Conference on Innovation of Science and Technology for Sustainable Development (ICISTSD) is a biyearly agenda held by the Postgraduate Program, Universitas Mahasaraswati Denpasar. Addressing the sustainable development issue and its current trend, 2nd ICISTSD aims to bring together academia, researchers, scholars, professionals in global environment to exchange recent research and share experiences about any aspects of sustainable development. This event provides an opportunity for all to network, share ideas, matchmaking, and present their recent research to a global community. The 2nd ICISTSD provides a platform for exchange and initiating collaboration in research and technology with local, national and international stakeholders, also to disseminate research results and its application to communities or industries. The conference on the latest findings, innovations, trends, and practical concerns and challenges in these fields are also encouraged. With the full support and acknowledgment from all the delegates of ICISTSD, it is expected to give better outcome for further collaboration or project.



"Strategic Innovation for the Acceleration of the Sustainable Life Resilience".



- Sustainable regional planning, tourism, community development and policy
- Disaster prevention and management
- Environmental engineering and management
- Sustainable material and infrastructure
- Smart transportation management
- Sustainable agriculture and food sovereignty
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- Agriculture smart farming
- Medical and health sciences
- Pharmaceutical sciences
- Pharmacy practicis and clinical pharmacy



EMAR BO S



"Strategic Innovation for the Acceleration of the Sustainable Life Resilience"





#### Time zone: Central Indonesia Time (WITA) GMT+8

- 09.00 09.30 Registration
- 09.30 10.00 Welcoming remark

Rector of Universitas Mahasaraswati Denpasar

10.00 - 11.00 Keynote Speaker

Ir. Bambang Susantono, MCP., MSCE., Ph.D

- 11.00 13.00 Invited speaker Room A & B
- 13.00 13.30 Break and briefing for parallel session
- 13.30 16.30 Parallel session
- 16.30 17.00 Elaboration and Closing

Time	Room A	Room B
11.00 - 11.30	Prof. Lal Mervin Dharmasiri	Prof. Dr. I Ketut Arnawa, MP
	University of Kelaniya, Srilanka	Universitas Mahasaraswati Denpasar, Indonesia
11.30 - 12.00	Apr. Maria Malida V.S., S.Farm., MP	Ronaldo da Costa Ximenes, SP., M.Si
	Universitas Mahasaraswati Denpasar, Indonesia	Universidade Oriental Timor Lords'e, Timor Leste
12.00 - 12.30	Reda Kachmar, PhD	Khaled Bouchama, Ph.D
	Universite Moulay Ismail, Morroco	Universite Abbes Laghrour Khenchela, Algeria
12.30 – 13.00	Dr. Ir. I Ketut Sumantra, MP	Ir. I Ketut Diartama Kubon Tubuh, ST., MT
	Universitas Mahasaraswati Denpasar, Indonesia	Universitas Mahasaraswati Denpasar, Indonesia





The event will be held virtually on Zoom Cloud Meeting as follow:

Zoom Link	: https://bit.ly/2ndICISTSD
Meeting ID	: 810 0135 6936
Passcode	: 106207

- The participants are suggested to use the virtual background and turn on the video during the conference. The virtual background is available on the conference website
- The participants have to use the name as same as on the registration. Especially for the presenters, use the abstract ID before the name (Example: P21\_I Made Wahyu Wijaya). The abstract ID can be found on the LoA or the abstract section below
- The participants should be joined 15 minutes before the opening
- All participants will be placed in the main room for opening and the keynote session. In the invited speaker session, the participants are welcome to enter the breakout room: Room A or Room B according to the invited speakers
- In the parallel session, all presenters have to enter the rooms according to the groups they are belong to. The room information can be seen below. All participants are welcome to join the parallel presentation session in all rooms
- The participants are allowed to enter a presentation rooms and also jump into other rooms by themselves.
- The parallel session will be led by a moderator and an operator. There will be also some panelist guest. All presentations will be presented in video which is played by the operator and presenter should be ready for the Q and A session afterwards.





- Presentation video have to be sent to the committee, at least before the parallel session. Please contact the moderator or the committee if there is any difficulties due to video submission. There will be no live presentation during the parallel session.
- A presenter is provided 15 minutes in total (10 minutes for video and 5 minutes for Q&A). During the presentation, all participants will be muted except the presenter. The next presenter has to be ready 5 minutes before.
- There will be awarding for Best Presentation from each rooms and Best
  Participant
- After the parallel session, all participants will be directed to the main room for the elaboration and closing ceremony.
- Please kindly contact the committee if there is any inqueries before or during the program



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#### ROOM 1 Moderator : Prof. Dr. Ir. I Ketut Widnyana, M.Si

Time	Abstract ID	Presenter	Title
13.30 - 13.45	P11	Gusti Ayu Nyoman Erawati	Analysis of Strengthening Implementation of Mother's Class Program in Stunting Prevention Effort in Denpasar City
13.45 - 14.00	P12	Ni Ketut Ana Erawati	STBM Program: Strategy For Implementation Of Pillar 1 Community-Based Total Sanitation in Denpasar
14.00 - 14.15	P13	Ni Wayan Rahadi	Constraints of the Covid-19 Task Force in Implementing Micro PPKM: A Qualitative Study in Pemogan Village, Denpasar City
14.15 - 14.30	P14	Anak Agung Kartika Ekasari	Collaborative Mangrove Ecosystem Management Srategy to Support Coastal Ecotourism in Pemogan Village, Denpasar City
14.30 - 14.45	P15	I Wayan Sulistyobudhi	Bird Diversity and Community Perception of Bird Conservation Based on Local Wisdom in Bukit Demulih Indigenous Forest
14.45 - 15.00	P16	Imam Ilmiah	The Development of Sangiang Village as A Community-Based Tourism Destination
15.00 - 15.15	P17	Okti Krishna Wardhani	Mangrove Ecosystem Vulnerability Mapping Based on Physical, Biological and Anthropogenic Aspects in The Ngurah Rai Forest Park Area Based on Geographic Information System
15.15 - 15.30	P34	l Made Wahyu Wijaya	Temple Waste Generation in Pejaten Village, Tabanan
15.30- 15.45	P35	I GD Yudha Partama	Development of Integrated Digital Tourism Village Based on Geographic Information System and Village Tourism Application (SIGADis) in Kerambitan District, Tabanan Regency

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#### ROOM 2

Moderator : Dr. Ir. Ni Putu Pandawani, M.Si

Time	Abstract ID	Presenter	Title
13.30 - 13.45	P31	Cok Gede Agung Panji	Strategies to Increase Health Professionals in Solid Medical Waste Sorting at Bangli General Hospital
13.45 - 14.00	P32	l Wayan Eka Suparwata	Long-term analysis of Global Warming and Climate Change Issues in Subak Jatiluwih, Bali
14.00 - 14.15	P33	Sakawesi Vidya	Persepsi dan Perilaku Masyarakat dalam Pengelolaan Limbah Masker di Kota Denpasar pada Masa Covid-19
14.15 - 14.30	P36	I GD Yudha Partama	Early Warning System Based on Digital Applications in Realizing Disaster-Safe Tourism Villages
14.30 - 14.45	P81	I Wayan Sudirta	Ecological, Economic and Social Impacts of the Integrated Agricultural System of Mina Padi In Subak Empelan Demulih Bangli
14.45 - 15.00	P91	Rayen Mokhati	Contribution to the study of the preventive effect of Zinc on Deltamethrin's Nephrotoxicity in rats
15.00 - 15.15	P61	Ketut Sumantra	Cultivators' Attitudes, Knowledge and Actions Shrimp To Pollution Waters in Negara-District
15.15 - 15.30	P62	Mimin Sundari Nasution	Implementation of The Development of Integrated Pineapple Agriculture Area In Bukit Batu District, Bengkalis Regency, Riau Province
15.30 - 15.45	P63	Komang Dean Ananda	Education on Segregation and Processing of Goat Manure into Organic Fertilizer as an Effort to Realize a Waste-Free Plant-Cattle System in Kesiut Village Kerambitan District Tabanan Regency

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CERTIFICATE

No. K.1497/A.51.02/Unmas/IX/2022

This is awarded to

## Ketut Sumantra

### As Presenter

in the 2nd International Conference of Innovation on Science and Technology for Sustainable Development (ICISTSD) held virtually on September, 9th 2022 and organized by Postgraduate Program, Universitas Mahasaraswati Denpasar



CULTIVAR ADAPTATION AND AGROECOSYSTEM FACTORS AFFECTING GULAPASIR SALACCA IN SEVERAL DEVELOPMENT AREAS IN BALI

2<sup>nd</sup> International Conference on Innovation of Science and Technology for Sustainable Development (ICISTD) Bali, Indonesia, September, 9<sup>th</sup> 2022





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#### Introduction

#### **Research Methods**

Results and Discussion

#### Conclusion

k Temu, Pupuan, Kabupaten Tabanar,



## WHY SALACCA ARE IMPORTANT

Bali salacca plants (Salacca zalacca var. Amboinensis) originaly from Karangasem Bali. There are 16 type of Bali salak; and the good one is Gulapasir salacca

> fruit can be harvested 2-3 times

sweet fruit flavors although the fruit is still young

price 4-5 times more expensive than bali salak



## INTRODUCTION

At the beginning, the developments of Gulapasir salacca were limited in Karangasem regency. Now, it has been extended to the other regencies such us Tabanan, Badung, Buleleng, Gianyar and Bangli regencies





#### POPULATION, PRODUCTION AND PRODUCTIVITY OF SALAK IN EACH REGENCY/CITY IN BALIYEAR 2021

Kabupaten	Plant Number (tree)	Production (Quintal)	Productivity (Quintal/Tree)
Jembrana	12,225	447	0.036
Tabanan	112,812	2,640	0.023
Badung	13,924	367	0.026
Gianyar	12,368	291	0.023
Klungkung	2,555	55	0.022
Bangli	62,065	1,738	0.028
Karangasem	8,389,031	222,673	0.027
Buleleng	7,262	213	0.029
Denpasar	-	-	-
Total BALI	8,612,242	228,425	-
Average Bali	1,076,530	28,553	0.026

Source: Department of Agriculture, Food Crops, Horticulture and Plantation of Bali Province (2021).

The population of salak plants in 2021 is 8,612,242 trees. The spread of salak is almost found at each Regency in Bali except in Denpasar city, with the highest population and production located in Karangasem district.



#### THE DIFFERENT OF SALACCA



### Salacca zalacca var. amboinensis

Decoesis:

Inflorescence are male and female on different plants

Monoesis :

Separate male flowers and female flowers, but there is in one plant

It can be developed by using seeds(agamospermi) (Kriswiyanti *et al.,* 2008)





Superiority salak Gulapasir makes communities in other areas, both inside and outside Bali province, interested in cultivating commodities.



Problems farmers face in the development of salak Gulapasir outside Sibetan-Karangasem are quality fruit and price sold cheaper.



### **THE QUESTION IS ?**

Do zalacca from origin (Sibetan) has the same fruit yield and quality as in the new development area



The influence of agroecosystems on the Gulapasir salak

## Research aims

## Expected

Evaluating the adaptation of Gulapasir salak cultivars in six development areas Evaluate the production of fruit Gulapasir salak Analyzing agro-ecosystems in

areas that are dominant in cultivating Gulapasir salak Solutions to support and improvements in the development of agribusiness salak

Zalacca technology in new developing areas

### **RESEARCH METHOD**

- The study was carried out in Karangasem Regency, Bangli, Gianyar, Badung, Tabanan, and Buleleng Regencies, from June 2021- October 2021.
- The Tools used include GPS map 60 CSX, light meter, Thermo hygrometer, soil moisture tester, drill, meter, scale, oven, and tools laboratory for soil analysis

Research using survey methods includes: secondary data collection, field observations, sample observations, interviews, soil and plant organ sampling, and laboratory analysis



### **RESEARCH FLOW CHART**

1 Evaluating salak cultivars in six development areas. Evaluation by interviewing 50 farmer include:

-Number and types of salak cultivar

-Salak Cultivation Techniques that have been carried out

-The area of the salak plant being worked on

2. Evaluating plant characters including fruit production and quality (by RCD)

3. Comparing the agro-ecosystems of the areas that planting the Salak Gula Pasir is greater than 50 percent.



#### Data Analysisis :

- 1. Data were analyzed using variance analysis with Randomized Completely Design on a 5% level.
- 2. The two area development of Salak Gulapasir with 50% population dominant is analyzed with *Principal Component Analysis* ).

#### Salak cultivars in each development area in Bali

No	Cultivars	Karang asem	Bangli	Gianyar	Badung	Tabanan	Buleleng
1	Gulapasir	+(63.52)	+(30.00)	+(20,0)	+(35,0)	+(80.04)	+(48.00)
2	Nangka	+(17.7)	+(40.00)	+(50,0)	+(50,0)	+(15.23)	+(39,62)
3	Nenas	+(5.5)	+(10.00)	+(10,0)	+(10,0)	+(0,10)	+(2,38)
4	Gondok	+(12.7)	+(20.00)	+(20,0)	+(5.00)	+(2.28)	+(10.00)
5	Putih	+(0.06)	-	-	-	+(0.07)	-
6	Merah	+(0.10)	-	-	-	+(2.28)	-
7	Bingin	+(0.09)	-	-	-	-	-
8	Injin	+(0.01)	-	-	-	-	-
9	Sudamala	+(0.06)	-	-	-	-	-
10	Layu	+(0.01)	-	-	-	-	-
11	Gonong	+ (0.01)	-	-	-	-	-
12	Jake	+(0.03)	-	-	-	-	-
13	Kelapa	+(0.07)	-	-	-	-	-
14	Penyalin	+(0.06)	-	-	-	-	-
15	Pade	+(0.06)	-	-	-	-	_
16	Muani	+(0.027)	_	_	-	_	_

Table 1 shows that Karangasem Regency and District Tabanan show a population plant salak Sugar bigger than 50%. Whereas Regency Bangli, Gianyar, Badung, and Regencies Buleleng salak Sugar respectively 30%, 20%, 35%, and 48%. Cultivars salak found at the development area diverse enough. The difference is based on shape, aroma, taste, skin color .The results of the study in 2021, the number of cultivars found was 16 cultivar.

The dominant was, Nangka, Nenas, Gondok and Salak Gulapasir

The limited population was: salak layu, salak sudemala, salak bingin, salak pada, salak gonong, salak Kelapa, Salak Putih , salak injin and salak muani salak Boni, Jaka



Salak Lanang

Salak penyalin

Salak Sudamala

Salak Nenas

## **Characteristics of Fruit**

Location	Number of Fruit per bunch	Weight of fruit per grain (g)	Thick flesh (cm)	Total Acid (%)	TSS (%brix)
Busungbiu-Buleleng	20.00 ab	53.70 ab	0.65 ab	0.45 ab	20.40 a
Pupuan -Tabanan	23.00 ab	58.25 a	0.78 ab	0.36 b	19.00 ab
<b>Evening-Badung</b>	22.50 ab	45.25 c	0.65 ab	0.36 b	17.40 b
Payangan-Gianyar	20.50 ab	45.20 c	0.60 b	0.45 ab	18.70 ab
Yangapi-Bangli	17.50 b	46.25 bc	0.65 ab	0.54 a	17.30 b
Sibetan - Karangasem	24.25 a	59.88 a	0.88 ab	0.45 ab	18.60 ab
LSD 5%	6.03	8.06	0.27	0.17	1.95

Numbers followed by the same letter in the same column are no different on BNT 5%

The results showed significant differences in the weight, number, thick flesh, total acid and TSS of fruit. Salak originating from Sibetan- Karangasem and Pupuan- Tabanan showed the best value for the characters of the fruit tested.

- 1. The amount and weight of fruit are strongly influenced by the cultivation technique
- Based on 12 cultivation activities, which were evaluated by giving a score of : 1 1.9 = not very good; 2 -2.9 = poorly; 3-3,9 = Good; 4-5 = Very good.

	Regency						
Activity cultivation	Karangasem	Tabanan	Bangli	Gianyar	Badung	Buleleng	
Planting Distance	5.0	5.0	2.3	2.3	5.0	5.0	
Arrangement midrib	4.3	2.3	2.0	2.0	2.0	2.0	
Amount midrib left	4.0	3.3	2.3	2.0	2.3	2.3	
Shoot Cleaning	4.0	4.0	3.0	2.5	3.0	3.0	
Arrangement shade	4.3	3.7	2.5	2.5	3.0	3.0	
Type Fertilizer	4.6	3.4	2.1	1.8	2.7	2.6	
Dose Fertilizer	2.0	1.1	1.3	1.1	0.5	0.5	
Watering	1.8	1.7	1.0	1.0	1.0	1.0	
Pest control	2.0	1.0	1.0	1.0	1.0	1.0	
Fruit Thinning	4.2	3.0	1.0	1.0	1.0	1.0	
Age of harvested fruit	4.2	3.5	1.8	1.7	1.5	1.0	
Total score	40.4	32.0	20.4	19.0	23.0	22.4	
Average score	3.7	2.9	1.9	1.7	2.1	2.0	
Remarks	Good	Poorly	NVG	NVG	Poorly	poorly	

#### Climate and soil characteristics in six locations

No	Parameter	Sibetan- KR.Asem	Yangapi Bangli	Buahan Gianyar	Petang Badung	Pupuan Tabanan	Bongan cina Buleleng
1	Rainfall (mm)	2886.5	4154	2774	4498.5	4533	4077
2	Average temperature (°C)	26	25	26	25	25	26
3	RH (%)	82	84	80	80	82	77
4	C-org(%)	3,78 (h)	2.72 (m)	2.46 (m)	2.67 (m)	4,45(h)	3.47(h)
5	Soil Textur	Sandy loam	Sandy Ioam	Sandy loam	Sandy loam	Dusty clay	Dusty clay
6	N total (%)	0.25 (m)	0.24 (m)	0.29 (m)	0.26 (m)	0.17 (l)	0.15 (I)
7	P2O5 (ppm)	45,92(vh)	46.85 (h)	38.62 (m)	38.62 (m)	10.66 (I)	9.50 ( I)
8	K2O (ppm)	20,83 (m)	19.77 (I)	18.47 (I)	20.17 (m)	19.25 (m)	21.98 (m)
9	рН (Н2О)	6,05(slightly acidic)	6.15(sa)	5.81(sa)	5.87(sa)	5.74(sa)	5.81(sa)
10	KTK(me/100 g)	24.66 (m)	24.66 (m)	20.72 (m)	20.59 (m)	32.83 (h)	35.83 (h)
11	KB (%)	24.48 (vh)	113.68(vh)	79.79(vh)	115.61(vh)	72.31(vh)	60.08(vh)

# Agroecosystems factors affecting fruit production

Based on the data, the cultivar SGP is superior and dominating in the district Karangangsem (63.52%) and Tabanan Regency with a percentage of 80.04. While in four districts, other domination of SGP is below 50 %. It is means that the salak Gulapasir has not yet become a superior cultivar in each area.

Superiority owned by salak Sugar in the region is required to study the inhibiting factors and strategies for improvement

Environmental factors and Cultivation that affects production is analyzed with analysis factor regression

## **Soil Factor Analysis**

Component	Eigenvalues (Initial Eigenvalues)				
soil	Total	% variation	Cumulative %		
1	4.035	40,346	40,346		
2	1,940	19.403	59 <i>,</i> 750		
3	1.308	13.084	72.834		
4	1.078	10,779	83.613		
5	0.500	5.003	88,617		
6	0.463	4.625	93.242		
7	0.379	3,790	97.032		
8	0.202	2,023	99 <i>,</i> 055		
9	0.086	0.857	99.912		
10	0.009	0.088	100,000		

The results show that ten soil variables formed four factors together, Factor together one with percentage variance = 40,345. Factor together two, three, and four with percentage variance 19,403, 13,084, and 10,779 respectively

<u>Score component > 0.5</u>: soil-1 consists of levels of N, P, CEC, KB, sand, and dust. The soil component -2 consists of C - organic and percentage clay. Soil components -3: pH and soil components -4 K content

### **Climate Factor Analysis**

Component	Eigenvalues (Initial Eigenvalues)					
	Total	% variation	Cumulative %			
1	1,797	44,913	44,913			
2	1.666	41,644	86.557			
3	.474	11.846	98.404			
4	.064	1,596	100,000			

The analysis result shows that four variable climates formed two factors together, that is factor together one with percentage variance = 44,913 and factor together two with percentage variance = 41,644

component factor  $\geq 0.5$ , climate component -1: rainfall and light interception, climate component -2: temperature and humidity

## Cultivation factor analysis

Component	Eigenvalues (Initial Eigenvalues)					
_	Total	% variation	<b>Cumulative %</b>			
1	2,582	36,891	36,891			
2	1,764	25,195	62.086			
3	0.913	13.041	75.127			
4	0712	10.172	85,299			
5	0.531	7.588	92.887			
б	0.317	4,522	97.409			
7	0.181	2,591	100,000			

Analysis result shows, from seven variables, cultivation formed two factors together, that is factor together one with percentage variance = 36,891 and factor together two with percentage variance = 25,195

Score component factor  $\geq 0.5$ , cultivation component -1 consists of Settings midrib/shoot, setting shade, fertilization, and weeding. component -2 consists of watering and controlling pest disease

### Factors Affecting the Weight of Zalacca Fruit.

The results of the analysis of the main components of soil, climate and cultivation techniques, there are nine factors that form the basis of consideration as independent variables (X) which affects the weight of the fruit (Y).

The nine new formation factors consist of ten soil variables forming four common factors (soil-1, soil-2, soil-3 and soil-4), four climate variables forming two common factors (climate-1 and climate-2), seven cultivation variables form two common factors (cultivation-1 and cultivation-2) and dumi factors (Tabanan and Karangasem locations)

### Results of partial regression analysis of fruit weight

Model	Unstandardize	d Coefficients	Standardized Coefficients	t hit.	Sig.
	В	Std. Error	Beta		
(Constant)	892.023	134.086		6653 **	0.000
Dumi (location)	689,073	260,068	1,292	2,650 **	0.019
Climate-1	89,371	104,872	0.328	0.852 ns	0.408
Climate-2	70,487	71.163	0.259	0.990 ns	0.339
Soil-1	-325,649	90,458	-1.196	-3,600 **	0.003
Soil-2	-114.801	45,748	-0.422	-2,509 *	0.025
soil-3	-180.657	66,476	-0.663	-2,718 *	0.017
Soil-4	20,771	47,874	0.076	0.434 ns	0.671
Cultivation-1	-12,951	63.479	-0.048	-0.204 ns	0.841
Cultivation-2	-32.119	51,566	-0.118	-0.623 ns	0.543

soil-1 consists of levels of N, P, CEC, KB, sand, and dust. Soil-2 consists of C - organic and percentage clay. Soil components -3: pH Soil-4 K (potassium) content

### **CONCLUSSION AND SUGGESTION**

Salak Gulapasir cv is superior and dominates in the Karangangsem and Tabanan Regencies with 63.52% for Karangasem and 80.04% for Tabanan, while in four districts, is below 50 %.

Cultivars of salak Gulapasir planted in Karangasem and Tabanan show weight fruit, quality fruit and thick flash higger compared salak that comes from districts Bangli, Gianyar, Badung, and Buleleng whereas the sugar content and total acid show value that is not different with salak that comes from Gianyar, Badung, and Buleleng,

Factor the plant locations and soil factors, which include levels of N, P, CEC, KB, soil texture, C - organic content, and soil pH, significantly affect fruit weight



Gulapasir salak development in new areas in Bali, especially in Tabanan Regency, needs to improve the physical and chemical properties of the soil through fertilizer, liming and irrigation.



## Thank you



