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## **LAMPIRAN**

Lampiran 1. Analisis regresi hubungan panjang bobot ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) pada bulan Juli 2022

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,980558184
R Square	0,961494353
Adjusted R Square	0,961176125
Standard Error	0,052552184
Observations	123

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	8,344287	8,34428677	3021,396243	1,96E-87
Residual	121	0,33417	0,00276173		
Total	122	8,678456			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	4,530722696	0,113833	39,8016552	2,30095E-71	-4,75608	-4,30536	-4,75608	-4,30536
X Variable 1	2,918670073	0,053098	54,9672288	1,96003E-87	2,813548	3,023792	2,813548	3,023792

Lampiran 2. Analisis regresi hubungan panjang bobot ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) pada bulan Agustus 2022

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,980000772
R Square	0,960401513
Adjusted R Square	0,960096909
Standard Error	0,043586292
Observations	132

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	5,98987	5,98987	3152,95368	5,03E-93
Residual	130	0,24697	0,0019		
Total	131	6,23684			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-4,90205458	0,11567	-42,3802	5,7743E-78	-5,13089	-4,67322	-5,13089	-4,67322
X Variable 1	3,092020612	0,05507	56,15117	5,0336E-93	2,983079	3,200962	2,983079	3,200962

Lampiran 3. Analisis regresi hubungan panjang bobot ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) pada bulan September 2022

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,982221914
R Square	0,964759888
Adjusted R Square	0,964509958
Standard Error	0,036535149
Observations	143

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	5,152557	5,152557	3860,122	2,5E-104
Residual	141	0,188209	0,001335		
Total	142	5,340767			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-4,55856703	0,097572	-46,7198	1,11E-87	-4,75146	-4,36567	-4,75146	-4,36567
X Variable 1	2,9169321	0,046949	62,12988	2,5E-104	2,824117	3,009747	2,824117	3,009747

Lampiran 4. Analisis regresi hubungan panjang bobot ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) jantan

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,97983458
R Square	0,960075803
Adjusted R Square	0,959943604
Standard Error	0,046114041
Observations	304

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	15,4433899	15,4433899	7262,33502	2,9E-213
Residual	302	0,64220443	0,0021265		
Total	303	16,0855943			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	4,805799594	0,07482729	-64,225225	3,9547E-178	-4,95305	-4,65855	-4,95305	-4,65855
X Variable 1	3,043327832	0,03571171	85,2193348	2,8644E-213	2,973053	3,113603	2,973053	3,113603

Lampiran 5. Analisis regresi hubungan panjang bobot ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) betina

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,984203663
R Square	0,96865685
Adjusted R Square	0,968316164
Standard Error	0,045745795
Observations	94

  

<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	5,950007	5,95000732	2843,250652	5,6001E-71
Residual	92	0,192526	0,00209268		
Total	93	6,142534			

  

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-4,61830265	0,118568	-38,950619	5,7831E-59	-4,8537892	-4,38282	-4,85379	-4,38282
X Variable 1	2,9536216	0,055392	53,3221404	5,60006E-71	2,84360825	3,063635	2,843608	3,063635

Lampiran 6. Uji statistik koefisien regresi keseluruhan ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) antara Bulan Juli dan Agustus.

$$\begin{aligned}
 JKS_1 &= \sum (Y_1 - \bar{Y}_1)^2 - \frac{\sum (X_1 - \bar{X}_1) (Y_1 - \bar{Y}_1)}{\sum (X_1 - \bar{X}_1)^2} \\
 &= \sum (8,6785) - \frac{\sum (2,8589)}{\sum (0,9795)} \\
 &= 0,3342
 \end{aligned}$$

$$\begin{aligned}
 JKS_2 &= \sum (Y_2 - \bar{Y}_2)^2 - \frac{(\sum (X_2 - \bar{X}_2) (Y_2 - \bar{Y}_2))^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \sum (6,2368) - \frac{\sum (1,9372)}{\sum (0,6265)} \\
 &= 0,2470
 \end{aligned}$$

$$\begin{aligned}
 S_p^2 &= \frac{JKS_1 + JKS_2}{(n_1 - 2) + (n_2 - 2)} \\
 &= \frac{0,3342 + 0,2470}{(123 - 2) + (132 - 2)} \\
 &= 0,0023
 \end{aligned}$$

$$\begin{aligned}
 t &= \frac{(b_1 - b_2)}{\sqrt{\text{Var}(b_1 - b_2)}} \\
 &= \frac{(2,9186 - 3,0920)}{\sqrt{0,0778}} \\
 &= 1,6564
 \end{aligned}$$

$$\begin{aligned}
 \text{var}(b_1 - b_2) &= \frac{S_p^2}{\sum (X_1 - \bar{X}_1)^2} + \frac{S_p^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \frac{0,0023}{0,9795} + \frac{0,0023}{0,6265} \\
 &= 1,9695
 \end{aligned}$$

$$t_{0.05(330)} = 1,6564$$

Lampiran 7. Uji statistik koefisien regresi keseluruhan ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) antara Bulan Juli dan September.

$$\begin{aligned}
 JKS_1 &= \sum (Y_1 - \bar{Y}_1)^2 - \frac{\sum (X_1 - \bar{X}_1) (Y_1 - \bar{Y}_1)}{\sum (X_1 - \bar{X}_1)^2} \\
 &= \sum (8,6785) - \frac{\sum (2,8589)}{\sum (0,9795)} \\
 &= 0,3342
 \end{aligned}$$

$$\begin{aligned}
 JKS_2 &= \sum (Y_2 - \bar{Y}_2)^2 - \frac{(\sum (X_2 - \bar{X}_2) (Y_2 - \bar{Y}_2))^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \sum (5,3408) - \frac{\sum (1,7664)}{\sum (0,6056)} \\
 &= 0,1882
 \end{aligned}$$

$$\begin{aligned}
 S_p^2 &= \frac{JKS_1 + JKS_2}{(n_1 - 2) + (n_2 - 2)} \\
 &= \frac{0,3342 + 0,1882}{(123 - 2) + (143 - 2)} \\
 &= 0,0020
 \end{aligned}$$

$$\begin{aligned}
 t &= \frac{(b_1 - b_2)}{\sqrt{\text{Var} (b_1 - b_2)}} \\
 &= \frac{(2,9187 - 2,9169)}{\sqrt{0,0730}} \\
 &= 1,7058
 \end{aligned}$$

$$\begin{aligned}
 \text{var}(b_1 - b_2) &= \frac{S_p^2}{\sum (X_1 - \bar{X}_1)^2} + \frac{S_p^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \frac{0,0020}{0,9795} + \frac{0,0020}{0,6056} \\
 &= 0,0730
 \end{aligned}$$

$$t_{0.05(330)} = 1,9691$$

Lampiran 8. Uji statistik koefisien regresi keseluruhan ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) antara bulan Agustus dan September.

$$\begin{aligned}
 JKS_1 &= \sum (Y_1 - \bar{Y}_1)^2 - \frac{(\sum(X_1 - \bar{X}_1)(Y_1 - \bar{Y}_1))^2}{\sum(X_2 - \bar{X}_2)^2} \\
 &= \sum(6,2368) - \frac{\sum(1,9372)}{\sum(0,6265)} \\
 &= 0,2470
 \end{aligned}$$

$$\begin{aligned}
 JKS_2 &= \sum (Y_2 - \bar{Y}_2)^2 - \frac{(\sum(X_2 - \bar{X}_2)(Y_2 - \bar{Y}_2))^2}{\sum(X_2 - \bar{X}_2)^2} \\
 &= \sum(5,3408) - \frac{\sum(1,7664)}{\sum(0,6056)} \\
 &= 0,1882
 \end{aligned}$$

$$\begin{aligned}
 S_p^2 &= \frac{JKS_1 + JKS_2}{(n_1 - 2) + (n_2 - 2)} \\
 &= \frac{0,2470 + 0,1882}{(132 - 2) + (143 - 2)} \\
 &= 0,0016
 \end{aligned}$$

$$\begin{aligned}
 t &= \frac{(b_1 - b_2)}{\sqrt{\text{Var}(b_1 - b_2)}} \\
 &= \frac{(3,0920 - 2,9169)}{0,0722} \\
 &= 1,8073
 \end{aligned}$$

$$\begin{aligned}
 \text{var}(b_1 - b_2) &= \frac{S_p^2}{\sum(X_1 - \bar{X}_1)^2} + \frac{S_p^2}{\sum(X_2 - \bar{X}_2)^2} \\
 &= \frac{0,0016}{0,6265} + \frac{0,0016}{0,6056} \\
 &= 0,0722
 \end{aligned}$$

$$t_{0.05(330)} = 1,9687$$

Lampiran 9. Uji statistik koefisien regresi keseluruhan ikan nila, *Oreochromis niloticus* (Linnaeus, 1758) antara jantan dan betina.

$$\begin{aligned}
 JKS_1 &= \sum (Y_1 - \bar{Y}_1)^2 - \frac{\sum (X_1 - \bar{X}_1) (Y_1 - \bar{Y}_1)}{\sum (X_1 - \bar{X}_1)^2} \\
 &= \sum (16,0855) - \frac{\sum (5,0745)}{\sum (1,6674)} \\
 &= 0,6422
 \end{aligned}$$

$$\begin{aligned}
 JKS_2 &= \sum (Y_2 - \bar{Y}_2)^2 - \frac{(\sum (X_2 - \bar{X}_2) (Y_2 - \bar{Y}_2))^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \sum (6,1425) - \frac{\sum (2,0145)}{\sum (0,6820)} \\
 &= 0,1925
 \end{aligned}$$

$$\begin{aligned}
 S_p^2 &= \frac{JKS_1 + JKS_2}{(n_1 - 2) + (n_2 - 2)} \\
 &= \frac{0,6422 + 0,1925}{(304 - 2) + (94 - 2)} \\
 &= 0,0021
 \end{aligned}$$

$$\begin{aligned}
 t &= \frac{(b_1 - b_2)}{\sqrt{\text{Var}(b_1 - b_2)}} \\
 &= \frac{(3,0433 - 2,9536)}{\sqrt{0,0662}} \\
 &= 1,7682
 \end{aligned}$$

$$\begin{aligned}
 \text{var}(b_1 - b_2) &= \frac{S_p^2}{\sum (X_1 - \bar{X}_1)^2} + \frac{S_p^2}{\sum (X_2 - \bar{X}_2)^2} \\
 &= \frac{0,0021}{0,6674} + \frac{0,0021}{0,6820} \\
 &= 0,0662
 \end{aligned}$$

$$t_{0.05(330)} = 1,9660$$

