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(// : // :)

(P<0.01)

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$$Y_t = a + bt^{0.5} + c \ln(t) \quad ($$

c b a

(DF)

()

$$Y_t = a + b t - c t^2 \quad ($$

(SGF)

SGF

()

$$Y_t = a - b t + c \ln(t) \quad ($$

RF

()

$$y_t = a + bt^{0.5} + ct \quad ($$

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$$R^2 = \text{SSM} / \text{SST}$$

SST

SSM

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1. Dave Function
 2. Singh & Gopal Function
 3. Regression Function
 4. Functions Fitting

... :
 a a
 .(Ln(a)= /)
 c b
)
 / (± /) / (± /) .(
 / / ()
 () / ()
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 .())
 Proc GLM (SAS
 ()
 () $y_{ijk} = HYS_i + NTD_j + \sum_{i=1}^4 b_i(x_i) + e_{ijk}$
 i NTD j k =y_{ijk}
 HYS
 i =HYS_i
 =NTD_j
 .() =x₁
 =x₂
 =x₃
 =x₄
 .() =b₄ b₃ b₂ b₁
 = e_{ijk}

c b

c b

()
(t)

)

b/c ()
t (b/c)

$$Y_{\max} = a (b/c)^b e^{-b}$$

$$S = -(b+1) \ln c$$

$$y = a \int_1^{305} t^b \exp^{-ct} dt$$

1. downhill shaped
2. Concave
3. Convex

(±)

IGF	PIF	EF	MLF	DF	SGF	RF	
/	/	/	/	/	/	/	
(/)	(/)	(/)	(/)	(/)	(/)	(/)	a
/	/	/	/	/	/	/	
(/)	(/)	(/)	(/)	(/)	(/)	(/)	b
/	/	/	/	/	/	/	
(/)	(/)	(/)	(/)	(/)	(/)	(/)	c
/	/	/	/	/	/	/	
(/)	(/)	(/)	(/)	(/)	(/)	(/)	R ²
$Y_t = a + be^{-0.05t} + ct$		$Y_T^{-1} = a + bt^{-1} + ct$		$\ln(y_t) = \ln(a) + b \ln(t) - ct$			
$Y_t = a - bt + c \ln(t)$		$Y_t = a + bt^{0.5} + c \ln(t)$		$Y_t = a + bt^{0.5} + c \ln(t)$			
		$Y_t = a + bt^{0.5} + ct$					

...

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(x)

(x)

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p<.05

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p<.01

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b

a

=

(b/c)

c

:

$$y = a \int_1^{305} t^b \exp^{-ct} dn \quad (S = -(b+1) \ln c)$$

$$(Y_{max} = a (b/c)^b e^{-b})$$

$$\ln(y_t) = \ln(a) + b \ln(t) - ct$$

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/ ±(/)

(Ln(a)) /

(b)

(a)

Exp /

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(c)

Exp)

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p<.05

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p<.01

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SAS

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(P<.01)

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(ln(a))

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PROC GLM

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