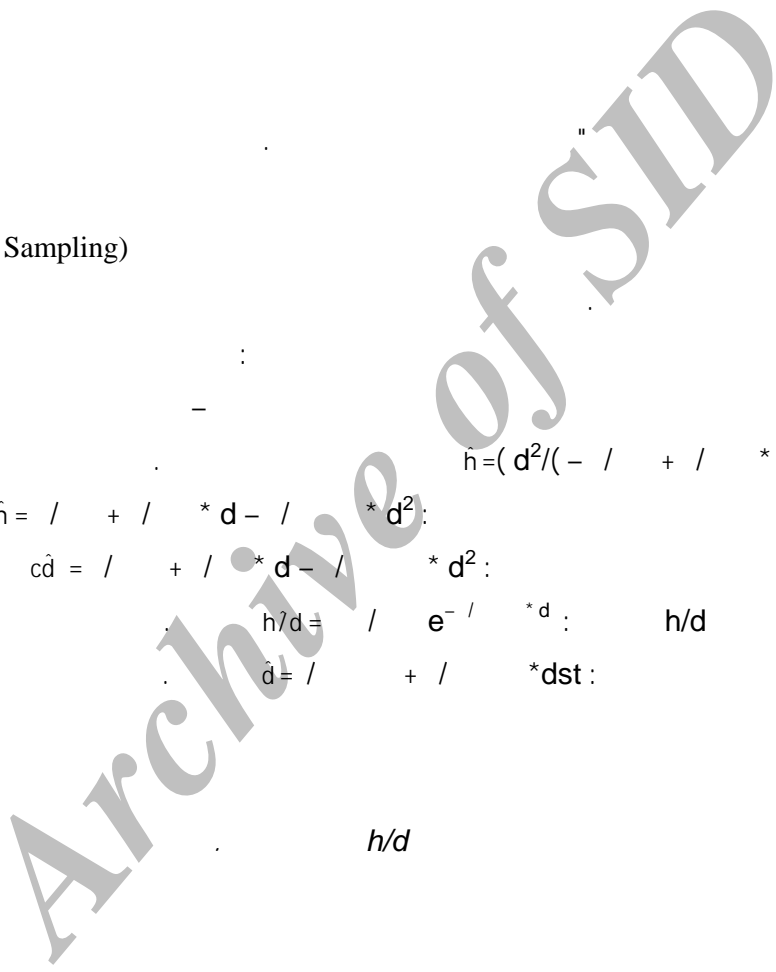


(Selective Sampling)



$$\hat{h} = (d^2 / (-1 + 1 * d + 1 * d^2)) + 1$$

$$C\hat{h} = 1 + 1 * d - 1 * d^2$$

$$c\hat{d} = 1 + 1 * d - 1 * d^2$$

$$h/d = 1 / e^{-1 * d} ; h/d$$

$$\hat{d} = 1 + 1 * d \text{ ; } \hat{d} \text{ ;}$$

h/d

/// : : /// :

(E-mail: namirani@nrf.ut.ac.ir)

(Fraxinus excelsior)

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	/	/	/	/		/		/		/	

(qh=d/d 0.1)

- /

:(h/d= h*100/d)

-

(Selective)

()

,(dst)

,(d)

()

(h)

(ch)

(shw)

(cd1, cd2)

spss

d/dst

-

(d/dst)

¹ Burschel & Huss

$$(csi=cd/h)$$

$$(cdi=cd/d)$$

$$(Shw * 100/h)$$

$$(ch*100/h)$$

$$(cf=cd_1*cd_2*\pi/4)$$

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$$\hat{d} = \frac{1}{r} + \frac{1}{r} * dst \quad \hat{r} = . / 956 ()$$

$$See = \frac{1}{r}$$

$$\hat{R}^2 = \frac{1}{r}$$

$$(ci = ch/cd)$$

$$(cpi = cd/ch)$$

$$d/dst = /$$

$$(\hat{r} = /)$$

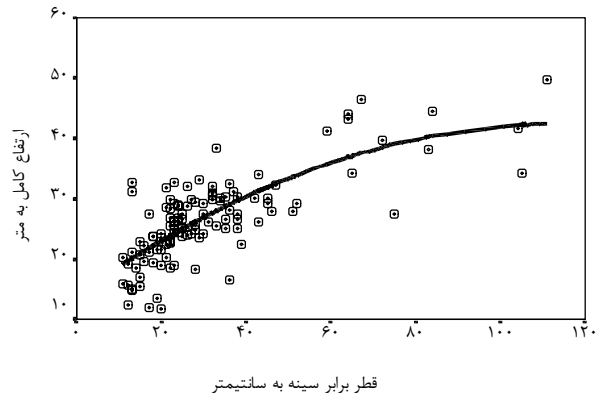
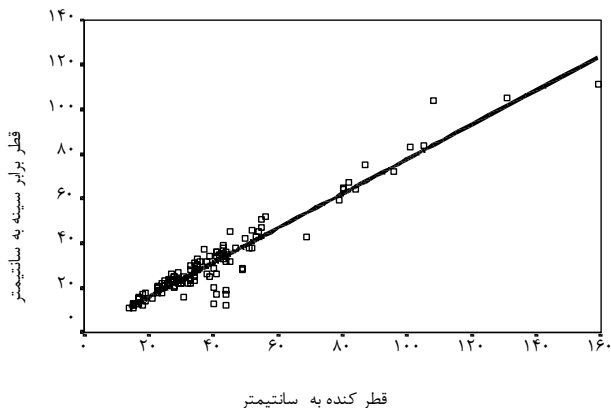
$$See = /$$

$$()$$

$$\hat{h} = (d^2 / (/ + / * d + / * d^2)) + / ()$$

$$()$$

$$(d/dst)$$



$$\hat{ch} = / + / * d - / * d^2 ()$$

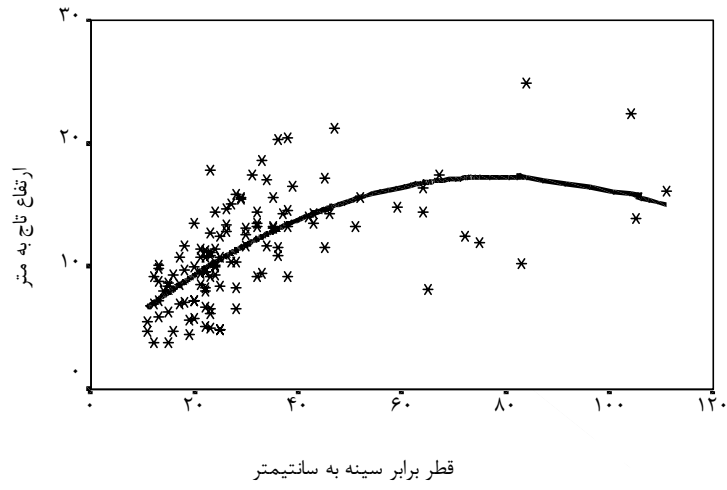
$$()$$

$$\hat{r} = /$$

$$See = /$$

$$R^2 = /$$

-



شکل ۳: ابر نقاط و رابطه بین قطر برابر سینه و ارتفاع تاج

See= /

$\hat{R}^2 = /$

$\hat{h}/d = / / *d+ / *d^2$ ()

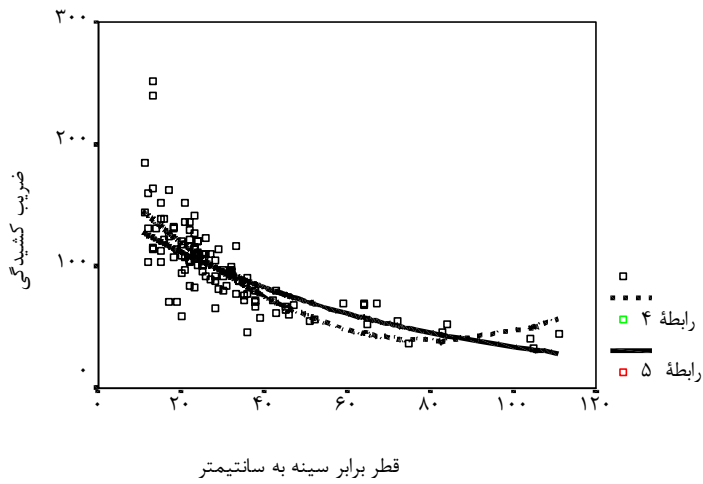
(Exponential)

($\hat{r} = /$)

$\hat{R}^2 = /$

$\hat{r} = /$

(h × /d)

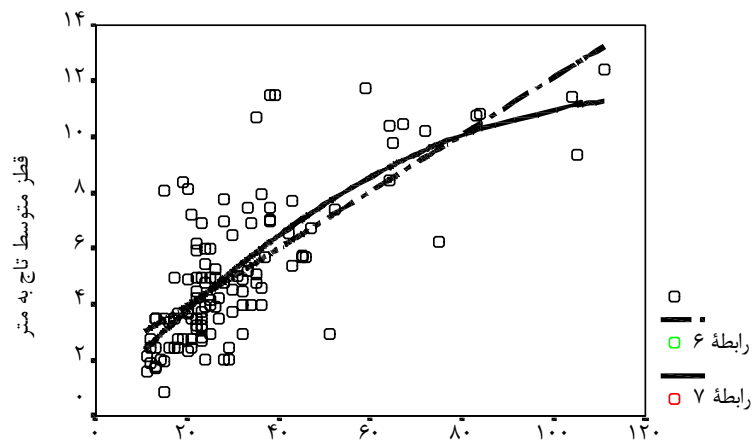


قطر برابر سینه به سانتیمتر

.See = /

$$\begin{aligned} &= / \quad R^2 = / \quad \hat{r} = / \quad h/d = / \quad e^{/ * d} \quad () \\ &\quad \hat{c}d = / + / \times d \quad () \quad \text{See} \quad () \\ \text{See} &= / \quad R^2 = / \quad \hat{r} = / \\ \hat{C}d &= / + / \quad d / \quad \times d^2 \quad () \end{aligned}$$

()

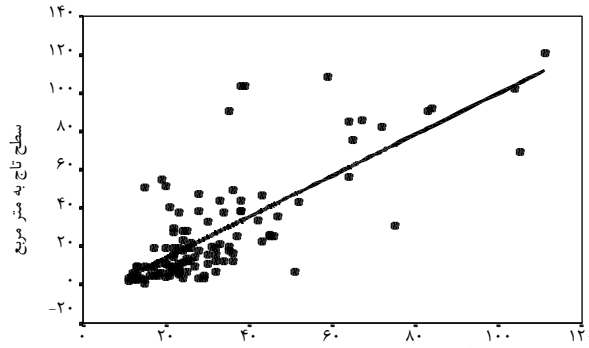


قطر برابر سینه به سانتیمتر

$$\hat{R}^2 = / \quad \hat{r} = /$$

$$\text{See} = /$$

$$\hat{C}A = / + / \times d \quad ()$$



قطر برابر سینه به سانتیمتر

$$\hat{C}DI = / \times e^{ / \times d} \quad ()$$

$$\hat{C}I = / \quad ()$$

$$\text{See} = / \quad \hat{R}^2 = / \quad \hat{r} = /$$

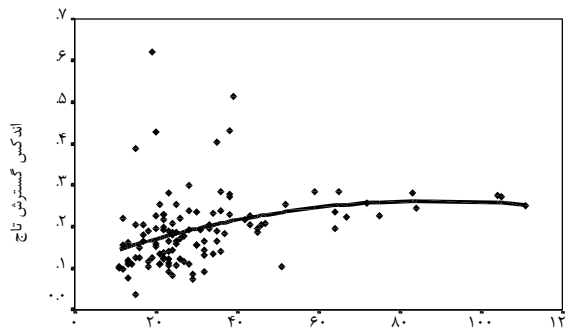
$$\hat{C}SI = / + / \times d + / \times d^2 \quad ()$$

$$\hat{C}I = / + / \times d + / \times d^2 \quad ()$$

$$\text{See} = / \quad \hat{R}^2 = / \quad \hat{r} = /$$

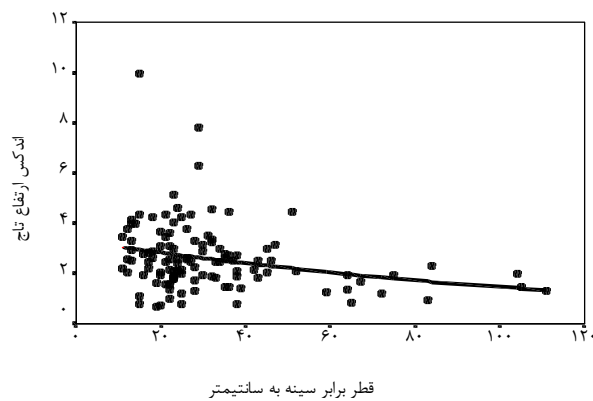
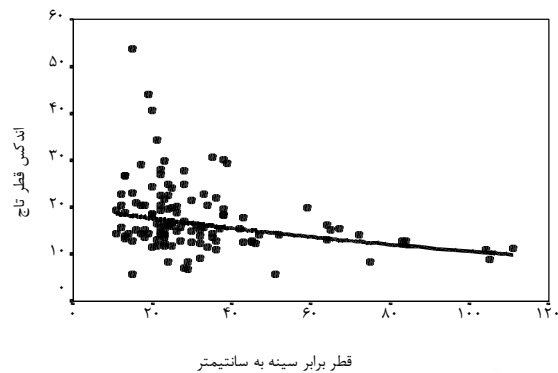
$$b_2$$

$$()$$



قطر برابر سینه به سانتیمتر

شکل ۷: ابر نقاط و رابطه بین قطر برابر سینه و اندکس گسترش تاج



:(cd/ch)

(

) /

($\bar{CPI} = /$)

()

$$R^2 = / \quad \hat{r} = /$$

(-)

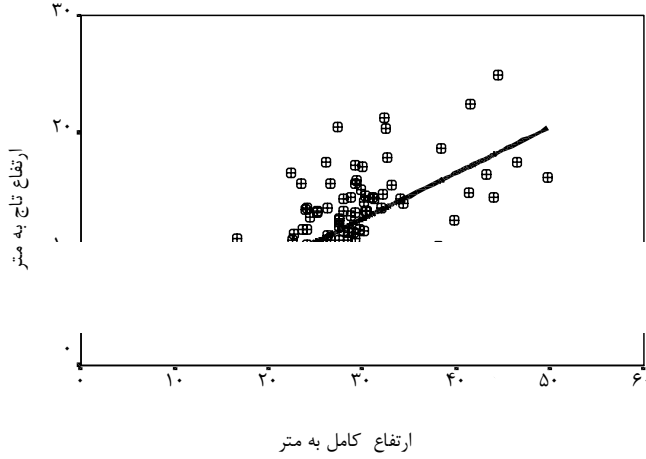
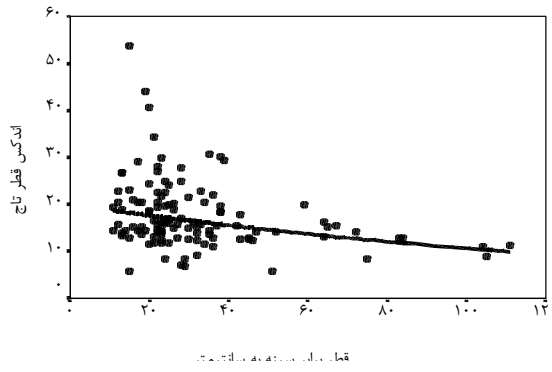
$$\hat{ch} = / + / \times h ()$$

See= /

()

() ,

(Kramer)



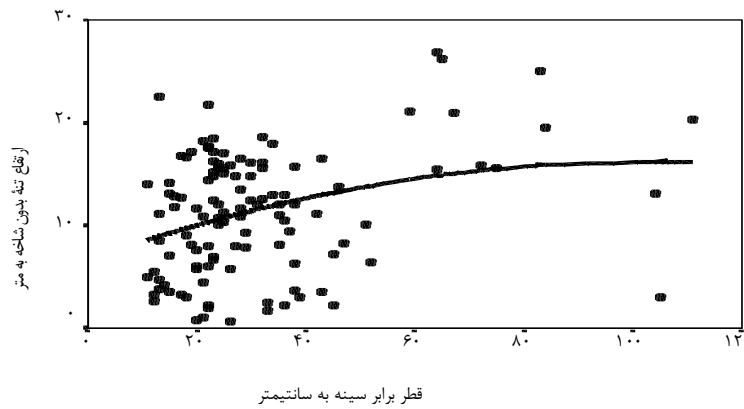
$$Shw \times / h =$$

See= /

شکل ۱۰: ابر نقاط و رابطه بین ارتفاع کامل و ارتفاع تاج

\hat{R}^2 \hat{r}

$$Shw = \frac{1}{b_2} \times d + \frac{1}{b_2} \times d^2 \quad ()$$



)"

"(

$$E\hat{y}_0 = \pm t_{n-2, \alpha} * S\hat{y}_0 \quad ()$$

$$S^2\hat{y}_0 = S^2_{ee} \left(1 + \frac{1}{n} + \frac{(x_0 - \bar{x})^2}{SSx} \right) \quad ()$$

(\hat{y}_0)

$$\hat{y}_0 \pm E\hat{y}_0 \quad ()$$

(y_0)

()

		d	h	ch	h/d	cd	cd	ca	csi	cdi	ci	ch	shw
		/	/	/	/	/	/	/	/	/	/	/	/
		/	/	/	/	/	/	/	/	/	/	/	/
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An Investigation of the Ash species inventory at Gorazbon District in the Educational and Research Forests of Kheiroodkenar

M. Namiranian¹

Abstract

An inventory of trees citing their different characteristics can be a useful guide in their management, as well as help them grow in a most proper way to shoot the targets of silviculture and finally a feasible forest enterprise. Knowledge about natural species, which are existing now but may not be naturally available in the future for the next generation is undoubtedly very useful. In Gorazbon district of educational and research forest of Kheiroodkenar of the Faculty of Natural Resources, 116 trees of Ash species were chosen and their necessary characteristics measured and evaluated (Selection Sampling). Some results of studying the relationships among the evaluated characteristics are:

1-Among the different models showing the relation between diameter at breast height, and the height of the tree the statistical-mathematical equation is a more suitable estimator.

$$\hat{h} = (d^2 / (-4.317 + 0.833 * d + 0.0172 * d^2)) + 1.30$$

2-The statistical-mathematical equation between diameter at breast and crown height is:

$$\hat{c}h = 2.989 + 0.361 * d - 0.00228 * d^2$$

3-The statistical-mathematical relation of diameter at breast and crown diameter is:

$$\hat{c}d = 0.567 + 0.176 * d - 0.00072 * d^2$$

4-The relation between diameter at breast and h/d coefficient is:

$$h/d = 150.1204e^{-0.014923*d}$$

5- The relation between diameter at breast height and stump diameter is:

$$\hat{d} = 0.397079 + 0.773406 * d_{st}$$

6- Other relations, which have been mentioned and illustrated in the results section of the article.

Keywords: Inventory, Tree height, Crown height, h/d Coefficient, Ash species.

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