NORMAL FOREST

Normal forest is an ideal forest

1. Normal series of age-gradations
2. Normal Increment
3. Normal Growing Stock

1. Conventional normal forest
2. Irregular normal forest

Normal series of age-gradations

Presence of trees of all ages, from one year old to rotation age in the forest, in appropriate quantity.

Should be in such proportion so that at their maturity same quantity will be available for felling

With *equal areas* under *same treatment* will give **equal annual sustained yield** only if the areas have *same productivity*

Each age-gradation with areas of equal productiveness is called "**Normal proportion**"

Normal increment

Increment attainable from fully-stocked stand arranged in normal distribution of age-classes/ age-gradations (*for a given species, locality and rotation*)

Normal growing stock

Is the sum of the volume of normal series of AGs/ ACs producing normal I

When age gradations are arranged normally and when they put on Normal I, the forest is said to contain NGS

When AG & I are **normal** ,GS will be normal as a consequence.

NGS varies with change in Rotation.
Change in R renders a normal Forest an abnormal one.

Total GS being normal is not a criterion of the forest being normal.

Kinds of abnormality

- Stocking
  - Over
  - Under
- Age class distribution
- Sub normal increment
- Volume is normal but AG/ AC are abnormal

Irregular normal forest (Normalcy in an irregular forest)

1. Trees of all size- classes/ crops of all age- classes are present in correct proportion to permit continued removal of an equal total of exploitable stems or crops without endangering further yields.

2. Each crop is putting on normal increment

3. No silvicultural/ other obstacles to continue felling of exploitable stem exist.

   1. Increasing the GS beyond a certain maximum may endanger regeneration

   2. GS of selection forest is better than average GS of even aged forest on similar sites

De Liocourt's Law

In a fully stock selection forest, the no. of stems fall off from one dia-class to the next in geometrical progression, which means that the % reduction in stem number from one dia- class to the one above is constant.

	UNEVEN AGED SAL CROPS - STAND TABLE											
	q1			q2			q3			q4		
dia - class	no	%		no	%		no	%		no	%	
20-30	153	58.3		101	56.4		67	53.3		44	51.1	
30-40	64	24.5	42	44	24.8	44	32	25.6	48	22	25.3	50
40-50	27	10.3	42	44	10.9	44	14.8	11.8	46	11.1	12.8	51
50-60	11.4	4.3	42	44	4.8	44	6.9	5.5	47	5.4	6.2	48
60-70	4.7	1.8	42	44	2.2	46	3.2	2.6	47	2.7	3.1	50
>70	2	0.8	44	44	1	45	1.5	1.2	46	1.2	1.4	45

Increment….