Forecast based upon Amount of Initial Inoculum

1. Stewart's wilt of ~~wart~~ corn.

C.O

Bacterial disease
⇒ Erwinia stewartii
⇒ Pantoea stewartii

Vector:-

⇒ corn flee beetle.

If the amount of beetle is high then more disease in up coming season. and vice versa.
If prolonged winter temperature remain low then it will kill the flee beetles. Some of mean temperature for 3 months from december to Febrary is -1°c then it will die the Beetle It will reduce the chances of epidemic.

2. Bluemold of ~~tomat~~ tobaco
Downy meldew of tobaco

C.O.

⇒ peronospora tabacina (oomycete).

Environmental Condition

If the guarnary temp above normal then it will appear early in season of seedbeds. and if it is

below then it will come late in the seed beds.
Then we can do the managent practices accordingly.
In 1980 the epidemic forcasting stem was mde. It was made by 2 agencies

1. Tobaco disease corcil
2. co-operative extension services.

It was establish on the base of the initial inoculum. It tells about

1. Location of disease (To which site D. come).
2. Time of disease
3. Disease severity.

3:- Pea rot

C.O

Fungal disease
⇒ Aphanomyces eutreches.
Some nematode are also involve.

Take soil from that field, and grow pea on them in pots. Then if infected then disease will come.

Others:-

1. Sclerotium
2. verticulum
3. cyst forming → Heterodera
   Globodera

stroma → hard like matras
selerotium → compact
No fructification and no grow
no fruiting body.

4. **PLAM:-** Pea nut leaf spot Temperature + Moisture
5. **Added Factors:-**
   Fungicide efficiency
   New resistance of varieties.
6. **Leaf spot disease:-**
   cercospora of peant
   celery
   Helminthosprorum.

prediction can be done by trapping of spore in air daily, Temperature and R.H=100% and for secondry inoculum prection R.H=95-100% for 10 hours

Firstly used by Shaner & Finney (1977)

$$= \sum_{i=1}^{n-1} \left[\left(\frac{x_{i+1} + x_i}{2} \right) \times (t_{i+1} - t_i) \right].$$

x = disease index expresed as a proportion at the ith observation:
t = time (day after planting) at ith observation
n = Total no of observation.

Plant Pathology
PP-308
Practical Part

Scoring leaf rust

Detailed outlines for recording leaf rust intensities in cereals are based upon:

- Severity (percentage of rust infection on the plant) and
- Field response (type of disease reaction).

Severity is recorded as a percentage, according to the modifed Cobb scale. This recording process relies upon visual observations, and it is common to use the following intervals: Trace / 5 / 10 / 20 / 40 / 60 / 100 percent infection.

Field response is recorded using the following letters:

O	No visible infection on plant.
R	**Resistant:** visible chlorosis or necrosis, no uredia are present.
MR	**Moderately Resistant:** small uredia are present and surrounded by either chlorotic or necrotic areas.
M	**Intermediate:** variable sized uredia are present; some with chlorosis, necrosis, or both.
MS	**Moderately Susceptible:** medium sized uredia are present and possible surrounded by chlorotic areas.
S	**Susceptible:** Large uredia are present, generally with little or no chlorosis and no necrosis.

Severity and field response readings are usually combined.
For example:

tR = Trace severity with a resistant field response.
5MR = 5% severity with a moderately resistant field response.
60S = 60% severity with a susceptible field response.

Figure 1. Examples of scoring Leaf rust severity

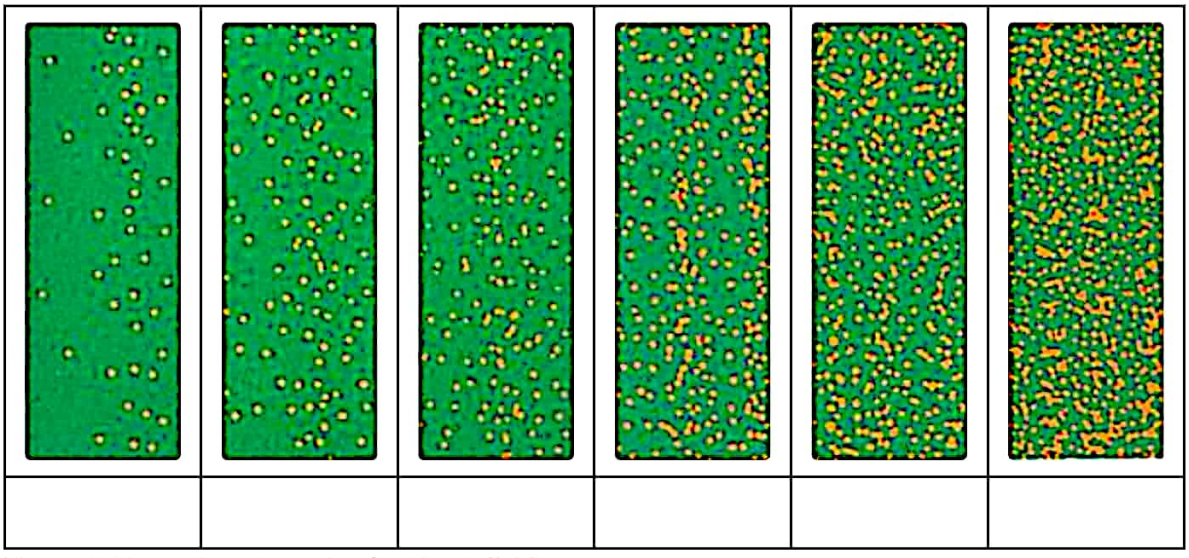
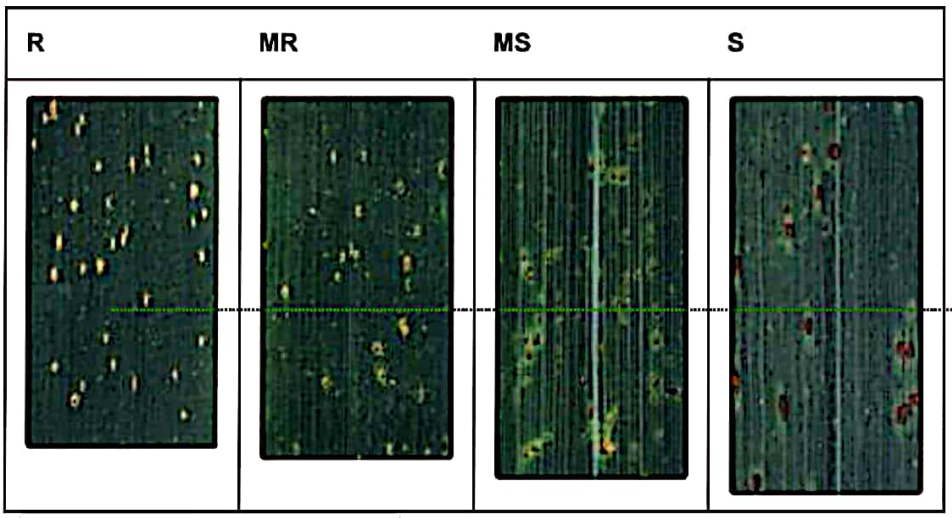


Figure 2. Examples of scoring Leaf rust field responses

R	MR	MS	S



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