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The topic assigned for this portion of the panel is "Odds and Ends." There are numerous additional factors which might be discussed with regard to testing for insect and disease resistance. Some are:

1. The techniques are not worked out in most cases, They will depend upon what is wanted in the future.
2. The variability of the pathogen, or insect, must be considered as well as that of the host. For example, the white pine weevil has been unusually abundant on red pine in Wisconsin during the last year or so. Is the weevil TESTING FOR INSECT AND DISEASE RESISTANCE the pest must be tested thoroughly to determine its capabilities.
3. Techniques of testing must allow for the possibility of indirect resistance through resistance to certain predisposing factors or to a vector.
4. The relation of resistance to other desired characteristics must be included.
5. The resistance of parent selections to that of progenies remains to be determined, i e., the aspects of transmission,
6. How pure do we want the lines? How much uniformity are we seeking? What is a barrier for one animal or disease may well be a highway for

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another. The more uniform our forests become, the more subject they may be to attack, In selecting for resistance to one insect or disease, we are undoubtedly setting the "table" for another, How thorough should the testing be?

7. For what type of environment should resistant strains be developed? Do we want red pine for plantations, for future natural stock, or for both purposes?
8. One of the things needed by geneticists, pathologists, and entomologists is a cover type plan for the future to guide research and testing programs in order to attempt to solve problems before they become critical.
9. Care must be taken in setting out test plantations not to place them on soil treated with insecticides or fungicides. Many of the newer insecticides have a rather amazing persistency in soil and many of them also appear to influence root development, mycorrhizal organisms, etc,
10. For how long a period do we want the resistance, i.e., at what stage? Do we want white pine to be resistant to white pine weevil at all times, or are we most interested in its escaping injury through the seedling and sapling stages?
11. Techniques of testing must make provision for separating temporary and more permanent resistance. Many repeated and replicated tests will be required. The problem is illustrated by the fact that certain bur oaks were heavily fed upon by June beetles at the Griffith State Nursery during 2 or 3 successive years, while others, of the same size and appearance, were only lightly utilized. Then the picture changed.
12. Testing must be continued until the cause of resistance is determined. In some cases this will require detailed morphological examination, or possibly detailed chemical examination to answer the question. Why should white pine, jack pine, and Norway spruce be heavily attacked by the white pine weevil and white spruce and red pine ordinarily ignored? What are the differences responsible? Assuming that the differences are located and are of a chemical nature, then many things may be done, such as the testing of various strains of conifers for the particular constituents involved and the determination of the response of insects to the chemicals by means of olfactometers.

Most of the points brought out are questions, And this appears to show well our present position in the matter of testing of trees for insect and disease resistance. At the present time it is easy to speak in generalities but very difficult to become specific.