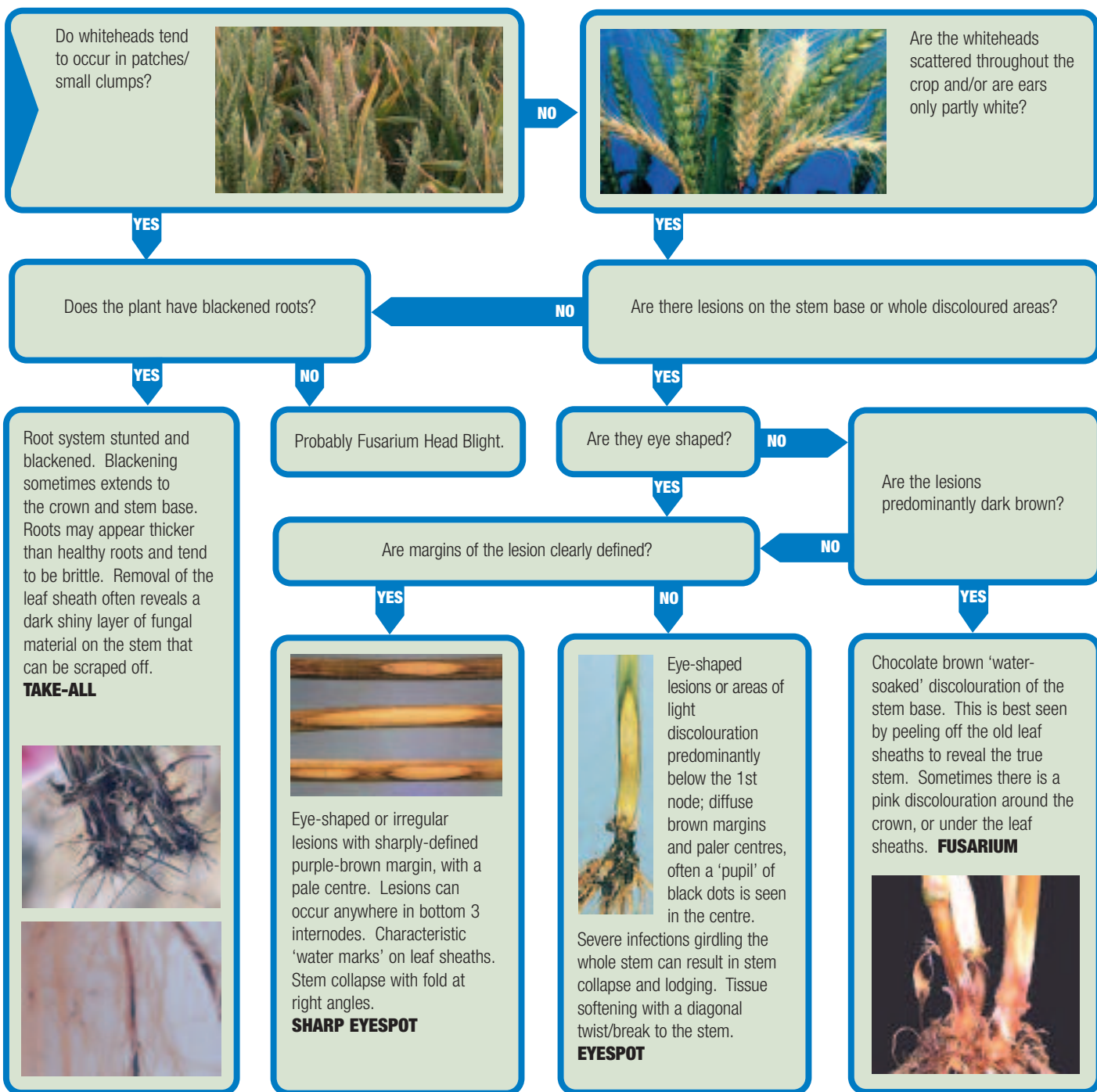


Root and stem base disease identification guide

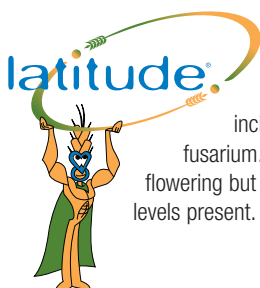


PRACTICAL GUIDANCE

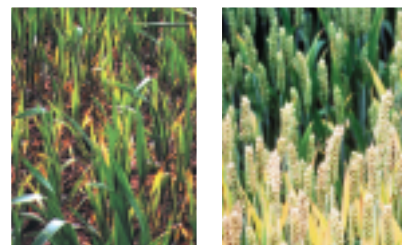
The first indications of take-all infection usually come from inspection of the crop and/or samples of individual plants. Infection of seminal roots can occur immediately after seeds germinate in autumn as emerging roots come into contact with the fungus and may be so severe as to cause seedling blight. However, the first above ground evidence of take-all usually appears later. From GS 31 onwards, patches of stunted plants appear in the crop, often with pronounced leaf yellowing and decreased secondary tiller development. If affected plants are lifted, they will be seen to have blackened roots.

Between flowering and grain-fill, premature ripening of affected plants due to stress may result in "whiteheads", the severity of which tends to be related to climatic conditions during the grain filling period.

These may occur in small to extensive patches and may incorporate bare patches in a severely affected crop.



None of the above symptoms is conclusive on its own; the more symptoms that are present, the more certain the diagnosis is take-all. However, whitehead incidence can be attributed to other diseases, especially eyespot, sharp eyespot and fusarium. No conclusion should be taken without visually examining the roots, ideally at flowering but examining the roots throughout the season will give you an indication of disease levels present.



Healthy

Infected