

## FLOWCHART FOR THE PRODUCTION OF PERITHECIA OF *Gibberella zeae* IN WHEAT GRAINS

Megier EJ, Lima MIPM, Marafon DL

*Embrapa Trigo, Passo Fundo, RS, Brazil*

maria-imaculada.lima@embrapa.br

The flowchart is one of the enabling tools to understand the analytically sequence of work, by characterizing the operations, the officials and/or organizational units involved in the process. At Embrapa Wheat, in a survey conducted through interviews, literature and personal observation, was detected the absence and the need to elaborate flowcharts of the protocols used in the access of Fusarium Head Blight disease (FHB). The objective of this study was to develop a routine work flowchart for the production of perithecia, reproductive structures of the fungus causing FHB (*Gibberella zeae*), based on scientific publication (Lima, 2007). For perithecia production the following materials and/or equipment are needed: good quality wheat grains; tap water; sterile distilled water; cotton; thick sand sifted; autoclave; wooden boxes (40 cm wide x 42 cm long x 10 cm high) with a false bottom; aseptic chamber; micro-organism growth chamber (22 ± 2 ° C and 12 hour photoperiod); Erlenmeyer of 500 ml with wide mouth; disposable plastic gloves; disposable protection mask; plastic sieve; beaker of 100 mL; pipette of 10 mL; Petri dishes with *Fusarium graminearum* on PDA culture with 5 - 10 days; watering can or garden hose and a shade net. Sixteen steps were defined in the flowchart and were represented in pictures: 1 - wheat grains; 2 - soaking in H<sub>2</sub>O for 5 hours; 3 - removal of H<sub>2</sub>O; 4 - sterilization; 5 - rest for 24 hours; 6 - conidia suspension preparation of *F. graminearum*; 7 - 20 mL suspension inoculation in the grains; 8 - Incubation; 9 - colonized grains; 10 - drying of grains; 11 - box with sand; 12 - sandbox with colonized grains; 13 - protection of the grains; 14 - wetting of the grains; 15 - immature perithecia; 16 - mature perithecia. The first nine steps are performed in the laboratory and the other ones outside of the greenhouse.

Keywords: *Fusarium graminearum*; ascospores