

Category	: 8th Rice Genetics Symposium
Select Theme	: Genes for Hybrid Rice
Endorsement email	:
Genes for Hybrid Rice Keyword 1	: male sterile
Genes for Hybrid Rice Keyword 2	: synchronous flowering
Genes for Hybrid Rice Keyword 3	: CGMS
Title of Entry	: FLORAL BIOLOGY AND RATE OF SEED SETTING OF HYBRID RICE (Bg 407H) UNDER LCWZ CONDITIONS OF SRI LANKA
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**Abstract** : Maximum seed setting is one of the requirements of any hybrid rice seed production program. Rice variety Bg 407H released by the Department of Agriculture (DOA) Sri Lanka, An experiment was conducted during the season of 2014\15 Maha to test the seed setting rate and floral biology under low country wet zone (LCWZ) conditions. The parent lines (CMS & Restorer) of the rice variety Bg 407 H were established in the field to test its floral biology in small double row method and design of the experiment was RCBD with two replicates.. Male sterile (CMS) line had mean and potential seed setting rates of 18.6 % and 25.1% respectively. The female (CMS) and male line (Restorer) populations recorded initial flowering at the age of 76 and 98 days respectively, under transplanting. Floral biology of the CMS line indicate that angle of spikelet opening is 26.70 and usually starts after 09 00 of the day and mean duration for spikelet remain opening is about three hours. The restorer line spikelet opening usually starts after 1030 of the day and mean duration of spikelet remain opening is about one and half hours. The mean panicle exertion and stigma exertion of the CMS of Bg 407 H are 33.7% and 85.2% respectively. The mean duration of flowering of restorer line is 7 days with regular blooming pattern observed within the individual panicle which normally starts blooming from top to bottom. Nevertheless CMS line has longer duration of flowering at population level, but with irregularity observed . Since spikelets of both CMS and restore lines of Bg407H were blooming and remained opened during the time of 1030 to 1200 hours of the day , this period of time can be considered as the peak period that most spikelets of CMS get pollinated by its restorer under the tested rainfed LCWZ condition. Only a very few CMS spikelets (Mean of 2.2%) of a panicle remain opened during peak period of pollen availability. The

mean Spikelet sterility of the CMS line is 100 % with spherical shape pollen observed having pollen sterility level of 100 %

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