

## **ABSTRACT**

The results concluded that this study provide germplasm and genetic markers that will assist breeding efforts to develop cultivars that have high resistance to stem borer. Results recommended that for production of resistance cultivars against stem borer some of characteristics such as short stature, increased tillers number, reduced stem diameter and high stem silica content should be considered. SSR markers (RM 263, RM201, RM 566, RM166 and RM164) help us for selection cultivars to stem borer resistance. Also we can depend on Sakha101, Sakha104 and Giza176 as cultivar resistance to stem borer attack in breeding program.

## المستخلص العربي

الأرز هو أهم المحاصيل الغذائية الأساسية لأكثر من نصف سكان العالم. وثاقبه الساق ( *Chilo* *agamemnon*) هي واحدة من الآفات الأكثر تدميرا للأرز والتي تحد من عائداته في جميع أنحاء العالم. إن استخدام الأصناف المقاومة لا تزال أكثر الوسائل الموثوق بها لمكافحة الآفات. في هذه الدراسة تم التقييم الوراثي لمقاومة ثاقبه الساق في بعض أصناف الأرز المصرية وقد أجريت التجربة في المزرعة التجريبية لمركز البحوث والتدريب (RRTC)، سخاء، كفر الشيخ، مصر. وتم استخدام صنفين أساسيين في هذه الدراسة Sakha101 وهو مقاوم لثاقبه الساق وGiza178 وهو قابل للإصابة بثاقبه الساق. تم التهجين بين الصنفين السابقين لنتبع سلوك الصفة وتم تقييم الـ  $F_1$  و  $F_2$  و  $F_3$ . وأظهرت النتائج أن صفة المقاومة لثاقبه الساق يبدو أنه يتحكم بها العديد من الجينات وصفه مقاومه مرتبطه ببعض الصفات المورفولوجيه كالتبكير , قصر طول الساق , صغر قطر الساق , زياده نسبه السليكا وصفر مساحه الورقه العلم. وقد تم استخدام خمس واسمات جزيئية (RM164 و RM166 و RM263 و RM201 و RM566) لدراسة إرتباطها بصفة مقاومة ثاقبه الساق وأظهرت تعدد الأنماط المظهرية لهذه الصفة. وتعتبر واسمات الـ SSR مفيدة للتطبيق في برنامج التربية حيث تساعد في الانتخاب السريع لمثل صفة مقاومة ثاقبات الساق.

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