Biotechnology Division

Research Program 2020-2021

Sl No.	Program area/ Project	Major objective	Annual budget (in Lakh Taka)
Program area: Biotechnology			
1	Evaluation of doubled haploids for developing low glycemic index (GI) rice	To select high yielding low glycemic index (GI) rice lines having desirable characters	0.25
2	Development and evaluation of salt tolerant rice lines through anther culture	To develop salt tolerant rice variety	2.00
3	Development and evaluation of premium quality Kalijira type rice lines through anther culture	To develop Kalijira type aromatic rice variety	2.00
4	Development of Aus rice variety through anther culture	To develop short duration high yield Aus rice variety	1.00
5	Development of antioxidant enriched black rice variety through anther culture	To develop antioxidant enriched black rice variety	1.00
6	Development of high yielding photosensitive rice variety through anther culture	To develop photosensitive rice variety	2.00
7	Field evaluation of doubled haploid high yielding rice lines	To select high yielding rice lines having desirable characters	1.50
8	Field evaluation of somaclonal variants developed from EMS treated rice seed	To select high yielding rice lines having desirable characters	0.50
9	Development of high yielding short stature aromatic Kilizira type varieties using NMU	To develop high yielding short stature aromatic Kilizira type varieties	1.00
10	Development of low sterility variants of BRH-11-9-11-4-5B rice lines using NMU	To reduced sterility of BRH-11-9-11-4-5B	1.00
11	Development of Sheath Blight resistant rice lines through mutation by NMU	To develop Sheath Blight resistant lines	1.00
12	Field evaluation of somaclonal variants for developing Aus rice variety	To develop high yielding Aus rice variety	1.00
13	Field evaluation of somaclonal variants for developing antioxidant enriched black rice lines	To develop high yielding antioxidant enriched black rice variety	1.00
14	Field evaluation of somaclonal variants of BRRI dhan47	To develop somaclone of BRRI dhan47 with reduced shattering.	0.5
15	Development of rice variety through wide hybridization followed by embryo rescue	To develop different stress tolerant rice variety through wide hybridization	1.5

16	Development of salt tolerant transgenic rice using *PVA* from *Porteresia coarctata*	To develop salt tolerant transgenic rice lines	2.00
17	Development of salt tolerant transgenic rice using *GlyI* and *GlyII* .	To develop salt tolerant transgenic rice lines	2.00
18	Introgression of salt tolerant mangrove gene *AeMDHAR*	To develop salt tolerant transgenic rice lines	2.00
19	Development of high yielding aromatic rice lines through genome editing	To develop high yielding aromatic rice lines using CRISPR-Cas9 genome editing technology.	4.00
20	Development of high yielding blast resistant lines using CRISPR-Cas9 technology.	To develop high yielding blast resistant lines using CRISPR-Cas9 genome editing technology.	4.00
21	Identification of QTLs for taller seedling height	To identify QTLs for taller seedling height for developing tidal submergence tolerant rice variety	3.00
22	Field evaluation of bacterial blight (BB) resistant gene pyramided lines	To develop breeding lines possessing multiple BB resistance genes	2.00
23	Validation of a simple functional marker for fragrance in non-Basmati fragrant rice varieties	To validate functional markers of major fragrance gene *BADH2* in different back ground and to examine the potential of this functional markers for using marker assisted selection	2.00
24	Isolation and cloning of stress tolerant DREB genes	To isolate and cloning of stress tolerance gene from *O. rufipogon*	5.00
25	Variations identification in DREB genes sequences in different types of rice genotypes	To find out the variation in DREB gene sequences in different types of rice genotypes	5.00
26	Variations identification in BADH2 gene sequence in different aromatic genotypes	To find out the variation in *BADH2* gene sequences in different Bangladeshi local aromatic rice genotypes	5.00
27	Isolation and cloning of drought tolerant genes from wheat	To isolate and cloning of drought tolerance gene	3.00
28	Identification of *Setaria italica* mutants losing C4 properties.	Characterizing of *Setaria italica* mutant population for loss of C4 functions	2.00