

# Molecular Marker Laboratory Workflow

Genetic Resources Center

IRRI

## SetGen List for GCP



Edit Window

List Characteristics

Name: GCP Type: LST Date: 2006- 8- 8 Levels for Cross Expansion: 1

Title: Generation Challenge Program List

No. of tagged entries: 0 No. of entries: 2757  Entry Code Naming Convention

Tag	Designation	Cross	Entry Code	Source	GLD	Entry ID
	CT 9993-5-10-1-M	CT 9993-5-10-1-M	1	CT9993-5-10-1-M	1846403	1
	APD	UPL RI 5/IR 12979-24-1 (BROW)	2	APD (IR55423-01)	204538	2
	VANDANA	C 22/KALAKERI	3	VANDANA	89864	3
	IR 62266-42-6-2	IR 47310-04-4-3-1/IR 44962-7-6-4	4	IR62266-42-6-2	86565	4
	IR 60080-46 A	IR 47686-8-4-3/CT 6516-21-4-4	5	IR60080-46A	90768	5
	IRGC 123:1999DS	DEE GEO WDO GEN	6	IRGC 123:1999DS	1780067	6
	IRGC 328:1998DS	AZUCENA	7	IRGC 328:1998DS	1780069	7
	IRGC 1723:1980WS	CAROLINA GOLD	8	IRGC 1723:1980WS	1639103	8
	IRGC 4122:1993DS	IGUAPE CATETO	9	IRGC 4122:1993DS	1642376	9
	IRGC 5418:2002DS	SINTANE DIOFOR	10	IRGC 5418:2002DS	1781197	10
	IRGC 6264:1996DS	RAJBHO G	11	IRGC 6264:1996DS	1781293	11
	IRGC 6426:1994DS	BASMATI	12	IRGC 6426:1994DS	1644990	12
	IRGC 7755:1998DS	IRGC 7755	13	IRGC 7755:1998DS	1781539	13
	IRGC 8195:1985DS	IRGC 8195	14	IRGC 8195:1985DS	1647364	14
	IRGC 8234:2002DS	IRGC 8234	15	IRGC 8234:2002DS	1781655	15
	IRGC 8948:2003DS	POKKALI	16	IRGC 8948:2003DS	1648280	16
	IRGC 10964:1985DS	IRGC 10964	17	IRGC 10964:1985DS	1650809	17
	IRGC 10984:1995DS	IRGC 10984	18	IRGC 10984:1995DS	1650833	18
	IRGC 12048:2000DS	MOROBEREKAN	19	IRGC 12048:2000DS	1782228	19
	IRGC 12386:1979WS	IRGC 12386	20	IRGC 12386:1979WS	1652532	20

DNA_SET_NO	ACCNO	SPECIES	DILUTION	NET_INTENSITY	$y = 1.72E-03x - 2.56E+01$ R2 = 9.46E-01	ng/ul undil	retain	avg (ng/ul)	total Yield (ug)	For_500ng	For_500ng for_1:25
15-01	10991	O. sativa	1:25	83070.75	117.28169	586.41		940.946452	141.1419678	0.531379866	13.28449666
			1:50	89589.91	94.0946452	940.95	940.95				
			1:100	38293	40.26396	805.28					
15-02	10992	O. sativa	1:25	63199.89	83.1038108	415.52		617.096408	92.5644612	0.810246168	20.25615421
			1:50	43239.51	48.7719572	487.72					
			1:100	32822.57	30.8548204	617.10	617.10				
15-03	10994	O. sativa	1:25	52366.42	64.4702424	322.35		621.36132	93.204198	0.804684785	20.11711962
			1:50	36919.34	37.9012648	379.01					
			1:100	32946.55	31.068066	621.36	621.36				
15-04	10997	O. sativa	1:25	51854.65	63.589998	317.95		495.133804	74.2700706	1.009828042	25.24570106
			1:50	43670.57	49.5133804	495.13	495.13				
			1:100	26828.59	20.5451748	410.90					
15-05	10998	O. sativa	1:25	51296.66	62.6302552	313.15		773.728896	116.0593344	0.64622118	16.15552949
			1:50	47349.78	55.8416216	558.42					
			1:100	37375.84	38.6864448	773.73	773.73				
15-06	11008	O. sativa	1:25	52344.03	64.4317316	322.16		431.611788	64.7417682	1.158448434	28.96121086
			1:50	38563.62	40.7294264	407.29	407.29				
			1:100	28137.48	22.7964656	455.93	455.93				
15-07	11009	O. sativa	1:25	34644.84	33.9891248	169.95	169.95	159.072726	23.8609089	3.143216393	78.58040982
			1:50	23499.99	14.8198828	148.20	148.20				
			1:100	17235.37	4.0448364	80.90					
15-08	11011	O. sativa	1:25	34224	33.26528	166.33		293.641816	44.0462724	1.70275476	42.56886901
			1:50	31714	28.94808	289.48	289.48				
			1:100	23540.78	14.8901416	297.80	297.80				
15-09	11012	O. sativa	1:25	47927.23	56.8348356	284.17	284.17	269.267902	40.3901853	1.856886752	46.4221688
			1:50	29465.92	25.0813824	250.81	250.81				
			1:100	22814.41	13.6407852	272.82	272.82				
15-10	11015	O. sativa	1:25	35979.2	36.284224	181.42	181.42	193.409336	29.0114004	2.585190614	64.62976534
			1:50	34360.33	33.4997676	335.00	205.40				
			1:100	20854.58	10.2698776	205.40					
15-11	11016	O. sativa	1:25	33586.79	32.1692788	160.85	160.85	170.687749	25.60316235	2.929325642	73.23314106
			1:50	29419.45	25.001454	250.01	180.53				
			1:100	20131.66	9.0264552	180.53					
15-12	11017	O. sativa	1:25	49022.33	58.7184076	293.59		356.788168	53.5182252	1.401391764	35.03479409
			1:50	28533.86	23.4782392	234.78					
			1:100	25255.47	17.8394084	356.79	356.79				

# SAGA Analysis

- Pre-process SAGA output with Excel VBA
- Process SAGA output using R for input to Darwin and PowerMarker

## Genotyping Data from SAGA

Allele Frequency for all Alleles in Project:

```
OSR13
[Size] [Frequency %]
105      0.42
107      0.08
109      0.17
110      1.20
111      1.06
112     33.53
113     32.85
114     17.71
115     15.96
116     39.86
117     41.30
118      2.52
119      1.65
120      0.97
121      1.10
122      0.97
123      1.65
124      0.18
125      0.46
126      0.09
127      0.25
128      0.71
129      1.31
130      2.26
131      1.73
```

SampleID	Locus	Gel	Dye	Allele 1	Peak 1	Qual 1	Volume 1	Allele 2	Peak 2	Qual 2
azu	OSR13	OSR13_plate9_10	700	117	116.4	86	655350	117	116.4	86
azu	OSR13	OSR13_plate7_8	800	116	116.9	61	226798	116	116.9	61
azu	OSR13	OSR13_Plate8_9	800	116	116.7	58	167274	116	116.7	58
azu	OSR13	OSR13_plate13_14	700	117	116.9	51	439038	117	116.9	51
azu	OSR13	OSR13_Plate6_7	800	116	116.5	73	102080	116	116.5	73
azu	OSR13	OSR13_Plate4_5	800	116	116.2	200	51528	116	96.9	200
shz	OSR13	OSR13_Plate2_	700	123	121.7	200	115214	123	93.5	200
azu	OSR13	OSR13_Plate17_2_3	800	116	116.7	75	655350	116	116.7	75
azu	OSR13	OSR13_Plate14_15	800	116	116.6	200	217232	116	94.3	200
azu	OSR13	OSR13_Plate10_11	800	116	116.6	200	87292	116	95.6	200
azu	OSR13	OSR13_Plate11_12	700	117	117.2	200	655350	117	117.2	200
azu	OSR13	OSR13_Plate12_13	800	116	116.7	85	555004	116	116.7	85
azu	OSR13	OSR13_Plate15_16	700	117	117.0	200	655350	117	117.0	200
azu	OSR13	OSR13_Plate1_17	700	117	116.6	76	573496	117	116.6	76
azu	OSR13	OSR13_Plate3_4	700	117	115.9	200	46164	117	96.9	200
azu	OSR13	OSR13_Plate5_6	700	-1	0	0	-1	0	0	0
ir64	OSR13	OSR13_plate9_10	700	113	113.1	200	652994	113	113.1	200
ir64	OSR13	OSR13_Plate8_9	800	112	112.8	200	131576	112	112.8	200
ir64	OSR13	OSR13_plate13_14	700	-1	0	0	-1	0	0	0
ir64	OSR13	OSR13_plate7_8	800	112	112.8	66	214726	112	86	214726
ir64	OSR13	OSR13_Plate10_11	800	112	112.7	200	374064	112	95.3	200
ir64	OSR13	OSR13_Plate11_12	700	113	112.9	69	655350	113	112.9	69
ir64	OSR13	OSR13_Plate12_13	800	112	112.6	200	491850	112	112.6	200
ir64	OSR13	OSR13_Plate14_15	800	112	112.6	72	609632	112	112.6	72
ir64	OSR13	OSR13_Plate15_16	700	113	112.9	200	175314	113	117.0	200
ir64	OSR13	OSR13_Plate17_2_3	800	112	112.6	79	655350	112	112.6	79
ir64	OSR13	OSR13_Plate1_17	700	113	112.8	79	655350	113	112.8	79
lth	OSR13	OSR13_Plate2_	700	-1	0	0	-1	0	0	0
ir64	OSR13	OSR13_Plate30_31	800	-1	0	200	0	-1	0	200
ir64	OSR13	OSR13_Plate3_4	700	-1	0	200	0	-1	0	200
ir64	OSR13	OSR13_Plate4_5	800	-1	0	200	0	-1	0	200
ir64	OSR13	OSR13_Plate5_6	700	113	112.5	73	101766	113	112.5	73
ir64	OSR13	OSR13_Plate6_7	800	112	112.7	76	174474	112	112.7	76

Saga Report (txt file)

GCP_Code	Plate	Well	Locus	Gel	Dye	Allele1	Peak1	Qual1	Volume1	Allele2	Peak2	Qual2	Volume2
1	Plate1-A01	OSR13	OSR13_Plate1_17	700	113	112.5	71	486994		117	116.3	72	564538
1	Plate1-A01	RM133	RM133_Plate1_17	800	247	247.6	84	261994					
1	Plate1-A01	RM152	RM152_Plate1_17	700	163	151.1	200	439104					
1	Plate1-A01	RM162	RM162_Plate1_17	700	205	203.8	86	655350					
1	Plate1-A01	RM215	RM215_Plate1_17	700	151	144.4	200	239602					
1	Plate1-A01	RM237	RM237_Plate1_17	700	132	132.8	2	655350					
1	Plate1-A01	RM271	RM271_Plate1_17	800	89	88.5	57	655350					
1	Plate1-A01	RM277	RM277_Plate1_17	700	136	136.7	42	104288					
1	Plate1-A01	RM44	RM44_Plate1_17	700	126	126.9	200	579866					
1	Plate1-A01	RM447	RM447_Plate1_17	800	106	104.6	78	655350					
1	Plate1-A01	RM5	RM5_Plate1_17	700									
2	Plate1-A02	OSR13	OSR13_Plate1_17	700	113	111.7	87	452730					
2	Plate1-A02	RM133	RM133_Plate1_17	800	247	247.2	70	167366					
2	Plate1-A02	RM152	RM152_Plate1_17	700	169	169	96	655350					
2	Plate1-A02	RM162	RM162_Plate1_17	700	211	209.2	57	655350					
2	Plate1-A02	RM215	RM215_Plate1_17	700	145	144.2	41	655350					
2	Plate1-A02	RM237	RM237_Plate1_17	700	138	137.8	76	655350					
2	Plate1-A02	RM271	RM271_Plate1_17	800	101	101	96	655350					
2	Plate1-A02	RM277	RM277_Plate1_17	700	132	132.8	48	120304					
2	Plate1-A02	RM44	RM44_Plate1_17	700	128	128.6	84	655350					
2	Plate1-A02	RM447	RM447_Plate1_17	800	112	112.2	29	655350					
2	Plate1-A02	RM5	RM5_Plate1_17	700	129	128.5	77	145438					
3	Plate1-A03	OSR13	OSR13_Plate1_17	700	113	112.1	93	315758					
3	Plate1-A03	RM133	RM133_Plate1_17	800	245	246.8	69	252800					
3	Plate1-A03	RM152	RM152_Plate1_17	700	169	168.9	93	655350					
3	Plate1-A03	RM162	RM162_Plate1_17	700	235	209	200	198926					
3	Plate1-A03	RM215	RM215_Plate1_17	700	145	144.2	55	655350					
3	Plate1-A03	RM237	RM237_Plate1_17	700	132	132.5	50	655350					
3	Plate1-A03	RM271	RM271_Plate1_17	800	101	100.8	83	654232					
3	Plate1-A03	RM277	RM277_Plate1_17	700	136	136.5	57	59376					
3	Plate1-A03	RM44	RM44_Plate1_17	700	128	128.6	85	655350					
3	Plate1-A03	RM447	RM447_Plate1_17	800	100	98.5	86	655350					
3	Plate1-A03	RM5	RM5_Plate1_17	700	125	124.6	83	204618					
4	Plate1-A04	OSR13	OSR13_Plate1_17	700	113	111.9	93	519874					
4	Plate1-A04	RM133	RM133_Plate1_17	800	245	246.9	69	212404					
4	Plate1-A04	RM152	RM152_Plate1_17	700	163	163.1	200	655350					
4	Plate1-A04	RM162	RM162_Plate1_17	700	203	201.9	93	655350					
4	Plate1-A04	RM215	RM215_Plate1_17	700	151	149.9	13	655350					
4	Plate1-A04	RM237	RM237_Plate1_17	700	122	121.7	22	628550	132	132.7	16	655350	
4	Plate1-A04	RM271	RM271_Plate1_17	800	103	102.1	200	121676					
4	Plate1-A04	RM277	RM277_Plate1_17	700	132	132.6	200	43900					
4	Plate1-A04	RM44	RM44_Plate1_17	700	128	128.6	85	655350					

## Processed Saga Report

# GCP Template

GCP_Code	OSR13_IRR1	OSR13_IRR2	RM133_IRR1	RM133_IRR2	RM152_IRR1	RM152_IRR2	RM162_IRR1	RM162_IRR2
1	113	117	247	247	163	163	205	205
2	113	113	247	247	169	169	211	211
3	113	113	245	245	169	169	235	235
4	113	113	245	245	163	163	203	203
5	113	113	243	245	163	163	203	209
6	113	123	243	243	175	175	209	209
7	117	117	245	245	163	163	207	233
8	117	117	245	245	163	163	201	201
9	117	117	245	245	163	163	201	201
10	131	131	243	243	160	169	205	205
11	129	129	243	243	163	163	205	205
12	113	113	243	243	163	163	237	237
13	113	113	243	243	151	151	207	207
14	117	117	243	243	163	163	207	207
15	113	113	243	243	169	169	207	207
16	113	113	243	243	151	151	207	207
17	113	113	245	245	175	175	207	207
18	115	115	245	245	163	163	207	207
19	117	117	247	247	163	163	201	201
20	129	129	245	245	151	151	209	209
21	117	117	247	247	169	169	223	223
22	113	113	245	245	175	175	209	209
23	117	117	247	247	163	163	203	203
24	117	117	247	247	151	163	209	233
25	113	113	247	247	163	175	209	209
26	117	117	245	245	151	151	209	209
27	117	117	245	245	169	169	209	209
28	117	117	245	245	169	169	209	209
29	117	117	247	247	163	163	235	235
30	117	117	245	245	163	163	209	209
31	117	117	245	245	163	163	211	211
32	115	115	247	247	151	151	209	209
33	113	113	247	247	175	175	211	211
34	113	113	245	245	175	175	211	211
35	117	117	245	245	163	163	209	209
36	113	113	245	245	151	151	215	215
37	117	117	247	247	163	163	205	205
38	117	117	245	245	151	175	211	211
39	113	113	245	245	169	175	211	211
40	117	117	247	247	163	163	227	239

Transpose SAGA  
output using R Scripts  
and Excel Macros

# Templates

- [http://cropwiki.irri.org/icis/index.php/Loading\\_SSR\\_Data](http://cropwiki.irri.org/icis/index.php/Loading_SSR_Data)
  - Workbook Template for loading SSR dataset
- [http://cropforge.org/frs/?group\\_id=18&release\\_id=151](http://cropforge.org/frs/?group_id=18&release_id=151)
  - GCP SSR Template