produced some seeds but died soon after. Type 2, in the place where it was collected, seems to propagate mainly through the perennial root stock as the same clumps are usually seen year after year although small plants developed from seeds also could be found, in the rainy season, scattered nearby and competing with other plants in the area for survival and growth. The ability of these young plants to become established and to perennate perhaps depends on the chance availability of conditions ideal for the purpose. Otherwise, they remain restricted in growth, produce a few seeds, and perish. Once they get established, they perennate. It may be concluded that in C. koenigii different types with variation in habit exist, reproducing either entirely by seed (annual) or by both vegetative and sexual means (perennial).

Panuganti N. Rao

BHABHA ATOMIC RESEARCH CENTRE
Trombay, Bombay-74, India
Biology Division

1. Complementation between some colorless recessive mutations obtained from I and C.

We have isolated 3 i mutants (from I) and 9 c mutants (from C) all of which breed recessive to C and in homozygous condition yield only colorless kernels. All these mutants were reciprocally crossed to test for complementation. Extensive complementation was noted in i-3 x c-6, i.e., the majority of the kernels were partially pigmented. Slight complementation was also noted in i-3 x c-2 and i-3 x c-8. All other combinations were completely colorless. The data are summarized in Table 1.

The response of these mutants to Bh (Blotched) is variable. The observations are noted in Table 2. Only i-3, c-2, c-6 and to a slight extent c-9 gave a blotched expression. i-1 and c-1 gave completely colored kernels. All other mutants gave only colorless kernels. The significance of these observations is not clear.

Table 1

Reciprocal crosses between different i and c mutants and the expression of F_1 aleurone colour.

Mutants	i-1		i-2		i-3	
	Male	Female	Male	Female	Male	Female
c-1	-	-	-	-	Colorless	-
c-2	Colorless	Colorless	Colorless	Colorless	Colorless	Two kernels partially pigmented
c-3	Colorless	-	-	Colorless	-	-
c-4	Colorless	-	-	-	Colorless	Colorless
c-5	Colorless	-	Colorless	-	Colorless	Colorless
c-6	-	-	Colorless	Colorless	All kernels partially pigmented	Few kernels partially pigmented
c-7	-	-	Colorless	-	-	-
c-8	-	-	Colorless	-	Six kernels partially pigmented	Colorless
c-9	-	-	Colorless	-	-	-

Table 2

Response to Bh (Blotched) of i and c mutations

Mutagen	Mutant	Bh (Blotched) Male	Bh (Blotched) Female
Diethyl sulfate (DES)	i-1	-	Completely colored
Ethyl methane sulfonate (EMS)	i-2	Colorless	Colorless
Radiation (gamma rays)	i-3	'blotched'	'blotched'
EMS	c-1	Colored	Colored
"	c-2	-	'blotched'
"	c-3	-	-
"	c-4	-	Colorless
"	c-5	Colorless	Colorless
"	c-6	Slightly 'blotched'	Colorless
"	c-7	-	Colorless
"	c-8	Colorless	Colorless
"	c-9	Slightly 'blotched'	-

We are repeating these experiments to confirm our results.

Chandra Mouli
N. K. Notani

2. Breeding behaviour of mutations from I and C.

Colored kernels isolated from the progeny of the cross $\frac{\text{I Sh Bz Wx}}{\text{I Sh Bz Wx}}$ (seed treated) x C sh bz wx generally do not breed true for i mutation. Out of 16 kernels isolated this way, only 3 bred true for the change I to i. In a new series from 1442 progenies, 22 kernels were isolated, none of these showed the change from I to i on further testing. In contrast, $\frac{\text{C Sh Bz Wx}}{\text{C Sh Bz Wx}}$ (seeds treated) x c sh Bz wx yielded 6 colorless kernels in 794 progenies. Out of these 6, 3 failed to propagate but the other three had changed from C to c and bred true. Essentially then the findings are the same as those reported last year, i.e.: