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EVALUATION OF ORNAMENTAL CHILLIES

Home gardeners have long been aware of the aesthetic value of chillies. Use of chillies for ornamental purposes is mentioned in many records (Anon., 1768; Novak, 1965, Vernon, 1982 and Graf, 1982) and in ancient literature. During 1988-89, fifty-one lines of ornamental chillies were collected and were grown in pots under green house conditions. Evaluation of the lines was done as per the descriptor list for *Capsicum* (IBPGR, 1983). Beautiful plant types having dwarf stature and clustered fruiting habit were selected as ornamental types of chillies based on visual observations. The selected lines were CA 352-1, CA 473, CA 474, CA 476-1, CA 477-1, CA 479-1a, CA 479-2, CA 481, CA 483-1, CA 486-1, CA 486-2, CA 486-4, CA 488, CA 489, CA 493 and CA 504. Plant and fruit characteristics of ornamental chillies are summarised in Tables 1 and 2.

Variation in plant height among different chilli lines suggested the use of ornamental chillies as borders, small beds, potted plants and background material for large beds or mass planting. Dwarf types, 48 cm or less in height are suited for use as bedding plants and as pot plants (Corley and Dempsey, 1971). In the present study, all the selected lines had a height less than 48 cm and therefore can be used as pot plants. Lines CA 490, CA 495, CA 499, CA 501, CA 506 and CA 507 had plant height greater than 90 cm. The cultivars which grow to over 90 cm in height can be used as background material for large beds and mass plantings (Corley and Dempsey, 1971).

Display of colour in foliage and fruits is considered as the most desirable attribute of **ornamental** chillies. Purple foliage colour was observed in lines CA 470, CA 477-1, CA 477-2 and CA 497. This purple pigmentation was present both in juvenile and mature stages of plant growth, thus increasing the beauty of plants before various fruit colours develop. The line CA 494 had a variegated leaf colour with a mixture of purple, cream and green.

Elongate, conical, heart shaped, round and bell fruit shapes were obtained among the accessions. The fruit colours observed were very striking, since common chilli fruits turn from green to red as they mature. Fruits of purple leaved lines changed from dark purple to red.

Table 1. Plant characteristics of ornamental chillies

Accession no.(CA series)	Plant		Plant growth habit	Stem colour	Leaf colour
	Height (cm)	Spread (cm)			
352-1	27.0	32.0	Pr	Gr	Gr
352-2	47.5	34.0	C	Gr	Gr
462	82.8	47.5	E	Gr	Gr
466	59.5	50.0	C	Gr	Gr
468	73.0	52.5	C	Gr	Gr
470	33.9	17.5	C	Gr	Pl
473	27.1	29.5	Pr	Gr	Gr
474	18.1	27.0	C	Gr	Gr
476-1	33.6	33.0	C	Gr	Gr
476-2	47.0	41.0	C	Gr	Gr
477-1	28.7	30.0	Pr	Pl	Pl
477-2	25.5	37.0	Pr	Pl	Pl
479-1a	28.2	27.5	C	Gr	Gr
479-1b	36.9	35.0	C	Gr	Gr
479-2	26.5	32.0	C	Gr	Gr
481	35.2	22.0	C	Gr	Gr
482-1	62.9	45.0	E	Gr	Gr
482-2	72.3	34.0	E	Pl	Gr
483-1	29.7	30.0	C	Gr	Gr
483-2	39.8	43.0	C	Gr	Gr
483-3	46.2	41.0	C	Gr	Gr
486-1	32.0	46.0	Pr	Gr	Gr
486-2	44.3	22.0	Pr	Gr	Gr
486-3	44.3	32.0	Pr	Gr	Gr
486-4	34.6	26.0	Pr	Gr	Gr
486-5	24.5	18.0	Pr	Gr	Gr
488	34.8	21.0	C	Gr	Gr
489	33.5	31.0	C	Gr	Gr
490	91.5	50.0	E	Gr	Gr
491	70.7	52.5	E	Pl	Gr
493	33.4	27.0	C	Gr	Gr
494	24.0	25.0	C	Pl	PCG
495	90.3	51.5	E	Gr	Gr
497	25.4	28.0	E	Pl	Pl
498	50.7	45.0	C	Gr	Gr
499	103.4	51.5	E	Gr	Gr
500	84.2	58.5	E	Gr	Gr
501	102.4	45.0	E	Gr	Gr
504	25.5	21.0	C	Gr	Gr
506	102.0	92.5	E	Gr	Gr
507	96.0	71.0	E	Gr	Gr

Pr=Prostrate; Gr=Green; C=Compact; Pi-Purple; E=Erect; Cr=Cream; PCG=Purple + cream + green

Table 2. Fruit characteristics of ornamental chillies

Accession number	Fruit				Colour of fruit	
	Length, cm	Width, cm	Position	Shape	Immature	Mature
CA 352-1	1.0	1.2	E	Rd	Y	R
CA 352-2	2.3	1.2	1	Co	Y	R
CA 462	2.7	2.0	E	Co	Gr	O
CA 466	1.0	1.0	E	Ol	Pl	R
CA 468	7.0	1.0	E	El	Gr	O
CA 470	0.5	0.7	E	Rd	Pl	R
CA 473	2.0	0,8	E	Co	Gr	R
CA 474	2.3	0.8	E	Co	Y	R
CA 476-1	1.2	1.2	E	01	Y	R
CA 476-2	3.2	1.0	E	Co	Y	R
CA 477-1	2.7	0.7	E	Co	Pl	R
CA 477-2	1.2	0.8	*E*	Ol	Pl	R
CA 479-1a	2.7	1.1	E	Co	Cr	R
CA 479-1b	2.9	0.9	I	El	Cr	R
CA 479-2	2.5	1.2	DC	Co	Gr	R
CA 481	4.0	1.2	E	Co	Y	R
CA 482-1	2.0	2.0	DC	Be	Gr	R
CA 482-2	1.9	2.1	DC	Be	Pl	R
CA 483-1	2.2	1.0	E	Co	Cr	R
CA 483-2	1.6	1.0	E	Co	Cr	R
CA 483-3	3.0	1.8	DC	Co	Cr	R
CA 486-1	1.0	0.7	E	Ol	Gr	R
CA 486-2	2.5	0.9	DC	El	Gr	R
CA 486-3	1.7	1.1	E	Rd	Cr	R
CA 486-4	0.7	0.9	DC	Rd	Cr	R
CA 486-5	0.3	0.5	DC	Rd	Gr	R
CA 488	1.9	1.0	E	Co	Cr	R
CA 489	1.0	0.9	E	Rd	Cr	R
CA 490	2.9	0.5	E	El	Gr	O
CA 491	2.7	1.0	E	Co	Pl	R
CA 493	1.2	0.7	E	Co	Cr	R
CA 494	1.7	1.1	DC	Co	Pl	R
CA 495	2.5	0.5	E	El	Gr	R
CA 497	2.5	1.8	E	Co	Pl	R
CA 498	1.6	0.6	E	El	Gr	O
CA 499	4.0	1.4	DC	Co	Gr	R
CA 500	2.5	0.7	E	El	Gr	O
CA 501	3.2	0.7	E	El	Gr	R
CA 504	0.7	0.4	E	Rd	Gr	R
CA 506	2.5	1.7	DC	Co	Gr	R
CA 507	4.2	1.5	DC	Co	Gr	R

E=Erect; Rd=Round; Y=Yellow; R-Red; I=Intermediate; Co=Conical; Gr=Green; O=Orange; Dc=Declining; Ol=Ohlong; Pl=Purple; El=Elongate; Cr=Cream; Be=Bell

A few lines with green leaves such as CA 466, CA 482-2 and CA 491 also produced purple immature fruits which turned to red at maturity. About 32 lines showed the usual fruit colour change from green to red and five accessions produced green fruits which turned to orange at maturity. Ten accessions had cream immature fruits and six yellow immature fruits which turned to red at maturity. Fruit colour displaying over a long period of time is desirable character for ornamental chillies.

In the present study, the collected lines belong to different species such as *Capsicum annum*, *Capsicum frutescens*, *Capsicum chinense*,

Capsicum baccatum var. *baccatum* and *Capsicum baccatum* var. *pendulum.*

Bushy plants with more number of fruits of attractive colour and shape are desirable for ornamental chillies. Dwarfening of ornamental plants through application of growth retardants is of commercial success (Khoshoo, 1974). These chemicals inhibit plant growth and plants become easy to manage and colour contrast is improved because of darkening of leaves and is an important desirable character of ornamental chillies. By proper management and tailoring, the selected lines in the present study could be made use of to develop good ornamental chilli plants.

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