Turmeric Indigenous Germplasm: Collection and Conservation Status, Diversity Mapping of Chhattisgarh

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2: Indian Institute of Spices Research, Kozhickode, Kerala

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Foreword

It is a great pleasure in bringing out the publication 'Catalogue on turmeric germplasm' of Chhattisgarh indigenous origin. A systematic collection of turmeric diverse germplasm from Chhattisgarh during 1995 to 2021 and collected a total of diverse 103 accessions of turmeric. Chhattisgarh is known for rice diversity apart from that the rhizome crop like turmeric very high diversity is available in different parts of Chhattisgarh. The gene pool of turmeric includes *Curcuma longa (91)*, *curcuma amada* (7), *curcuma caesia* (4) and *Curcuma angustifolia*(1) maintained at All India Coordinated Research Project on Spies, at College of Agriculture and Research Station, Raigarh, Indira Gandhi Krishi Vishwavidyalaya, Raipur Chhattisgarh. The gene pool maintained here boasts of an impressive range of variation for different traits of economic and academic values. These include early maturing (180 days) to late maturing (250 days) genotypes, unique characters like high curcumin (>5 %) which attracts medicinal sector and for powder industry curcumin content ranged from 2.5 to 4.9 %. All the available turmeric germplasm are free from rhizome rot disease in Chhattisgarh which is very important for research and development point of view. Beside this, total 54 set of germplasm has been deposited in National Active Germplasm Collection Centre(NAGC), at Indian Institute of Spices Research, Kozhikode, Kerala for long term storage and obtained Indigenous Collection number from NBPGR, New Delhi. Two varieties of turmeric Chhattisgarh Haldi-1 and Chhattisgarh Haldi-2 identified for cultivation to farmers of Chhattisgarh state through Chhattisgarh State Seed Sub-Committee, Raipur.

At national level, AICRP on Spices, CARS, Raigarh IGKV, Chhattisgarh the only centre mainly involved in its genetic improvement and was adjudged as the best AICRP on Spices center for the year 2019-20 in XXXI workshop of ICAR-All India Coordinated Research Project on Spices held at ICAR-Indian Institute of Spices Research, Kozhicode during 29-30 September 2020.

I hope, information generated and published in this catalogue will help the researchers in evolving high yielding turmeric varieties to improve the spices and medicinal industry as well as status of poor rural of India in particular and world over in general. Efforts made by Dr.Shrikant L. Sawargaonkar, Dr A.K. Singh and his team of scientists are highly appreciated who have compiled this important publication.

(S.K. Patil)

Foreword

The XXXII Annual Group Meeting of The Indian Council of Agricultural Research– All India Coordinated Research Project on Spices is being held at ICAR-IISR, Kozhikode during 22 to 24 September 2021. Owing to Covid 19 pandemic, the workshop will be organized through Virtual platform. I feel pleasure to know that All India Coordinated Research Project on Spices, College of Agriculture and Research Station, Raigarh Indira Gandhi Krishi Vishwavidyalaya, Raipur is publishing a catalogue on Turmeric (Curcuma longa L.) germplasm. In India, turmeric is commonly called "haldi," a word derived from the Sanskrit word haridra and is an important spice crop of India and has unique adaptation to dry lands. It is widely grown as kharif annual crop in India and its adjoining states. It is well adapted to different parts of Chhattisgarh among all the spices because it can tolerate flooding, drought and moderate soil salinity.

Major emphasis in horticulture development in recent years has been on doubling farmer's income through horticulture. There is further need of refining our ongoing research programmes to make horticulture sector more income generating under the changing consumer and market driven economy and rapidly depleting environmental conditions. I am glad to express that progress of AICRP on Spices, CARS, Raigarh, IGKV, and Chhattisgarh centre is getting higher day by day. Due to efforts of scientist of Raigarh, IGKV, Chhattisgarh AICRPS Raigarh center was adjudged as the best AICRP on Spices centre for the year 2019-20 in XXXI workshop of ICAR-All India Coordinated Research Project on Spices held at ICAR-Indian Institute of Spices Research, Kozhicode during 29-30 September 2020.

The present publication Turmeric Indigenous Germplasm: Collection and Conservation Status, Diversity Mapping of Chhattisgarh which describes 103 accessions of turmeric germplasm of Chhattisgarh. As it is indigenous germplasm of turmeric it is so valuable and I appreciate efforts of Dr Sawargaonkar S.L., Dr A.K. Singh and team of AICRP on Spices on documentation of turmeric germplasm. It is hoped that publication will serve as a ready reference to students, teachers, and researchers and also to progressive farmers.

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Contents

Introduction

Turmeric [*Curcuma longa* (L.)] is an important traditional spice predominantly cultivated in tropical and subtropical regions of Asia and Africa and also plays an important role in masala industry (< 5% curcumin content turmeric varieties and > 5 % rich curcumin content variety for medicinal industry .Turmeric is mainly consumed directly as powder in daily diet of all human beings, also in the form of turmeric pickles, chutney as medicine. It is used for cure of many known and unknown diseases. It is used as antibacterial, antifungal and in cosmetic industries. The rural people use turmeric large leaf for taking food. It is a hardy, widely adapted and drought tolerant crop with a large temporal variation (180-300 days) for rhizome maturity. These traits allow its cultivation in a wide range of environments and different cropping systems. The relatively low crop yields may be attributed to a lack of genetically superior varieties, low use of gene bank collections, and exposure to several biotic (diseases and insect pests) and abiotic (drought, salinity and water logging) stresses (Sawargaonkar S.L. *et al*. 2018, 2019). Turmeric has a unique place in Indian farming and India accounts for about major share of the global production. According to Horticultural statistics (2017) in India turmeric is cultivated in 193.4 thousands ha with the total production of 1052.1 thousand tons and productivity of 54.4 ton/ha, while in Chhattisgarh it is cultivated on 11,925 ha with average production of 0.96 Metric Ton and productivity of 0.84 MT/ha (Horticultural Statistics, 2018).

Plant genetic resources are an invaluable source of genes and gene complexes for yield and several biotic and abiotic factors and provide raw materials for further genetic improvement. Therefore, the collection of turmeric germplasm and its proper characterization and evaluation, conservation and utilization in improvement programmes assume great significance especially in view of climate change.

Table 1: Distribution and production of spices crops in Chhattisgarh

Sl. No.	Name of Spices	2019-20		2018-19		2017-18	
		Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)
1	Zinger	5129	47955	12715	153144	12499	151309
2	Turmeric	11925	105509	11849	105703	11356	100696
3	Coriander	8048	23501	20069	94730	19512	89744
4	Methi	2544	10633	4014	18479	3851	16464
5	Karayat	201	289	195	282	183	265
6	Ajwain	177	240	174	237	163	230
7	Chilli (Dry Red)	12241	78903	28215	196851	37590	274265
8	Garlic	4359	26688	4351	25319	4245	23833
9	Other	10752	60807	12006	64505	11581	58711

Source: Directorate of Horticulture, Chhattisgarh

ICAR-National Bureau of Plant Genetic Resources,
Pusa Campus, New Delhi-110 012

Table 2: PASSPORT DATA of Turmeric

S.N.	IT No	Collector No	Pedigree	Village	Taluka	District	State	Latitude (N)	Longitude (E)	Altitude (m)	Date of collection	Biological status
1	IT 1	RTS 1	Clonal selection RTS 1	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
2	IT 2	RTS 2	clonal election RTS 2	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
3	IT 3	RTS 3	Clonal selection RTS 3	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
4	IT 4	RTS 5	Clonal selection RTS 4	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
5	IT 5	RTS 6	Clonal selection RTS 5	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
6	IT 6	RTS 7	Clonal selection RTS 6	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
7	IT 7	RTS 8	Clonal selection RTS 7	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
8	IT 8	RTS 10	Clonal selection RTS 8	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
9	IT 9	RTS 13	Clonal selection RTS 9	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
10	IT 10	RTS 14	Clonal selection RTS 10	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
11	IT 11	RTS 18	Clonal selection RTS 11	BATAGUDA	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
12	IT 12	RTS 19	Clonal selection RTS 12	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
13	IT 13	RTS 20	Clonal selection RTS 13	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace

14	IT 14	RTS 21	Clonal selection RTS 14	Bangursia	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
15	IT 15	RTS 23	Clonal selection RTS 15	Bangursia	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
16	IT 16	RTS 25	Clonal selection RTS 16	Surguja,	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
17	IT 17	RTS 26	Clonal selection RTS 17	Kalyanpur,	Raigarh	Ambikapur	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
18	IT 18	RTS 27	Clonal selection RTS 18	Mohali Bagicha	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
19	IT 19	RTS 28	Clonal selection RTS 19	Pathalgaon	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
20	IT 20	RTS 30	Clonal selection RTS 20	Lipti,	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
21	IT 21	RTS 31	Clonal selection RTS 21	Rajnandgaon	Raigarh	Raigarh	Chhattisgarh	21° 05' N	81° 05' E	304 m	1997-98	Landrace
22	IT 22	RTS 32	Clonal selection RTS 22	Khoshla,	Lailunga,	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
23	IT 23	RTS 33	Clonal selection RTS 23	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
24	IT 24	RTS 34	Clonal selection RTS 24	Bizna	Tamnar	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
25	IT 25	RTS 35	Clonal selection RTS 25	Tarpali,	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	Landrace
26	IT 26	RTS 36	Clonal selection RTS 26	Potra	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1997-98	
27	IT 27	RTS 37	Clonal selection RTS 27	Bilaspur	Bilaspur	Bilaspur	Chhattisgarh	22° 05' N	82° 13' E	304 m	1998-99	Landrace
28	IT 28	RTS 38	Clonal selection RTS 28	Janjgir,	Janjgir,	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
29	IT 29	RTS 39	Clonal selection RTS 29	Sakti,	Bilaspur	Bilaspur	Chhattisgarh	22° 05' N	82° 13' E	304 m	1998-99	Landrace
30	IT 30	RTS 30	Clonal selection RTS 30	Muhar,	Rajnandgaon	Rajnandgaon	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
31	IT 31	RTS 41	Clonal selection RTS 31	Bilaspur	Bilaspur	Bilaspur	Chhattisgarh	22° 05' N	82° 13' E	304 m	1998-99	Landrace
32	IT 32	RTS 43	Clonal selection RTS 32	Jogidipa,	Maha samundra	Mahasamundra	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
33	IT 33	RTS 45	Clonal selection RTS 33	Dharamjaigarh	Dharamjaigarh	Raigarh	Chhattisgarh	22° 28' N	83°15’E	304 m	1998-99	Landrace

34	IT 34	RTS 50	Clonal selection RTS 34	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
35	IT 35	RTS 51	Clonal selection RTS 35	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
36	IT 36	RTS 52	Clonal selection RTS 36	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
37	IT 37	RTS 53	Clonal selection RTS 37	Raigarh	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
38	IT 38	RTS 38	Clonal selection RTS 38	Janjgir	Janjgir	Janjgir	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
39	IT 39	RTS 39	Clonal selection RTS 39	Bilaspur	Bilaspur	Bilaspur	Chhattisgarh	22° 05' N	82° 13' E	304 m	1998-99	Landrace
40	IT 40	RTS 40	Clonal selection RTS 40	Rajnandgaon	Rajnandgaon	Rajnandgaon	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
41	IT 41	RTS 41	Clonal selection RTS 41	Bilaspur	Bilaspur	Bilaspur	Chhattisgarh	21°55’ N	83°24’E	304 m	1998-99	Landrace
42	IT 42	RTS 42	Clonal selection RTS 42	Raigarh	Raigarh	Bilaspur	Chhattisgarh	22° 05' N	82° 13' E	304 m	1998-99	Landrace
43	IT 43	RTC12-1	Clonal selections RTC 12-1	Noniyatala	Duldula	Jashpur	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
44	IT 44	RTC 12-2	Clonal selections RTC 12-2	Jamzor,	Jamzor,	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
45	IT 45	RTC 12-3	Clonal selections RTC 12-3	Kunkuri,	Kunkuri,	Jashpur	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
46	IT 46	RTC 12-4	Clonal selections RTC 12-4	Noniyatala	Duldula	Noniyatala, Jashpur	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
47	IT 47	RTC 12-5	Clonal selections RTC 12-5	Madhuban,	Madhuban,	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
48	IT 48	RTC 12-6	Clonal selections RTC 12-6	GadaVahar	Kunkuri	, Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
49	IT 49	RTC12-7	Clonal selections RTC 12-7	Noniyatala	Duldula	Jashpur	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
50	IT 50	RTC 12-8	Clonal selections RTC 12-8	Aityali	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
51	IT 51	RTC 12-9	Clonal selections RTC 12-9	GadaVahar	Kunkuri	, Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
52	IT 52	RTC12-10	Clonal selections RTC 12-10	Kharsiya	Kharsiya	, Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
53	IT 53	RTC 12-11	Clonal selections RTC 12-11	Jashpur	Jashpur	Jashpur	Chhattisgarh	21°55’ N	83°24’E	304 m	2012-13	Landrace
54	IT 54	RTC 11-1	Clonal selections RTC 12-12	Bastar	Bastar	Bastar	Chhattisgarh	19° 10' N	81° 30' E	304 m	2012-13	Landrace
55	IT 55	RTC 2015-1	Clonal selections RTC 2015-1	Lingir	Lingir	Raigarh	Chhattisgarh	21° 56' N	83° 26' E	220 m	2015-16	Landrace

56	IT 56	RTC 2015-2	Clonal selections RTC 2015-2	Kusumura	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2015-16	Landrace
57	IT 57	RTC 2015-3	Clonal selections RTC 2015-3	Kusumura	Raigarh	Raigarh	Chhattisgarh	21°55’ N	83°24’E	304 m	2015-16	Landrace
58	IT 58	RTC 2015-4	Clonal selections RTC 2015-4	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
59	IT 59	RTC 2015-5	Clonal selections RTC 2015-5	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
60	IT 60	RTC 2015-6	Clonal selections RTC 2015-6	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
61	IT 61	RTC 2015-7	Clonal selections RTC 2015-7	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
62	IT 62	RTC 2015-8	Clonal selections RTC 2015-8	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
63	IT 63	RTC 2015-9	Clonal selections RTC 2015-9	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	243 m	2015-16	Landrace
64	IT 64	RTC 2015-10	Clonal selections RTC 2015-10	Lailunga	Lailunga	Raigarh	Chhattisgarh	21°55’ N	83°43’E	305 m	2015-16	Landrace
65	IT 65	RTC 2016-1	Clonal selections RTC 2016-1	Lingir	Baramkela	Raigarh	Chhattisgarh	21° 56' N	83° 26' E	220 m	2016-17	Landrace
66	IT 66	RTC 2016-2	Clonal selections RTC 2016-2	Lingir	Baramkela	Raigarh	Chhattisgarh	21° 56' N	83° 26' E	220 m	2016-17	Landrace
67	IT 67	RTC 2016-3	Clonal selections RTC 2016-3	Lingir	Baramkela	Raigarh	Chhattisgarh	21° 56' N	83° 26' E	220 m	2016-17	Landrace
68	IT 68	RTC 2016-4	Clonal selections RTC 2016-4	Jobro	Tamnar	Raigarh	Chhattisgarh	22°05' N	83° 80' E	240 m	2016-17	Landrace
69	IT 69	RTC 2016-5	Clonal selections RTC 2016-5	Jobro	Tamnar	Raigarh	Chhattisgarh	22°05' N	83° 80' E	240 m	2016-17	Landrace
70	IT 70	RTC 2016-6	Clonal selections RTC 2016-6	Jobro	Tamnar	Raigarh	Chhattisgarh	22°05' N	83° 80' E	240 m	2016-17	Landrace
71	IT 71	RTC 2016-7	Clonal selections RTC 2016-7	Chadoriya	Ghargho da	Raigarh	Chhattisgarh	22°17' N	83° 25' E	258 m	2016-17	Landrace
72	IT 72	RTC 2016-8	Clonal selections RTC 2016-8	Chadoriya	Ghargho da	Raigarh	Chhattisgarh	22°17' N	83° 25' E	258 m	2016-17	Landrace
73	IT 73	RTC 2016-9	Clonal selections RTC 2016-9	Chadoriya	Ghargho da	Raigarh	Chhattisgarh	22°17' N	83° 25' E	258 m	2016-17	Landrace
74	IT 74	RTC 2017-1	Clonal selections RTC 2017-1	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace

75	IT 75	RTC 2017-2	Clonal selections RTC 2017-2	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
76	IT 76	RTC 2017-3	Clonal selections RTC 2017-3	Sodekela	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
77	IT 77	RTC 2017-4	Clonal selections RTC 2017-4	Tarpali	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
78	IT 78	RTC 2017-5	Clonal selections RTC 2017-5	Tarpali	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
79	IT 79	RTC 2017-6	Clonal selections RTC 2017-6	Bhikarimal	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
80	IT 80	RTC 2017-7	Clonal selections RTC 2017-7	Jurda	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
81	IT 81	RTC 2017-8	Clonal selections RTC 2017-8	Jurda	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
82	IT 82	RTC 2017-9	Clonal selections RTC 2017-9	Jurda	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
83	IT 83	RTC 2017-10	Clonal Selections RTC 2017-10	Pandharipani	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
84	IT 84	RTC-2018-1	Clonal selections RTC 2018-1	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
85	IT 85	RTC-2018-2	Clonal selections RTC 2018-2	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
86	IT 86	RTC-2018-3	Clonal selections RTC 2018-3	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
87	IT 87	RTC-2018-4	Clonal selections RTC 2018-4	Pussor	Pussor	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
88	IT 88	RTC-2018-5	Clonal selections RTC 2018-5	Sarangarh	Sarangarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
89	IT 89	RTC-2018-6	Clonal selections RTC 2018-6	Sarangarh	Sarangarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2017-18	Landrace
90	IT 90	RTC-2018-7	Clonal selections RTC 2018-7	Sarangarh	Sarangarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
91	IT 91	RTC 2018-8	Clonal selections RTC 2018-8	Jamgaon	Raigarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace
92	IT 92	RTC 2021-1	Clonal selections RTC 2021-1	Malda	Sarangarh	Raigarh	Chhattisgarh	22°17' N	83° 25' E	220 m	2018-19	Landrace

Table 3: Indigenous Collections number of Turmeric obtained from NBPGR New Delhi

IT No	Entries	I.C. Number	IT No	Collector No	I.C. Number
IT 1	RTS 1	626514	IT 28	RTS 38	626541
IT 2	RTS 2	626515	IT 29	RTS 39	626542
IT 3	RTS 3	626516	IT 30	RTS 30	626543
IT 4	RTS 5	626517	IT 31	RTS 41	626544
IT 5	RTS 6	626518	IT 32	RTS 43	626545
IT 6	RTS 7	626519	IT 33	RTS 45	626546
IT 7	RTS 8	626520	IT 34	RTS 50	626547
IT 8	RTS 10	626521	IT 35	RTS 51	626548
IT 9	RTS 13	626522	IT 36	RTS 52	626549
IT 10	RTS 14	626523	IT 37	RTS 53	626550
IT 11	RTS 18	626524	IT 38	RTS 38	626551
IT 12	RTS 19	626525	IT 39	RTS 39	626552
IT 13	RTS 20	626526	IT 40	RTS 40	626553
IT 14	RTS 21	626527	IT 41	RTS 41	626554
IT 15	RTS 23	626528	IT 42	RTS 42	626555
IT 16	RTS 25	626529	IT 43	RTC12-1	626556
IT 17	RTS 26	626530	IT 44	RTC 12-2	626557
IT 18	RTS 27	626531	IT 45	RTC 12-3	626558
IT 19	RTS 28	626532	IT 46	RTC 12-4	626559
IT 20	RTS 30	626533	IT 47	RTC 12-5	626560
IT 21	RTS 31	626534	IT 48	RTC 12-6	626561
IT 22	RTS 32	626535	IT 49	RTC12-7	626562
IT 23	RTS 33	626536	IT 50	RTC 12-8	626563
IT 24	RTS 34	626537	IT 51	RTC 12-9	626564
IT 25	RTS 35	626538	IT 52	RTC12-10	626565
IT 26	RTS 36	626539	IT 53	RTC 12-11	626566
IT 27	RTS 37	626540	IT 54	RMGC 11-1	626567

Table 4: Yield and yield attributing traits of indigeneous germplasm of turmeric recorded during 2020-21

S.N.	Entries	Days to maturity	Plant height/ plant (CM)	No of leaves/ plant	No of shoots/ plant	No of mother rhizome/ clump/ plant	No of primary rhizome per clump/plant	No of secondary rhizome per clump/plant	Length of mother rhizome per plant	Breadth of mother rhizome per plant	Length of primary rhizome per plant	Breadth of primary rhizome per plant	Clump weight of rhizome per plant (g)	Dry recovery (%)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	17
1	IT 1	225	119.31	15.29	3.41	2.3	7.0	8.7	6.6	3.6	7.2	2.7	290	22
2	IT 2	223	136	15.36	2.74	1.7	5.0	12.7	6.2	15.0	6.7	1.8	305	18
3	IT 3	222	121.1	16.99	3.91	1.7	7.7	49.0	6.6	3.2	7.3	2.1	266	18
4	IT 4	220	137.21	17.86	3.24	1.3	3.7	8.0	6.9	3.7	9.2	2.2	330	22
5	IT 5	221	124.8	13.49	2.94	1.3	6.0	5.0	5.4	14.4	7.7	2.1	303	20
6	IT 6	227	126.3	18.06	3.21	1.3	5.3	11.3	6.8	3.5	6.0	2.0	288	19
7	IT 7	230	116.71	11.49	3.14	2.0	5.0	4.7	6.6	5.1	7.2	2.0	293	27
8	IT 8	222	131	16.76	3.51	1.3	5.0	10.7	6.1	3.5	8.3	2.1	343	17
9	IT 9	215	132.3	13.76	2.74	1.0	5.3	17.0	6.5	3.3	8.0	1.8	376	16
10	IT 10	220	155.01	11.09	3.41	1.3	6.3	20.7	5.3	3.3	6.7	1.6	669	23
11	IT 11	219	137.8	15.56	3.14	1.3	6.0	9.7	6.9	3.5	7.8	2.2	324	17
12	IT 12	211	127.5	12.79	2.74	2.7	8.7	15.0	6.5	3.8	9.3	1.9	466	17
13	IT 13	220	121.71	13.76	2.91	2.0	6.7	5.7	7.1	3.0	8.6	2.5	507	19
14	IT 14	221	122.8	15.29	3.14	4.0	12.7	18.7	8.2	4.7	10.9	1.9	370	17
15	IT 15	217	124.1	18.36	3.51	1.7	6.0	11.0	8.5	3.9	9.0	2.1	547	15
16	IT 16	223	126.91	11.86	2.64	2.7	7.0	11.7	8.7	3.8	8.8	2.1	371	23
17	IT 17	226	138.5	11.99	3.41	2.0	7.0	12.3	6.9	3.9	9.1	1.9	301	20
18	IT 18	215	106.8	12.86	2.94	1.0	4.7	8.7	8.2	4.9	9.9	1.9	282	23

19	IT 19	231	126.91	12.09	2.74	1.7	5.3	10.7	8.0	3.8	8.3	1.9	369	22
20	IT 20	236	114.6	15.76	3.41	1.3	4.7	9.7	6.8	3.7	7.9	2.4	410	12
21	IT 21	222	121.5	14.09	3.24	2.3	7.7	7.0	6.9	3.8	8.2	2.6	307	24
22	IT 22	227	124.71	18.76	3.91	1.3	4.7	6.3	6.7	3.4	7.1	2.2	445	20
23	IT 23	225	127.8	18.26	3.24	1.7	10.0	9.7	6.4	4.0	8.4	2.0	488	17
24	IT 24	223	120.1	12.79	3.01	2.7	7.0	5.3	6.4	5.5	6.9	2.3	398	11
25	IT 25	220	123.91	15.76	2.94	1.0	5.0	13.0	6.1	3.6	9.1	2.5	623	17
26	IT 26	219	123	13.49	2.94	1.0	6.0	10.3	7.2	4.0	8.4	2.0	434	17
27	IT 27	222	120.5	14.26	2.91	1.3	4.7	11.3	7.0	3.3	9.3	2.4	576	11
28	IT 28	235	113.91	11.59	2.44	1.0	4.3	9.7	7.4	3.7	8.6	2.3	368	12
29	IT 29	229	115.3	14.06	2.91	2.0	7.0	11.7	6.5	3.4	7.5	2.3	514	20
30	IT 30	227	126	17.86	3.24	1.0	5.0	5.7	6.9	3.6	7.4	2.4	307	20
31	IT 31	225	124.71	14.29	3.21	2.0	6.0	5.3	4.8	4.4	7.1	2.6	454	12
32	IT 32	216	132	11.56	2.44	1.0	5.3	14.7	6.0	3.7	8.5	2.0	288	15
33	IT 33	211	127.6	15.79	2.94	2.0	7.0	7.7	7.9	3.9	7.5	1.7	428	20
34	IT 34	220	123.01	10.56	3.01	2.0	6.3	9.0	6.4	3.7	6.7	1.7	300	13
35	IT 35	211	113	15.79	3.24	1.0	16.7	10.0	15.8	3.4	7.7	2.4	315	10
36	IT 36	186	117.1	14.36	3.01	1.0	4.0	4.7	7.0	3.6	5.8	2.2	483	18
37	IT 37	226	104.01	14.36	3.14	2.7	5.0	4.3	7.8	3.9	6.7	2.1	410	17
38	IT 38	216	106.8	9.99	3.01	2.7	7.7	14.7	6.5	3.9	6.7	2.3	685	13
39	IT 39	213	104.6	12.76	2.64	1.0	4.3	8.3	5.9	3.6	8.2	2.2	432	11
40	IT 40	225	115.41	18.29	3.24	1.0	4.7	13.3	6.7	4.0	8.9	1.8	401	16
41	IT 41	216	129.8	17.86	3.01	1.7	6.7	9.7	7.2	4.3	9.7	2.0	366	20
42	IT 42	211	102.8	9.29	2.24	1.3	6.0	11.3	6.0	3.2	8.1	1.9	609	15
43	IT 43	221	110.51	13.06	2.91	1.3	7.0	17.0	6.8	5.0	8.3	1.8	569	17
44	IT 44	221	100.3	14.06	3.24	2.0	5.0	12.0	8.2	4.3	9.8	2.1	414	11
45	IT 45	232	95.8	9.79	3.01	1.0	7.0	9.0	5.1	4.0	9.9	1.8	421	17
46	IT 46	245	98.91	13.86	2.74	2.0	4.3	21.7	6.5	4.0	10.3	1.7	576	14

47	IT 47	236	99.5	12.59	2.94	1.0	3.3	8.0	6.5	3.9	8.4	2.7	301	18
48	IT 48	232	113.8	15.76	3.41	1.3	7.7	18.7	7.7	4.2	9.5	2.6	455	11
49	IT 49	241	103.01	12.29	2.64	2.7	5.3	12.3	6.7	4.2	8.1	2.6	790	13
50	IT 50	236	96.6	12.76	3.01	2.3	4.7	8.7	6.7	3.2	6.2	1.8	225	14
51	IT 51	212	97.8	10.76	2.94	1.0	7.0	6.7	6.3	3.4	6.4	2.3	278	16
52	IT 52	225	104.41	12.49	2.51	2.3	8.0	6.3	7.5	4.4	9.5	2.3	440	20
53	IT 53	216	100.3	13.06	2.74	2.0	4.0	8.0	5.7	3.1	7.5	2.2	427	14
54	IT 54	207	147.1	11.49	2.64	2.0	5.7	4.7	6.9	3.5	6.7	2.4	564	14
55	IT 55	215	110.41	13.26	3.41	1.0	5.7	8.3	5.9	3.3	8.3	2.1	399	15
56	IT 56	211	127.3	7.89	2.24	1.0	5.3	12.7	6.8	3.9	8.3	2.0	435	19
57	IT 57	230	125.6	12.76	3.01	1.0	4.7	14.7	7.6	3.8	12.2	2.1	522	17
58	IT 58	224	106.51	13.86	2.94	1.0	10.0	9.0	5.6	3.4	8.4	2.1	375	15
59	IT 59	217	152.3	7.29	2.91	2.7	5.0	19.0	7.3	4.2	8.9	2.2	950	18
60	IT 60	225	97.3	11.76	2.44	2.0	5.0	11.3	7.7	3.8	7.1	2.2	392	15
61	IT 61	221	155.21	9.99	2.74	1.7	4.3	9.3	6.0	4.2	8.5	2.0	446	25
62	IT 62	222	165.1	12.96	3.21	1.0	3.0	7.7	5.9	3.4	6.2	2.1	264	18
63	IT 63	231	103.8	10.29	2.64	1.0	4.7	7.7	5.6	3.2	6.9	1.7	219	16
64	IT 64	223	104.01	15.56	3.21	1.0	7.0	12.0	7.1	3.7	8.2	2.1	429	16
65	IT 65	217	109.3	12.76	2.74	1.3	5.3	8.7	7.3	3.5	6.5	1.6	302	16
66	IT 66	210	134.8	7.79	2.51	2.0	8.7	10.7	6.4	3.2	7.2	2.4	515	14
67	IT 67	221	137.41	13.56	2.74	1.3	6.0	13.7	7.9	4.4	8.8	2.0	404	19
68	IT 68	212	111.1	12.39	3.04	1.0	4.0	10.0	6.1	4.0	10.5	2.0	328	19
69	IT 69	223	83.5	15.06	3.21	8.3	6.3	13.0	9.9	6.3	9.7	3.0	297	14
70	IT 70	221	99.91	8.79	2.24	1.0	3.7	10.7	5.2	3.4	8.9	1.6	230	15
71	IT 71	219	111.1	19.36	3.21	1.0	5.3	12.0	8.2	4.5	10.1	2.2	192	15
72	IT 72	210	125.3	10.76	2.24	1.0	4.7	6.3	6.1	2.9	7.1	1.8	459	15
73	IT 73	223	106.21	11.79	2.91	1.3	5.0	6.0	6.0	3.3	4.7	1.6	171	19
74	IT 74	212	110.5	10.76	2.44	1.0	5.0	6.0	5.5	3.2	8.1	1.6	192	18

75	IT 75	221	93.5	15.09	2.64	1.0	3.3	4.7	5.1	3.0	7.0	1.7	243	18
76	IT 76	219	98.51	14.36	2.91	1.7	4.3	7.3	6.3	3.3	7.2	1.9	211	16
77	IT 77	227	113.8	13.49	2.64	1.0	5.0	9.0	6.3	4.1	7.7	1.6	250	17
78	IT 78	216	119.5	18.36	3.01	1.0	4.0	3.7	5.6	3.4	6.6	2.2	231	15
79	IT 79	217	108.51	10.06	2.24	1.0	4.0	5.3	5.6	3.0	6.3	1.9	240	14
80	IT 80	230	114.8	11.09	2.91	1.7	5.0	9.0	6.3	3.4	6.1	2.4	156	17
81	IT 81	216	94	11.56	2.94	3.0	7.7	7.0	7.3	3.8	6.6	2.6	495	16
82	IT 82	217	95.21	14.09	3.44	1.3	4.7	6.0	6.8	4.0	10.1	2.5	472	16
83	IT 83	220	103.3	11.86	2.91	1.0	4.7	5.7	6.3	3.7	6.5	2.7	263	19
84	IT 84	216	117.3	8.09	2.74	1.0	4.3	12.0	7.2	3.4	7.5	2.6	344	10
85	IT 85	221	96.41	9.76	2.51	1.0	4.7	11.0	5.5	3.5	8.3	2.5	492	12
86	IT 86	220	98.3	13.06	2.74	2.0	4.0	6.7	6.8	4.2	7.7	2.3	310	12
87	IT 87	215	107.3	6.3	2.5	1.7	5.7	10.0	7.7	3.1	7.3	2.5	450	11
88	IT 88	220	109.4	4.6	2.7	1.3	5.7	8.7	6.7	3.1	7.9	2.4	375	19
89	IT 89	215	106.2	4.2	2.1	2.0	6.0	25.3	8.2	5.0	9.0	2.1	491	11
90	IT 90	210	110.2	4.6	2.6	1.3	4.0	6.3	5.1	3.3	7.3	2.0	269	14
91	IT 91	215	113.6	5.3	3.2	1.1	3.0	4.5	4.5	3.5	8.1	2.3	167	13
92	IISR Prathibha	197	108.01	14.56	2.94	1.3	4.2	6.5	4.2	3.3	5.5	2.6	350	13
93	Narendra Haldi-1	216	103	12.09	2.91	2.1	5.2	4.6	4.7	3.6	4.8	3.1	475	17
94	Roma	215	117.1	12.99	2.74	1.3	4.1	9.2	5.1	3.7	4.6	3.2	357	17
95	BSR 2	226	107.8	13.76	3.01	1.4	3.5	3.2	4.2	3.1	4.1	3.3	380	17
96	Suranjana	212	94.21	10.99	2.64	1.5	4.3	3.3	4.1	4.2	3.5	3.3	345	17

Table 5: Visual assessment by observation of individual plants and clump of plants

S.N.	G. P. Number	Rhizome habit (Compact/ Intermediate/Loose)	Rhizome shape (Straight/ Curved)	Rhizome internode pattern (Close/ Distant)	Status of tertiary rhizome/ clump /plant	Disease reaction	
						Colletotrichum leaf spot	*Taphrina* leaf blotch
	16	17	18	19	20	21	22
1	IT 1	Intermediate	Straight	Close	Present	MR	MR
2	IT 2	Intermediate	Straight	Distant	Absent	MR	MR
3	IT 3	Loose	Straight	Distant	Present	MR	MR
4	IT 4	Intermediate	Curved	Distant	Absent	MR	MR
5	IT 5	Compact	Straight	Distant	Absent	MR	MR
6	IT 6	Compact	Straight	Distant	Present	MR	MR
7	IT 7	Intermediate	Curved	Distant	Absent	MR	MR
8	IT 8	Loose	Curved	Distant	Absent	MR	MR
9	IT 9	Loose	Straight	Distant	Present	MR	MR
10	IT 10	Intermediate	Curved	Close	Present	MR	MR
11	IT 11	Loose	Curved	Distant	Present	MR	MR
12	IT 12	Loose	Curved	Distant	Absent	S	S
13	IT 13	Intermediate	Curved	Distant	Present	S	S
14	IT 14	Intermediate	Curved	Distant	Present	S	S
15	IT 15	Intermediate	Curved	Distant	Present	S	S
16	IT 16	Loose	Curved	Distant	Absent	MR	MR
17	IT 17	Compact	Curved	Close	Absent	MR	MR
18	IT 18	Loose	Curved	Distant	Present	S	S
19	IT 19	Loose	Curved	Distant	Absent	S	S
20	IT 20	Compact	Curved	Close	Present	MR	MR
21	IT 21	Loose	Straight	Distant	Present	S	S
22	IT 22	Compact	Straight	Distant	Present	MR	MR
23	IT 23	Compact	Straight	Distant	Present	MR	MR
24	IT 24	Compact	Straight	Distant	Absent	MR	MR
25	IT 25	Intermediate	Straight	Distant	Present	MR	MR
26	IT 26	Compact	Straight	Close	Present	MR	MR
27	IT 27	Loose	Straight	Close	Absent	MR	MR
28	IT 28	Compact	Straight	Distant	Present	MR	MR
29	IT 29	Compact	Straight	Distant	Absent	S	S
30	IT 30	Loose	Curved	Close	Absent	MR	MR
31	IT 31	Loose	Curved	Distant	Absent	MR	MR
32	IT 32	Compact	Curved	Distant	Absent	S	S
33	IT 33	Loose	Straight	Close	Present	MR	MR
34	IT 34	Compact	Curved	Close	Present	MR	MR

35	IT 35	Intermediate	Straight	Distant	Present	MR	MR
36	IT 36	Compact	Curved	Distant	Absent	MR	MR
37	IT 37	Loose	Straight	Distant	Absent	MR	MR
38	IT 38	Loose	Straight	Distant	Present	MR	MR
39	IT 39	Compact	Straight	Distant	Present	MS	MS
40	IT 40	Loose	Curved	Distant	Present	MS	MS
41	IT 41	Compact	Straight	Distant	Present	MS	MS
42	IT 42	Loose	Straight	Distant	Absent	MS	MS
43	IT 43	Loose	Straight	Distant	Present	MS	MS
44	IT 44	Loose	Straight	Distant	Present	MS	MS
45	IT 45	Compact	Curved	Distant	Present	MS	MS
46	IT 46	Loose	Straight	Distant	Present	MS	MS
47	IT 47	Compact	Curved	Distant	Absent	MS	MS
48	IT 48	Loose	Straight	Distant	Present	MS	MS
49	IT 49	Compact	Curved	Close	Present	MS	MS
50	IT 50	Compact	Curved	Distant	Present	MS	MS
51	IT 51	Loose	Straight	Distant	Absent	MS	MS
52	IT 52	Loose	Curved	Distant	Present	MR	MR
53	IT 53	Compact	Curved	Distant	Present	MR	MR
54	IT 54	Intermediate	Straight	Distant	Present	MR	MR
55	IT 55	Compact	Curved	Distant	Absent	MR	MR
56	IT 56	Intermediate	Curved	Distant	Absent	S	S
57	IT 57	Loose	Curved	Distant	Present	S	S
58	IT 58	Compact	Curved	Distant	Present	S	S
59	IT 59	Intermediate	Curved	Distant	Present	MR	MR
60	IT 60	Compact	Curved	Distant	Present	S	S
61	IT 61	Loose	Curved	Distant	Present	S	S
62	IT 62	Loose	Straight	Distant	Present	MR	MR
63	IT 63	Loose	Straight	Distant	Present	S	S
64	IT 64	Loose	Straight	Distant	Present	MR	MR
65	IT 65	Intermediate	Curved	Distant	Absent	S	S
66	IT 66	Loose	Curved	Distant	Present	MR	MR
67	IT 67	Intermediate	Curved	Distant	Present	S	S
68	IT 68	Loose	Curved	Distant	Present	S	S
69	IT 69	Loose	Curved	Distant	Present	S	S
70	IT 70	Intermediate	Curved	Close	Absent	S	S
71	IT 71	Loose	Curved	Close	Present	S	S
72	IT 72	Loose	Curved	Distant	Present	MR	MR
73	IT 73	Loose	Curved	Distant	Absent	MR	MR
74	IT 74					MS	S
75	IT 75	Loose	Curved	Distant	Present	S	S
76	IT 76	Loose	Curved	Close	Absent	S	S
77	IT 77	Loose	Straight	Distant	Absent	S	S
78	IT 78	Intermediate	Curved	Close	Absent	S	S
79	IT 79	Loose	Curved	Distant	Absent	S	S

80	IT 80	Loose	Curved	Close	Present	S	S
81	IT 81	Compact	Curved	Close	Present	S	S
82	IT 82	Loose	Curved	Distant	Absent	S	S
83	IT 83	Intermediate	Straight	Close	Present	S	S
84	IT 84	Compact	Curved	Close	Present	S	S
85	IT 85	Intermediate	Curved	Distant	Present	S	S
86	IT 86	Compact	Straight	Close	Present	S	S
87	IT 87	Compact	Curved	Distant	Present	MS	MS
88	IT 88	Compact	Curved	Close	Absent	MS	MS
89	IT 89	Compact	Curved	Close	Absent	MS	MS
90	IT 90	Loose	Curved	Close	Absent	MS	MS
91	IT 91	Loose	Curved	Close	Present	MS	MS
92	IISR Prathibha	Intermediate	Curved	Distant	Present	MR	MR
93	Narendra Haldi-1	Compact	Curved	Distant	Absent	MR	MR
94	Roma	Intermediate	Straight	Distant	Present	MR	MR
95	BSR 2	Intermediate	Curved	Distant	Absent	MR	MR
96	Suranjana	Compact	Straight	Distant	Absent	MR	MR

MR = moderately resistant, MS = moderately susceptible, S= Susceptible

Released Varieties of Turmeric for Chhattisgarh State

S.N.	Name of variety	Year of release through SVRC
1	*Chhattisgarh Haldi-1	2015
2	*Chhattisgarh Haldi-2	2019

*= Notification proposal submitted to CVRC, New Delhi and is under consideration

Fig 1: Glimpses of rhizome, dry recovery % and variation in turmeric powder of different accessions of indigenous germplasm of turmeric at CARS, Raigarh

	**Dry recovery % 22**	
	**Dry recovery % 18**	
	**Dry recovery % 18**	
	**Dry recovery % 22**	
	**Dry recovery % 20**	
	**Dry recovery % 19**	

	**Dry recovery % 27**	
	**Dry recovery % 17**	
	**Dry recovery % 16**	
	**Dry recovery % 23**	
	**Dry recovery % 17**	
	**Dry recovery % 17**	
	**Dry recovery % 19**	

	**Dry recovery % 17**	
	**Dry recovery % 15**	
	**Dry recovery % 23**	
	**Dry recovery % 20**	
	**Dry recovery % 23**	
	**Dry recovery % 22**	

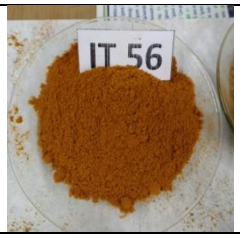
	**Dry recovery % 12**	
	**Dry recovery % 24**	
	**Dry recovery % 20**	
	**Dry recovery % 17**	
	**Dry recovery % 11**	
	**Dry recovery % 17**	

	**Dry recovery % 17**	
	**Dry recovery % 11**	
	**Dry recovery % 12**	
	**Dry recovery % 20**	
	**Dry recovery % 20**	
	**Dry recovery % 12**	
	**Dry recovery % 15**	

	**Dry recovery % 20**	
	**Dry recovery % 13**	
	**Dry recovery % 10**	
	**Dry recovery % 18**	
	**Dry recovery % 17**	
	**Dry recovery % 13**	

	**Dry recovery % 11**	
	**Dry recovery % 16**	
	**Dry recovery % 20**	
	**Dry recovery % 15**	
	**Dry recovery % 17**	
	**Dry recovery % 11**	
	**Dry recovery % 17**	

	**Dry recovery % 14**	
	**Dry recovery % 18**	
	**Dry recovery % 11**	
	**Dry recovery % 13**	
	**Dry recovery % 14**	
	**Dry recovery % 16**	
	**Dry recovery % 20**	

	**Dry recovery % 14**	
	**Dry recovery % 14**	
	**Dry recovery % 15**	
	**Dry recovery % 19**	
	**Dry recovery % 17**	
	**Dry recovery % 15**	
	**Dry recovery % 18**	

	**Dry recovery % 15**	
	**Dry recovery % 25**	
	**Dry recovery % 18**	
	**Dry recovery % 16**	
	**Dry recovery % 16**	
	**Dry recovery % 16**	
	**Dry recovery % 14**	

	**Dry recovery % 19**	
	**Dry recovery % 19**	
	**Dry recovery % 14**	
	**Dry recovery % 15**	
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	**Dry recovery % 14**	

	**Dry recovery % 17**	
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	**Dry recovery % 12**	
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	**Dry recovery % 14**	
	**Dry recovery % 13**	
	**Dry recovery % 17**	

	**Dry recovery % 13**	
	**Dry recovery % 17**	

भाकृअनुप
ICAR

XXXI Workshop

ICAR-All India Coordinated Research Project on Spices

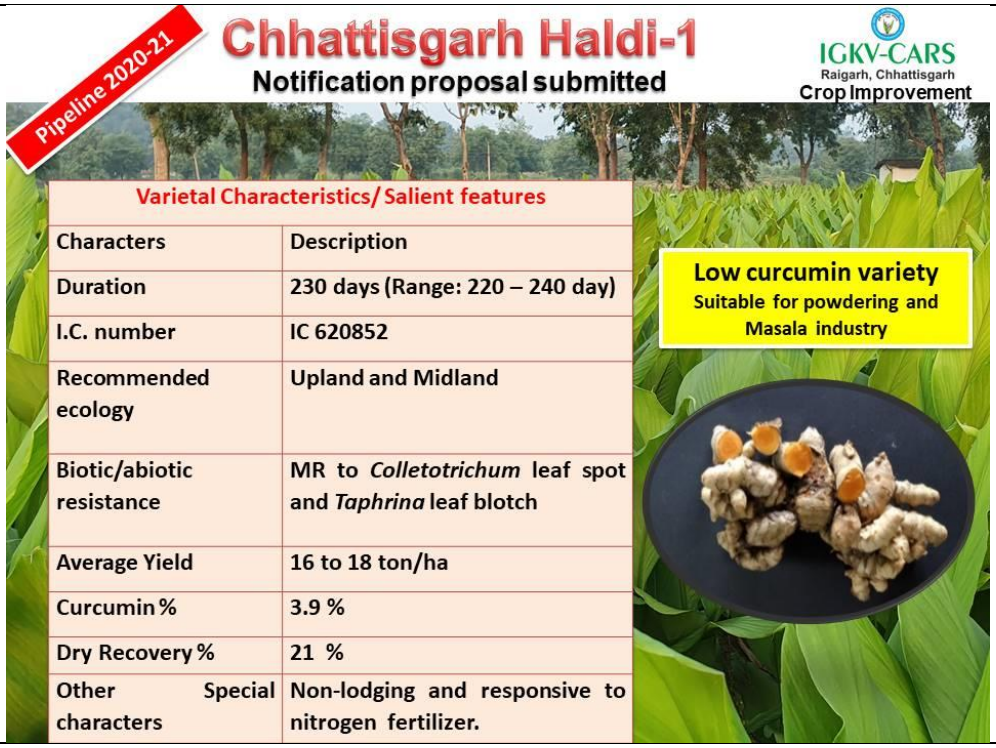
29-30 September 2020

Best AICRPS Centre Award 2019-20

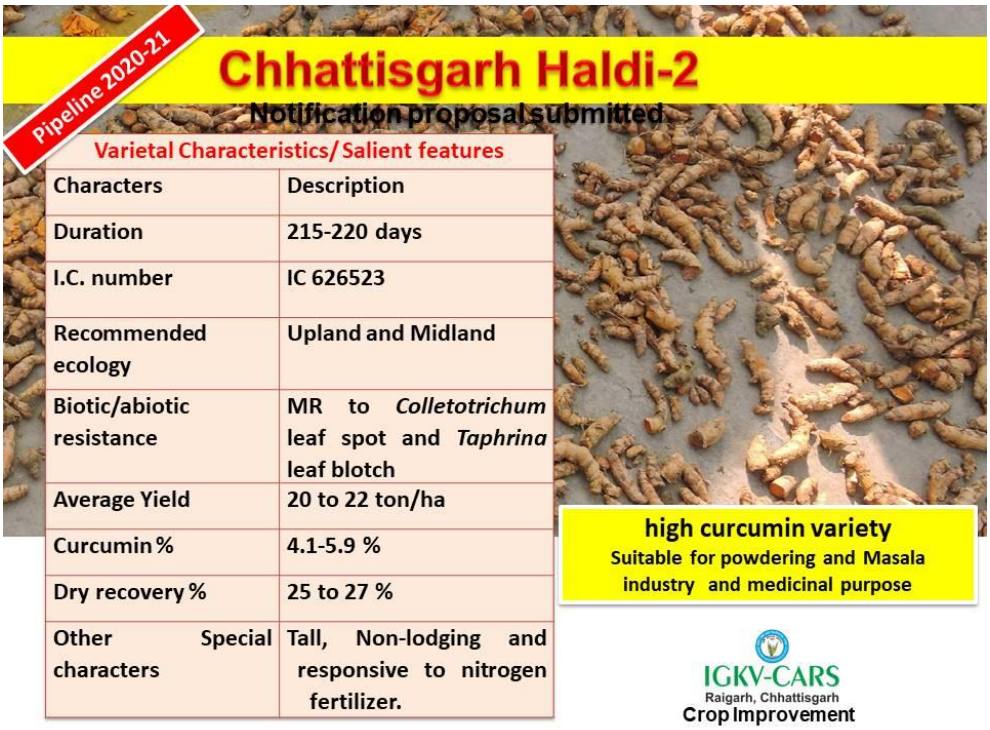
This is to certify that the AICRPS centre at IGKV, Raigarh was adjudged as the Best AICRPS Centre for the year 2019-20 in XXXI Workshop of ICAR – All India Coordinated Research Project on Spices held at ICAR-Indian Institute of Spices Research, Kozhikode during 29 – 30 September 2020.

Date: 29 September 2020
Place: Kozhikode

Project Coordinator
ICAR-AICRP on Spices, Kozhikode, Kerala



Chhattisgarh Haldi -1 (SVRC 2015)



SVRC-Chhattisgarh Haldi -2 (SVRC-2019)

Note: CGH 1 and CGH 2 notification proposal submitted on February 2021 and is under consideration

Performance of Chhattisgarh Haldi-1 and 2 on farmers field at Raigarh K-2020

AICRP Spices , CARS, Raigarh

Processing of Turmeric

नवभारत
छत्तीसगढ़ • ओडिशा
Rajdhani - 06 Oct 2020 - 06raj3

मसाला फसलों की नई किस्मों के रिसर्च के लिए मिला सम्मान

- कृषि विश्वविद्यालय का रायगढ़ केंद्र देश के सर्वश्रेष्ठ मसाला केंद्र के रूप में शामिल
- अभा समन्वित अनुसंधान परियोजना की 31वीं वार्षिक कार्यशाला में मिला सम्मान

• नवभारत रिपोर्टर | रायपुर.
www.navabharat.org

इंदिरा गांधी कृषि विश्वविद्यालय के अंतर्गत संचालित कृषि महाविद्यालय एवं अनुसंधान केंद्र रायगढ़ के मसाला अनुसंधान केंद्र को वर्ष 2019-20 के लिए भारत के सर्वश्रेष्ठ मसाला अनुसंधान केंद्र के रूप में सम्मानित किया गया है. केंद्र को यह सम्मान अखिल भारतीय समन्वित अनुसंधान परियोजना (मसाला) की 31वीं वार्षिक कार्यशाला पर प्रदान किया गया. रायगढ़ केंद्र को यह सम्मान हल्दी, अदरक, धनिया, मेथी, अजवाइन आदि मसाला फसलों की नई किस्मों के विकास, फसल सुधार, अनुसंधान एवं विस्तार के लिए दिया गया है. यह केंद्र प्रदेश के आदिवासी किसानों के उत्थान के लिए उनके खेतों में मसाला फसलों की विभिन्न किस्मों के प्रदर्शन भी आयोजित कर रहा है.

कृषि महाविद्यालय एवं अनुसंधान केंद्र, रायगढ़ में मसाला अनुसंधान हेतु सन 1996 में समन्वित मसाला अनुसंधान केंद्र की स्थापना की गई थी. परियोजना के वैज्ञानिक राज्य के प्रमुख मसाला फसलों पर फसल सुधार और रोग प्रतिरोधकता हेतु अनुसंधान कार्य कर रहे हैं. कृषि महाविद्यालय एवं अनुसंधान केंद्र, रायगढ़ के मसाला अनुसंधान केंद्र द्वारा हल्दी, अदरक, आमी अदरक, मेथी और निगेला में अखिल भारतीय समन्वित अनुसंधान परीक्षणों में विभिन्न फसलों की कई प्रजातियों का योगदान दिया गया है. केंद्र द्वारा विकसित धनिया की दो किस्मों सीजी धनिया-1 को छत्तीसगढ़ राज्य हेतु एवं सीजी श्री चन्द्रहासिनी धनिया-2 को छत्तीसगढ़, मध्यप्रदेश, राजस्थान, बिहार, उत्तर प्रदेश, हरियाणा, गुजरात, उत्तराखंड, आंध्रप्रदेश एवं तमिलनाडु राज्यों के लिए वर्ष 2019 में जारी तथा अधिसूचित किया गया है.

XXXI Workshop
ICAR-All India Coordinated Research Project on Spices
29-30 September 2020

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Date: 29 September 2020
Place: Kozhikode

Project Coordinator
ICAR-AICRP on Spices, Kozhikode, Kerala

प्रस्ताव दिल्ली में है विचाराधीन

वर्तमान में केंद्र द्वारा विकसित हल्दी की दो नवीन किस्मों सीजी हल्दी-1 एवं सीजी हल्दी-2 को छत्तीसगढ़ राज्य किस्म बीज उपसमिति द्वारा जारी करने हेतु पहचान किया गया है. इस नवीन किस्म को राज्यों के लिए अधिसूचित करने हेतु प्रस्ताव सीवीआरसी नई दिल्ली समक्ष विचाराधीन है. छत्तीसगढ़ राज्य किस्म बीज उपसमिति द्वारा राज्य हेतु केंद्र की पहली अजवाइन की किस्म सीजी अजवाइन-1 की भी पहचान की गई है. परियोजना के वैज्ञानिक डॉ. एके सिंह एवं डॉ. श्रीकांत सवरगांवकर ने हल्दी और अदरक के उत्पादन हेतु कम लागत वाली 'प्रकंद गुणा फसल उत्पादन एवं संरक्षण' नामक नवीन तकनीक का विकास किया है जो किसानों के लिए लाभदायी साबित होगी.

TheHitavada
Raipur City Line | 2020-10-06 | Page- 4

IGKV's AICRPS centre adjudged as best one

■ **Staff Reporter**
RAIPUR, Oct 5

THE All India Coordinated Research Project on Spices (AICRPS) being operated by Agricultural College and Research Centre in Raigarh under Indira Gandhi Krishi Vishwavidyalaya (IGKV) Raipur has been adjudged as best AICRPS centre for 2019-20.

The centre has been felicitated with the honour during 31th workshop of ICAR-All India Coordinated Research Project on Spices held at ICAR-Indian Institute of Spices Research, Kozhikode recently, informed the IGKV administration.

Raigarh centre has been given this honour for the development, crop improvement, research and extension of spice crops including turmeric, ginger, coriander, fenugreek, bishop's weed seeds and others. For the upliftment of tribal farmers, the centre also organises display of various varieties of spice crops in their fields.

Notably, the Coordinated Spice Research Centre in Agricultural College and Research Centre, Raigarh was established in 1996 and since then researches on spices are being carried out in the centre under All India Coordinated Research Project on Spices. The scientists of the project are doing research work on crop improvement and disease resistance on the major spice crops of the state like turmeric, ginger, coriander, fenugreek and others.

A spice crop planted in a field.

Two varieties of coriander developed by the centre-CG Coriander-1 for the state of Chhattisgarh and CG Shri Chandrahasini Dhaniya-2 was released and notified for Chhattisgarh, Madhya Pradesh, Rajasthan, Bihar, Uttar Pradesh, Haryana, Gujarat, Uttarakhand, Andhra Pradesh and Tamil Nadu in 2019. Currently, two new varieties of turmeric developed by the centre are CG Haldi-1 and CG Haldi-2 has been identified by Chhattisgarh State Seed Sub-Committee for release.