

## Postrainy season sorghum varieties developed at All India Coordinated Sorghum Improvement Project, MPKV, Rahuri

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The All India Coordinated Sorghum Improvement Project (AICSIP) at Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri, Maharashtra was established in 1973 with the objective of developing varieties and hybrids with high yield as well as with tolerance/resistance to biotic and abiotic stresses. The Review Team of 1985 to 1987 stressed the need for research on postrainy season sorghum and accordingly in Annual Group Meeting of AICSIP 1992 a decision was taken to have the postrainy season sorghum research concentrated only at MPKV, Rahuri. Accordingly, this center had been pursuing a postrainy season sorghum breeding program for the past several years. These efforts resulted in developing 12 postrainy season sorghum varieties. These are Swati, Selection 3, Phule Yashoda, Phule Maulee, Phule Uttara, Phule Chitra, Phule Vasudha, CSV 22, Phule Anuradha, Phule Revati, Phule Panchami and Phule Suchitra. Among these, the variety Phule Chitra for medium soil, Phule Vasudha for deep soil, Phule Anuradha for shallow soil, Phule Revati for irrigated conditions, Phule Uttara for *hurda* (soft dough stage snack) and Phule Panchami for popping are popular among the farmers. The salient features of the above postrainy season sorghum varieties are given below.

### Swati (RSV 9/SPV 504)

It was developed from a cross of SPV 86 × M 35-1 during 1980–84 through pedigree method. It has non-tan plant pigment, green colored midrib, broad leaves, semi-compact oblong panicle and bold grains. It has medium plant stature and is medium in maturity (120–125 days). It is tolerant to shootfly and charcoal rot. It is also responsive to irrigation. It yields 2.4–2.8 t ha<sup>-1</sup> grain and 5–5.6 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for deep soil of postrainy season growing areas. It is registered with NBPGR No. IC 553440 and notified vide SO No. 540 (E) dated 24/7/1985.

### Selection 3 (SPV 1509)

It was developed from the local variety *Bedar* during 1990–94 through pure line selection. It has non-tan plant pigment, green colored midrib, oval semi-compact panicle and medium bold grains. It has mid tall plant

stature and is early in maturity (105–110 days). It is tolerant to shootfly and charcoal rot. It yields 0.5–0.6 t ha<sup>-1</sup> grain and 1.5–1.8 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for shallow soil in postrainy season growing areas. It is registered with NBPGR No. IC 553441 and notified vide SO No. 1 (E) dated 1/1/1996.

### Phule Yashoda (RSV 56/SPV 1359/CSV 216)

It was developed from a local landrace during 1994–98 through pure line selection. It has non-tan plant pigment, white midrib, cylindrical semi-compact panicle and medium bold pearly white grains. It has tall plant stature and is medium in maturity (120–125 days). It is tolerant to shootfly and charcoal rot. It yields 2.5–3 t ha<sup>-1</sup> grain and 7–7.8 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for deep soil in postrainy season growing areas. It is registered with NBPGR No. IC 2000/52 and notified vide SO No. 82 (E) dated 13/09/2000.

### Phule Maulee (RSLG 262/RSV 93/SPV 1506)

It was developed from a local germplasm during 1994–99 through pure line selection. It has non-tan plant pigment, green colored midrib, oval semi-compact panicle and medium bold pearly white grains. It has tall plant stature and is early in maturity (105–110 days). It is tolerant to shootfly, charcoal rot and drought. It yields 1.5–1.8 t ha<sup>-1</sup> grain and 4.5–5 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for medium soil in postrainy season growing areas. It is registered with NBPGR No. IC 296365 and notified vide SO No. 82 (E) dated 13/09/2000.

### Phule Uttara (RSSGV 3)

It was developed from a local germplasm during 2001–05 through pure line selection. It has non-tan plant pigment, green colored midrib, oval semi-compact panicle with sub-lenticular seed. It has mid tall plant stature at *hurda* stage (dough stage, 95–100 days). It is tolerant to shootfly, charcoal rot and drought. It yields 2–2.5 t ha<sup>-1</sup> *hurda* and 5–5.5 t ha<sup>-1</sup> fodder under rainfed

conditions. It is recommended for alternate uses like *hurda*. It is registered with NBPGR No. IC 523096 and notified vide SO No. 122 (E) dated 06/02/2007.

#### **Phule Chitra (RSV 237/SPV 1546)**

It was developed from a cross SPV 655 × RSLG 112 during 2002–06 through pedigree method. It has non-tan plant pigment, white midrib, medium leaves, semi-compact elliptical oval panicle and medium bold pearly white grains. It has medium plant stature and is medium in maturity (118–120 days). It is tolerant to shootfly, charcoal rot and drought. It yields 2–2.5 t ha<sup>-1</sup> grain and 5.5–6 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for medium soil in postrainy season growing areas. It is registered with NBPGR No. IC 523095 and notified vide SO No. 72 (E) dated 10/01/2008.

#### **Phule Vasudha (RSV 423/SPV 1704)**

It was developed from a cross RSLG 206 × SPV 1047 during 2003–07 through pedigree method. It has non-tan plant pigment, white midrib, medium leaves, semi-compact cylindrical panicle and medium bold pearly white grains. It has medium plant stature and is medium in maturity (116–120 days). It is tolerant to shootfly, charcoal rot and drought. It yields 2.5–2.8 t ha<sup>-1</sup> grain and 5.5–6 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for deep soil in postrainy season growing areas. It is registered with NBPGR No. IC 552391 and notified vide SO No. 72 (E) dated 10/01/2008.

#### **CSV 22 (RSV 491/SPV 1626)**

It was developed from a cross SPV 1359 × RSP 2 during 2003–07 through pedigree method. It has non-tan plant pigment, white midrib, medium leaves, semi-compact cylindrical panicle and medium bold pearly white grains. It has medium plant stature and is medium in maturity (118–122 days). It is tolerant to shootfly, charcoal rot and drought. It yields 2.4–2.8 t ha<sup>-1</sup> grain and 6.5–7 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for deep soil in postrainy season growing areas of Karnataka, Maharashtra and Andhra Pradesh. It is registered with NBPGR No. IC 552490 and notified vide SO No. 1709 (E) dated 05/10/2007.

#### **Phule Anuradha (RSV 458/SPV 1709)**

It was developed from a cross RSLG 559 × RSLG 1175 during 2004–08 through pedigree method. It has non-tan

plant pigment, green colored midrib, narrow leaves, semi-compact oval panicle and medium bold pearly white grains. It has short plant stature and is early in maturity (105–110 days). It is tolerant to shootfly, charcoal rot and drought. It yields 0.8–1 t ha<sup>-1</sup> grain and 3–3.5 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for shallow soil in postrainy season growing areas. It is registered with NBPGR No. IC 552492 and notified vide SO No. 2137 (E) dated 31/08/2010.

#### **Phule Revati (RSV 1006/SPV 1830)**

It was developed from a cross CSV 216 × SPV 1502 during 2006–10 through pedigree method. It has non-tan plant pigment, white midrib, medium leaves, semi-compact symmetrical panicle and medium bold pearly white grains. It has tall plant stature and is medium in maturity (118–120 days). It is tolerant to shootfly, charcoal rot and foliar diseases. It yields 4–4.5 t ha<sup>-1</sup> grain and 9–10 t ha<sup>-1</sup> fodder under irrigated conditions. It is recommended for medium to deep soil in postrainy season growing areas. It is registered with NBPGR No. IC 573125.

#### **Phule Panchami (RPOSV 3)**

It was developed from a local landrace during 2006–10 through pure line selection. It has non-tan plant pigment, white midrib, oval semi-compact panicle with small chalky white seed. It has mid tall plant stature and is medium in maturity (118–120 days). It is tolerant to shootfly, charcoal rot and drought. It yields 1.2–1.4 t ha<sup>-1</sup> grain and 4–4.5 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for alternate uses like popping. It is registered with NBPGR No. IC 573124.

#### **Phule Suchitra (RSV 1098/SPV 2048)**

It was developed from a cross SPV 1359 × SPV 1502 during 2006–12 through pedigree method. It has non-tan plant pigment, white midrib, medium leaves, semi-compact cylindrical panicle and medium bold pearly white grains. It has medium plant stature and is medium in maturity (120–125 days). It is tolerant to shootfly, charcoal rot and drought. It yields 2.4–2.8 t ha<sup>-1</sup> grain and 6–6.5 t ha<sup>-1</sup> fodder under rainfed conditions. It is recommended for medium soil in postrainy season growing areas. It is registered with NBPGR No. IC 595231.