

**Technology developed (Last 5 years)**

Sr. No.	Recommendations
1	<b>Nutrient management through organic sources in summer blackgram</b> The farmers of Middle Gujarat Agro-climatic zone growing summer blackgram organically are recommended to apply 1.0 L/ha Bio NP liquid biofertilizer (Rhizobium and PSB) mixed with 500 kg/ha vermicompost or 250 kg/ha Castor cake as basal for getting higher yield and net return. (2022-23)
2	<b>Pigeonpea Variety : GT 109</b> The farmers of Gujarat State growing pigeon pea are recommended to grow Gujarat Tur 109 (GT 109) during kharif season. The proposed genotype AAUVT 17-02 gave 1918 kg/ha seed yield which is 14.45, 11.32, 11.05 and 27.38% higher than check varieties AGT 2, GT 104, BDN 2 and Vaishali, respectively in the Gujarat State. Whereas, it exhibited yield increment by 24.42, 32.56, 35.14, 14.87 and 26.84 per cent over AGT 2, GT 104, BDN 2, GJP 1, and Vaishali, respectively in middle Gujarat under kharif season. The variety is medium maturity, semi-erect in nature, resistant against wilt and SMD under natural field condition. On quality point of view, seeds of this genotype contain higher amount of protein (23.35%) micronutrients like Fe (32.54 mg/kg) and Zn (22.38 mg/kg) as compared to check varieties AGT 2, BDN 2 and Vaishali.
3	<b>Study of pigeonpea varieties under relay cropping system</b> The farmers of middle Gujarat agro climatic zone are recommended to adopt either black gram-pigeon pea or green gram-pigeon pea relay cropping system for getting higher pigeonpea equivalent yield and net return. ➤ In case of black gram-pigeon pea relay cropping, black gram is to be sown at 45 cm apart by first week of July and pigeonpea (AGT 2 or BDN 2 or Vaishali) by first week of September. ➤ Whereas, in case of green gram-pigeon pea relay cropping, green gram is to be sown at 45 cm apart by first week of July and pigeonpea (AGT 2 or Vaishali) by first week of September. ➤ Keep a row after each two-rows of black gram or greengram for the sowing of pigeon pea. (2021-22)
4	<b>Pigeonpea Variety : GT 106</b> The average yield of pigeon pea variety AAUVT-13-20 (GT-106) is 1842 kg/ha. It exhibited overall yield advantage of 50.72, 21.44, 23.63 and 12.68 per cent over the checks BDN 2, AGT 2, Vaishali and GJP 1, respectively under middle Gujarat. Under north Gujarat, average yield of this genotype is AAUVT-13-20 (GT-106) is 1853 kg/ha. It is exhibited 23.16, 25.37, 20.73, and 22.33 per cent higher yield over the checks BDN 2, AGT 2, Vaishali and GJP1, respectively. The variety GT-106 mature within 170 (165-175) days (Medium group) with semi-spreading in nature, yellow flower colour, green pod, 4-6 seeded with cream colour. It has high yield potential and resistant against Wilt & moderately resistance against SMD under field condition. The pigeon pea variety GT-106 is recommended for kharif season under Middle & North Gujarat. (2019-20)
5	<b>Urdbean Variety : GAU 4</b> The proposed genotype JAUG 2 (GABG 4) gave 1044 kg/ha and 924 kg/ha grain yield in kharif and summer season, respectively. It exhibited yield advantage of 22.50% and 25.44% in kharif as well as 20.83 and 25.03% in summer over the checks T 9 and GU 1, respectively. The variety GABG 4 matures within 76.00 (70.0-82.0) in kharif and 70 (65-75) days in summer season with semi erect in nature, hairy pod, 5-7 seeded and resistant against YMD under natural field condition. The Black gram variety GAU 4 is recommended for cultivation in summer and kharif season in Middle Gujarat. (2019-20)
6	<b>Effects of sowing dates and spacing on semi-rabi green gram.</b> The farmers of middle Gujarat Agro-climatic Zone growing semi-rabi greengram (GAM 5) are advised to sow the crop during 3 <sup>rd</sup> week of September at 30 cm spacing for obtaining higher yield and net return (2017-18).