

Research Recommendations

● **Brinjal** : Junagadh Brinjal Green Round -1

● A high yielding brinjal variety named JBGR-1 has been recommended for release for Saurashtra and Middle Gujarat region growing brinjal crop during late kharif and rabi seasons.



The fruits are medium to large size with round shape, and contain higher T.S.S., protein, phenol and total soluble sugars as compared to the check variety Green Round Local.

● The farmers of the coastal area of South Saurashtra Agro Climatic Zone -VII growing **groundnut** crop are advised to apply half dose of fertilizer i.e. 6.25 - 12.50- 0.00 in the form of urea and rock phosphate with seed inoculation of bacterium EBJ-3 at the rate of 25 ml. per kg seed of groundnut to obtain higher net return.

● The farmers of the coastal area of South Saurashtra Agro Climatic Zone -VII growing **bajra** crop are advised to apply half i.e. 40-20-00 dose of fertilizer in the form of urea and rock phosphate with seed inoculation of bacterium EBKH-1 at the rate of 25 ml. per kg seed of bajra to obtain higher net return.

● The farmers of South Saurashtra Agro Climatic Zone growing **brinjal** in summer season are advised to irrigate the crop with drip irrigation system at 1.0 PEF (Pan Evaporation Fraction) laying laterals at 90 cm. distance in each row and drippers of 4.0 litres per hour at 60 cm. distance on each lateral, that is operating the system at an alternate day with a pressure of 1.2 kg/cm² (total 56 irrigations) for getting more net realization with higher water use efficiency. Farmers are also advised to apply wheat straw mulch @ 5 t/ha for getting more net realization.

● The Farmers of South Saurashtra Agro Climatic Zone growing **coconut** hybrid (D x T) are advised to apply 270 gm. urea per plant at monthly intervals through drip irrigation. The drip system should be operated for 1 hour and 30 minutes daily during October to February and for 2 hours and 30 minutes from March onwards with 4 drippers, each having 8 liters discharge per

hour, keeping drippers 1 m. away from the trunk of palm to save 46.82 per cent irrigation water without affecting yield.

● The farmers of South Saurashtra Agro climatic Zone growing **coriander** are advised to irrigate the crop with mini sprinkler at 0.8 PEF (Pan Evaporation Fraction) with laying the laterals at 1.8 m. distance in paired row and sprinkler of 35 litres per hour at 2.5 m. distance on each lateral, and operating the system at an alternate day with a pressure of 1.2 kg/cm² (total 32 irrigations) for getting higher net realization.

● Wheat straw incorporated in soil @ 5 t/ha before sowing was found comparable to pre-emergence application of Fluchloralin @ 0.9 kg/ha for weed management in kharif **groundnut** in the South Saurashtra Agro Climatic Zone.

● Two low volume sprays of Endosulfan 0.21 % (Endosulfan 1.2 l. in 200 l. water /ha) through power sprayer (ICBR 1: 7.66) twice, starting from 50 % flowering and second at 15 days after first spray are recommended for effective and economic control of **gram pod borer in chickpea**.

● The crop rotation of chickpea after sorghum or chickpea after bajra and application of castor cake 500 kg/ ha at the time of sowing with seed treatment of Carbendazim 1 g and Thirum 2 g/kg seed or castor cake 500 kg/ha at the time of sowing with seed treatment of Tebuconazole 3 g/kg seed was found beneficial for effective management of **wilt of chickpea**.

● **The engine operated portable post hole digger** is useful for making the pits for erecting fencing poles, plantation for orchard and forest saplings etc. This machine makes about 25 to 35 pits of 15 cms. diameter and 45 cms. depth in one hour. The cost (Rs. 2.16) of making one pit by this machine is lower than manual digging (Rs. 5.60) and tractor operated digger (Rs. 4.10). Looking to the performance and application, this machine is recommended for farmers, manufacturers and other users.

● The farmers of North Saurashtra Agro- climatic Zone growing **hybrid cotton - 8** in kharif season under dry farming condition are advised to adopt 30 cm deep tillage every year for the highest seed cotton yield, net return and moisture conservation. They are also advised to apply FYM @ 10 t/ha for higher yield, net return and moisture conservation. Recommended dose (80-00-00 NPK kg/ha) of fertilizer should be applied to the crop.

● The farmers of North Saurashtra Agro climatic zone growing grasses are advised to grow **clitoria** (Clitoria ternatea) with marvel grasses (zinzvo) (Dichthium annulatum) in 1:2 row for obtaining economically maximum green biomass and dry matter yield under rainfed condition.

● Varietal Identification Committee has identified the bread wheat variety **GW 366** for the cultivation in Central Zone comprising Gujarat, Madhya Pradesh, Chhatisgad, Southern areas of Rajasthan and Budel khand areas of Uttar Pradesh under timely sown irrigated conditions.



The proposed variety GW 366 yielded an average of 12.11, 12.03, 11.27, 9.86, 6.44, 6.10 and 5.94 per cent higher grain yield than the check varieties MACS 1496, Lok-1, GW 496, GW 190, HI 8498, GW 273 and GW 322 respectively. The special features of GW 366 include stable grain yield, rust resistance, resistance to lodging & shattering and seeds are highly lustrous and bold with good quality.

● The P.G. student, Miss Anita Mungale under the guidance of Prof. J.B. Savani, Professor and Head, Farm Machinery and Power Department designed Rotary Power Weeder cum Interculturing unit. The unit is operated with 4 horsepower kerosene run engine and found effective in



orchard as well as field crops for weeding cum interculturing work. The field capacity in cotton crop sown at 120 cm is about one acre per hour, whereas 10-12 Chicku tress basins (8 years old) could be tilled in an hour. Dr. B.K. Kikani, Vice Chancellor and Dr. N.C. Patel, Dean, College of Agril. Engg. and Tech. appreciated the working of the machine during its testing.

● Bajra (Pearl Millet) Hybrids GHB - 715 and GHB - 719 were identified for release at national level for cultivation in scanty rainfall areas of Rajasthan, Gujarat and Haryana (A1 zone). This hybrids are highly tolerant to drought condition.

