



Scope of fig (*Ficus carica* L.) cultivation in north west India

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The cultivated fig (*Ficus carica* L.) belonging to Moraceae family, is clearly of greatest importance as a source of human food. Common fig is also known as Anjeer. Fig is cultivated all over the world, originated from West Asia and spread to the Mediterranean region. The genus *Ficus* is a large one containing more than 1000 species, out of which about 65 species are found in India. In the world, the area under fig cultivation is 4,15,780 hectares with production of 10,47,230 MT (Anonymous, 2015). Egypt is leading fig producing country followed by Turkey, Algeria, Morocco and Iran. In India, fig is grown in Maharashtra, Gujarat, Uttar Pradesh, Karnataka, Punjab and Tamil Nadu. The area under cultivation of fig in India is nearly 3,570 hectares with production of 14,643 MT, where in Maharashtra is the leading state followed by Karnataka (Anonymous, 2015). Fig is a minor fruit crop in North India with moderate size semi deciduous tree, growing 6-8 m high with short or twisted trunk and crown with irregular branches. Fig fruit is a multiple fruit botanically known as ‘Syconium’ which consists fleshy receptacle with a narrow aperture at the tip and number of flowers lining the inner surface. It is a rich source of nutrients viz., calcium, manganese, magnesium, potassium and fibre and vitamins B₆, B₂, B₁, A and C (Kaur and Kaur, 2017). Fig is essential in curing various diseases e.g. gastrointestinal, hypoglycaemic, insulinase, anti-tumour, anti-ulcer, anti-diabetic, lipid lowering and antifungal activities (Mewar and Naithani, 2016). The figs are consumed fresh, dried, preserved, candied and in canned form. About 90 per cent of the fig produced in world, are dried. Fresh fig is delicious and used as dessert or for jam. In Europe, Fig coffee is also prepared. It is added in cakes, bread and ice creams. Fig leaves serve as fodder in India. The prophet Mohammed (s) indication can be used for the fig cultivation. He said, “If I could wish a fruit brought to paradise it would certainly be the fig”. Fig crop have wide range of diversity and it grows all over the world and tolerates wide range of environmental conditions, has a low chilling requirement

withstands some frost and is tolerant to drought. Although, it grows most vigorously with proper irrigation resources but for the production of fresh fruits dry climate and light rain is essential because heavy rains during fruiting and ripening are detrimental. It is well adapted in tropical, subtropical and mild temperate climate. It can tolerate adverse climatic conditions *i.e.* high temperature and drought. The state of Jammu and Kashmir is located in north western Himalayan. It has four distinct agro climatic Zones. These are subtropical Jammu (upto 800 m above mean sea level;msl) , intermediate/ semi- temperate mid hills 800-1500 msl), temperate Kashmir valley (1500-2500 m above msl) and cold arid zone of Ladakh (>2500m above msl) (Anonymous, 2011). The state has an area of 10.7 mha with a net sown area of 0.75 million ha, irrigated area of 41.96 per cent and rainfed area accounting to 58.03 per cent (Anonymous, 2008). Jammu Division is located between an altitude of 300 meters and 4200 meters above mean sea level. Jammu region on the basis of altitude and climate has been divided into three Zones *i.e.* subtropical, Intermediate and temperate Zones. Jammu region consist of considerable rainfed area where fig crop can adapt easily because it can tolerate high temperature and drought conditions. Fig cultivation has already started in neighbouring state of Punjab. To explore the possibilities of its cultivation in North Indian eleven fig cultivars viz., Black fig, Brown Turkey, Conadria, Dinkar, Diana, Excel, Ishia white, Panachee, Poona fig, RSSB and Texas were introduced and planted in the college orchard of Punjab Agricultural University, Ludhiana, Punjab, India. The germplasm was evaluated for their tolerances against insect and mite during 2012-2014. Major insect pest observed were fig leaf roller, phycodes Minor Moore, fig borer etc. (Singh and Kaur, 2017). Fig cultivars suitable for Punjab have been introduced in Jammu district by Sher-e-Kashmir university of Agricultural Sciences and Technology of Jammu in research orchard and after evaluation recommendations can be made for its commercial cultivation. Fig will prove suitable for Jammu

especially in dry subtropical areas because this is one of the most salt tolerant crop, It is tolerant to frost which is common feature during winter and requires availability of distinct summer and winter seasons and dry atmosphere during fruit maturity – prerequisite for quality fig production (Meghwal and Kumar, 2009). Further there is a good scope of fig cultivation due to late arrival of monsoons rains in this part of India because heavy rains during fruiting and ripening are detrimental. The main reasons for low production are limited availability of new cultivars, the lack of proper characterization of available cultivars and fig growing guidelines for the producers. Some farmers are growing local unknown cultivars resulting in very poor productivity and fruit quality (Rattanpal *et al.*, 2017). However, Fig cultivation has been proved remunerative in various parts of India. In Maharashtra, it is cultivated on commercial scale in areas of Pune and Aurangabad with cultivation of Poona and Dinkar cultivars commercially. In Anantapur (Andhra Pradesh) farmers find a new hope in fig plantation. Farmers in the district have found a new found love for the Asiatic origin fruit. Starting with just two hundred acres or so it has slowly expanded to 500 acres in the district. The plant is less susceptible to pests and diseases and reaches fruit bearing stage in just 7-8 months. A single plant yields 20- 30 kgs of figs and about 500 – 1000 fruits. Figs are selling at Rs. 50-60 / kilo. One acre of figs accommodates 400 plants. The cost of each plant is Rs. 12. It would cost Rs. 5000 per acre to plant 400 plants. Even if the wholesale value of figs is a minimum Rs. 20 per kilo, one can earn Rs. 1.60 lakh per acre. Those growing the crops in 10 acres of land can earn on an average Rs. 15 lakh for a single harvest. Thus, its cultivation can boost the socio-economic

status of small land holders having upto one acre land in rainfed area. Fig is till now considered as a minor commercial fruit crop because its economic potential of cultivation has been poorly addressed and it is considered as an underutilized fruit species in some regions. Thus, there is need to commercialize this underutilized plant in rainfed areas of North India.

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