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Tomar Bhavna
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Manekar Uarwash
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Chandravanshi Neha
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Gupta Niharika I
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Tomar Shobhana
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

S Bhadoria
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Corresponding Author:
Tomar Bhavna
 Rajmata Vijayaraje Scindia
 Krishi Vishwa Vidyalaya,
 Gwalior, Madhya Pradesh, India

Quality character estimation of different of varieties and dates of sowing of pearl millet cultivation of gird zone

Tomar Bhavna, Manekar Uarwash, Chandravanshi Neha, Gupta Niharika I, Tomar Shobhana and S Bhadoria

Abstract

The study was conducted at RVSKVV Agricultural College, Gwalior, in the summer of 2016. Therefore, in this study, three days of sowing (July 20, July 30, and August 9) and five types of combined applications were used as research objects to determine the net use advantages of pearl millet in different varieties and planting days. Pearl millet (Big B, Crystal Dhoom, Boss-65, Ankur-045 and 86M86). The experiment was adapted to a split-plot design and repeated three times. The results showed that the advantage of pearl millet-protein content (%) was the highest pearl millet variety "Jing Dhoom" with the sowing date of August 9. Many "Big B" Things Followed. B, Ankur-045, 86M86 and Boss-65 respectively.

Keywords: Pearl millet, protein content, varieties, date of sowing

Introduction

Pearl millet is a high-yielding, simple crop that can be grown in harsh climates. This crop can grow in high temperatures and low water conditions where other crops such as wheat, rice and corn cannot grow. It also has the best physical properties compared to other grains as it tolerates drought, low soil fertility and high salinity (Rai *et al.*, 2008) [3]. The content of pearl millet consists of 75% endosperm, 17% germ and 8% bran (Singh *et al.*, 2006) [5]. Therefore, the incidence of pearl millet disease is approximately twice that of sorghum, one of the main food sources of pearl millet, rather than rice (Andrew *et al.* 1991) [2]. Pearl millet is a good source of energy, protein, vitamins, fiber and other nutrients. It contains more fat than other grains and has better fat digestibility. It also contains essential fatty acids, including essential dietary n-3 fatty acids. Pearl millet has the highest macronutrient content among all millets and is rich in starch, soluble and insoluble dietary fiber (Ragae *et al.*, 2006) [4]. Good nutrition is very important to maintain the health of the human body because it is a powerful force for human health, well-being, growth and development. It is the greatest of human genetics. Pearl millet has been shown to contain starch, soluble and insoluble starch dietary fibre, minerals and antioxidants (Ragae *et al.*, 2006) [4]. It contains approximately 92.5% dry matter, 2.1% ash, 2.8% crude fiber, 7.8% crude fat, 13.6% crude protein and 63.2% starch (Ali *et al.* 2003) [1].

Materials and Methods

Research activities were carried out at Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya Gwalior (26.130°N, 76.140°E), Madhya Pradesh during the monsoon season 2016-17. The rainfall in the 2016-17 monsoon season is between 80 and 90 cm. The average rainfall is 80 to 90 cm). The hot summer season usually begins in mid-April and lasts until mid-June, when summer is clearly visible in the sky. Physio-chemical properties of soil

Table 1: Physio-chemical properties of soil during experiment 2015-16

S. No.	Properties	Value
1.	Sand (%)	56.75
2.	Silt (%)	19.82
3.	Clay (%)	21.00
4.	Textural class	Sandy loam

Results and Discussion

Result shows in the experiment, quality character estimation of different of varieties and dates of sowing of pearl millet was concluded on the basis of protein percentages, respectively.

Protein Content (%) in grain

The protein content was recorded after harvest of crop. The grains of replication wise and treatment wise analyzed in laboratory to find out the protein content (%) in grains.

The recorded data were analyzed and shown in Table 2 and Figure 1; The difference in protein content (%) due to the difference in planting date and variety was shown

Under date of sowings, maximum protein content recorded under, date of sowing D₁ 20th July (10.73%), followed by date of sowing D₂ 30th July with 9.44% and minimum protein content was recorded in date D₃ 9th August sowing 9.29% protein, respectively.

In case of varieties maximum protein % was recorded under pearl millet variety V₂ Crystal Dhoom (10.21%), followed by variety V₁ Big B with 9.98%, variety V₄ Ankur-045 with

9.67%, variety V₅ 86M86 with 9.63% and minimum protein % was recorded under pearl millet variety V₃ Boss 65 9.60% in year 2016, respectively.

Table 2: Protein Content (%) in grain of Pearl millet at harvest as influenced by different treatments

Treatment Details	Protein content in grain (%)
D ₁	10.73
D ₂	9.44
D ₃	9.29
SEm±	0.08
CD (at 5%)	0.33
V ₁	9.98
V ₂	10.21
V ₃	9.60
V ₄	9.67
V ₅	9.63
SEm±	0.09
CD (at 5%)	0.27
Interaction I(D×V)	NS
Interaction II (V×D)	NS

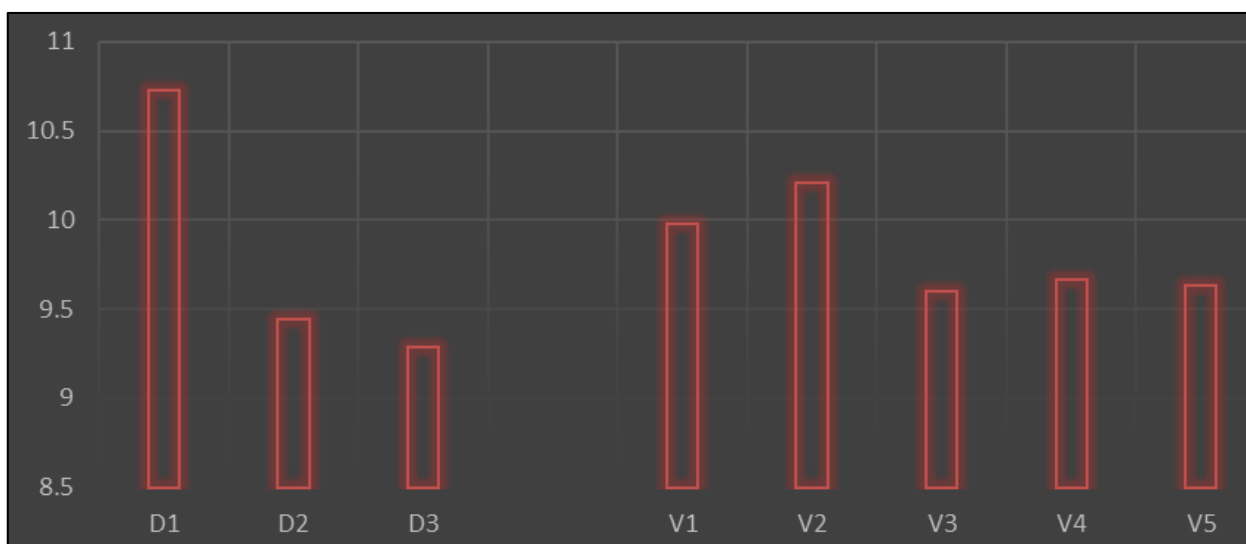


Fig 1: Protein Content (%) in grain of Pearl millet at harvest as influenced by different treatments

Conclusion

Use of variety ₂ crystal Dhoom was have higher protein % in grain of pearl millet followed by Big B, Ankur-045, 86M86 and variety Boss-65 respectively. Similar, trend followed in date of sowing, maximum protein % was found under the sowing date of 20th July of pearl millet followed by date of sowing 30th July and 9th august, respectively.

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