

# Bio- Chemical test on Gram Varieties Protein of Fresh and Infected Grain Against Callosobruchus Maculatus



Priyanka Sachan, S.P. Srivastava, Nidhi Srivastava

**Abstract:** The maximum present of protein was recorded PUSA-256(24.67) at par by KGD – 1168, Pant G-186, Kw-168 having 24.32, 23.42, and 23.67 percent respectively. The infected grain by Callosobruchus maculatus minimum KPG-59 (21.06) and maximum infected grain protein PUSA – 256 (25.07) percent. The fresh grain protein was found PUSA-256 (24.67) and minimum KPG-59(21.06).

**Keyword:** Gram Grain, Protein, Gram Varieties, etc.

## I. INTRODUCTION

Gram Grain is a rich source of easily digestible proteins. Grains are drought resistant, suitable for dry land farming and predominantly used as an intercrop. Grains cultivated for more than 60 years in the world produces nutrient-rich dry grains which contain proteins 20-40%, carbohydrates 50-65%, a small amount of fats, calcium, iron, phosphorous, and several essential vitamins and necessary fats shanmugas, (1988) they cause heavy losses to stored grains throughout the world and their impacts are more divesting in developing countries Ekeh et al (2013).

## II. METHODOLOGY

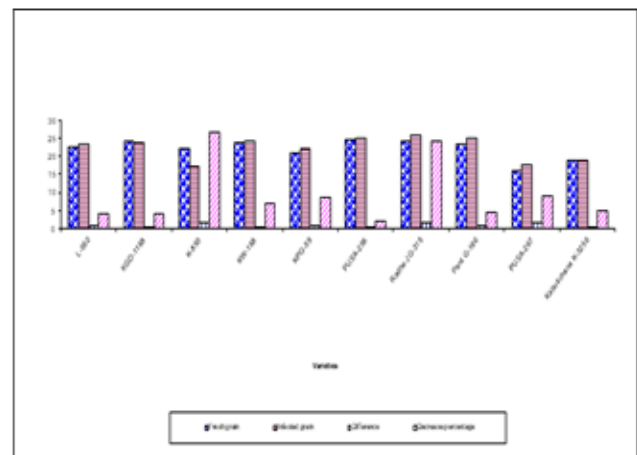
Protein content was expected by the Biuret method Pinckey (1961). The soil sample of each assortment was predicted with carbon tetrachloride to remove fat and 50 ml Biuret solution was added to it. The development of blue color was achieved. The concentration of the color of each sample was measured by the spectrometer. The protein percent values were calculated with the help of the calibration curve of Kjeldah's value against the Biuret value of known samples. It was determined in the Department of Biochemistry, Shri Venkateshwara University and the Department of Zoology D.A-V P.G. College Kanpur.

## III. RESULT AND DISCUSSION

It is obvious from the data presented in table (1) and depicted in fig (1). The maximum protein was found PUSA-256(29.67) followed by KGD-1168, Pant G-186, and KW-168 having 24.32, 23.42 and 23.67 percent recorded as.

**Table 1: Protein content in fresh and infected grain, Difference and decrease Grain of Gram varieties due to attack of Callosobruchus maculatus (fab).**

	Fresh grain	Infested grain	Difference	Decrease percentage
L-550	22.67	23.38	0.71	4.03
KGD-1168	24.32	23.89	0.28	3.86
K-850	22.06	17.23	1.57	26.69
KW-168	23.67	23.98	0.1	7.03
KPG-59	21.06	22.01	0.95	8.67
PUSA-256	24.67	25.07	0.4	2.04
Radhe JG-315	24.06	25.62	1.56	24.12
Pant G-186	23.42	24.94	0.62	4.32
PUSA-267	16.07	17.69	1.62	9.14
Kabulichana K-3256	18.78	19.02	0.24	4.98



**Figger 1: Protein contant in fresh grain,infested, Difference and Decrease Grain of Gram varieties due to attack of callosobruchus maculatus (fab).**

The minimum on variety KPG-59(21.06) followed by k-850 and L-550 being and 22.67 percent respectively.

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The result obtains on the infected grain by *Callosobruchus maculatus* on various grain varieties is exhibited. The maximum infested grain protein PUSA-256(25.07) followed by Pant G 186(24.94) and PUSA-267(23.98) percent K-85(17.23) the rest of the varieties range from 19.02 to 23.89 percent. Fresh grain (protein) maximum proteins were found PUSA- 256(29.67) followed by KGD-1168, Pant G -186 and KW-168 having 24.32, 23.42, and 23.67 percent respectively. The minimum on variety KPG-59(21.06) followed by K-850 and L-550 being 22.06 and 22.67 percent respectively. Similar results were found Verma et al (2006).Singh S.R.et al (1978).Suleiman et al (2015). Umrao et al (1999). A similar result found Modgil and Menta (1996).Sunderrajan R.P.et al (2012).tanya E. Stathers et al (2020). Jones et al (2018).Hoffman and Gatobu (2014).Wu et al (2011). Karababa, E. (2006). Sekender sanjida et al (2020). Sangeeta and Apte (2016). A. S. sunita et al (2017). K.Manju et al (2019). P.S.Soumya et al (2017). Moualeu N. et al (2016). Bamaiyi L.J. et al (2006). Singh S.R. et al (1978).

## IV. CONCLUSION

The protein of Gram variety had a highly significant and positive correlation with fresh grain, infected and decrease percent grain of gram varieties due to attack of *Callosobruchus maculatus* (fab) above in result and discussion.

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conferences.

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