ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 12 , December 2019

The Use of Sunflower Stalks as Animal Feed

Astanakulov Komil Dullievich, Karshiev Fakhriddin Umarovich, Tursunov Shokir Chorievich, Gapparov Shokir Hasanovich

Head of Departments, Doctor of Technical Sciences, Tashkent institute of irrigation and agricultural mechanization engeneers(TIIAME)
Candidate of Technical Sciences, Termez State University
Candidate of Agricultural Sciences, Termez State University
PhD student of Tashkent institute of irrigation and agricultural mechanization engineers (TIIAME)

ABSTRACT: The article presents the results of the study of using sunflower seeds and baskets as fodder for livestock. Sunflower is a valuable feed crop in addition to oil. It is known to be less resistant to temperature and more resistant to frost and drought than corn. That is why it can be a productive source of fresh water for scarce areas.

In order to feed the animals and achieve better nutrient absorption it is necessary to achieve a finer grinding rate.

KEYWORDS: stalk feeds, livestock farming, livestock breeds, sunflower.

I. NTRODUCTION

It is known that animal husbandry is the main agricultural sector of our country. The leadership of the country set tasks along with the uninterrupted supply of cheap and high-quality livestock products, exporting them abroad.

For this development, livestock production has been given attention as a state value. In this area, decisions of the President and the State, as well as state programs, have been adopted. In the adopted decisions and programs for the development of livestock farming, improvement of livestock breeds, prevention of infectious diseases, and the creation of a reliable fodder base were noted.

At present, in Uzbekistan livestock are kept in farmers, personal subsidiary and rental farms, as well as in subsidiary farms of an enterprise and organization. According to the Ministry of Agriculture of the Republic of Uzbekistan, now the total number of cattle in the republic is 10,994.6 thousand heads, of which 545.2 thousand heads fit into the share of farms, 10328.1 thousand heads into the share of dekhkan and personal subsidiary farms population and 121.3 thousand animals in the subsidiary farms of an enterprise and organization. The number of all sheep is 18447.4 thousand heads, of which 1336.6 thousand heads are kept in farms, 15459.9 thousand heads of dekhkan and personal subsidiary farms of the population, 1650.9 thousand heads in other farms.

II. RELATED WORKS

In these farms, animals are fed green stalk feeds, which are prepared from corn stalks, groves and natural herbs. Feeding livestock with green masses leads to an improvement in their productivity and a significant increase in livestock.

If you feed animals with other feeds, enriched with useful elements, will give a good result. One such feed is feed made from the stems and heads of sunflowers.

Sunflower is considered a valuable forage oilseed crop and does not react much to changes in air temperature. Sunflower will suffer a decrease in moisture in fiber up to 25-30%. Therefore, it can serve as a fertile source for obtaining food with high humidity in dryers.

The green mass of sunflower contains an average of 2.5 percent protein, 0.8 percent fat, 17 percent carbohydrates, as well as calcium salts, phosphorus and other elements. It can also be used in the preparation of herbal flour from chopped stems.

When studying the nutritional value of the sunflower head, it was determined that they contain an average of 9 percent protein, 20-27 percent pectin, 4.8 percent fat, up to 51 percent extract elements and minerals.

ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 12 , December 2019

The heads of sunflowers are considered edible and in unrefined form, and if fed to animals with crushed mass, edibility will increase several times.

III. METHODS

In the wound of the studies, it was determined that the feed value of 1 kg of sunflower head in general is 0.718 ced units. and in crushed form reaches up to 0.794 ced units

From these it can be seen that after harvesting a sunflower crop, it is considered important to use its heads and stems as animal feed.

Currently, Uzbekistan cultivates sunflower varieties Dushko, Lucha Ferul, and Jahongir for processing on an industrial basis. For consumption, the local population grow varieties of local origin.

When using sunflower as a feed, it is considered important to know the parameters of its stems and head. Therefore, scientific studies are being conducted in this direction.

Scientists of the Uzbek experimental station of oil and light plantings carried out scientific work on the production of agricultural machinery to obtain a high yield of sunflower in the conditions of Uzbekistan. (table 1).

Table 1.

Biometric indicators of sunflower using different mineral and biological fertilizers.

Options kg/ra	By the end of the growing season		Stem diameter mm.	Number of leaves, pcs.	Head diameters m	Productivity Ц /ra
	Planting density pcs ./m^2	Plant growth, sm				
Control without fertilizer	3,1	142,1	33,7	19,4	23,1	14,5
$N_{200}P_{150}K_{200}$	3,0	151,5	35,7	21,5	25,4	20,7
$N_{100}P_{75}K_{1000}$+ Twenty	3,2	149,0	34,0	19,5	23,3	18,2
$N_{100}P_{75}K_{1000}$+ earth tablets	3,0	151,5	34,0	20,7	23,8	18,8
Bist-20л	3,3	144,0	34,1	19,6	24,5	17,0
Earth pills 20л	3,2	147,7	35,5	20,3	24,7	17,2

The results of experiments conducted on the influence of different minerals and biofertilizers on the growth and productivity of sunflower (“Ray Ferul”) showed, depending on the quantity and type of fertilizer, the height of the sunflower was in the range 142.1-151.5 cm, stem diameter 33.7-35, 7 mm, the number of leaves is 19-21 pieces, the diameter of the head is 23.1-25.4 cm. These data are obtained from a plant grown in alluvial soils with a humus content of 1.2%, total phosphorus of 0.95 mg, replacing potassium 135 mg and a groundwater depth of 2-3 meters.

In these experiments, the yield of sunflower seeds (14.5-20.7 / ha) was determined, but the amount of yield of the stems and heads, which are considered fodder, is not given.

IV. RESULTS

In 2014, we conducted initial experiments to determine the composite amount of the aerial part of sunflower seed “Dushko” and obtained the following results: (Table 2).

Table 2.

№	Part Extent	The mass		Humidity %	General attitude %
		On one stalk, gr	On one hectare, c		
1	Whole plants	43,6	386,0	107,2	100

ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 12 , December 2019

2	Head	60,2	109,4	30,3	26,2
3	Seeds	16,2	65,2	18,1	22,9
4	The stalk	52,7	208,3	57,6	50,1
5	Leaves	24,8	2,9	1,2	0,8

In the experiments, a total yield of 107.2 centners was obtained on an area of 1 hectare, of which 89.1 centners, or 77.1 percent, were feed-producing parts.

VI. CONCLUSION

This shows that you can get a large amount of feed from part of the sunflower without seeds. These rates are still high in sunflower varieties grown by local populations.

For the preparation of high-quality feed from sunflower, crushing installation of the stems and heads is necessary.

Currently, research is underway in this direction.

REFERENCES

1. Crampton E.W., Harris L.E. Applied Animal Nutrition. – Sanfrancisco: 1972. – Б.189-301.
2. Melnikov S.V. Experimental fundamentals of the theory of the process of grinding feed on farms with hammer crushers. Abstract. diss. ... doctors tech. sciences. L., 1969. – 60 p.
3. Karshiev F. Theoretical studies of the working body of the crusher-grinder // Bulletin of modern science Scientific and theoretical journal No. 3/1 2016.35-38 pages.
4. Astanakulov K., Karshiev F. Research on the development of crusher-grinder-feed distributor / I International Scientific and Practical Internet Conference "The Current Ecological State of the Natural Environment and Scientific and Practical Aspects of Environmental Management" electronic collection of articles. 2016 - the village of Solenoye Zaymishche 3410-3413.
5. Karshiev F.U., Astanakulov K.D. Some physico-mechanical features of corn stem // Agriculture of Uzbekistan, №5, 2003. – 22 p.