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Evaluation of grassland resources in Etooke front banner

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Key words: evaluation, grassland resources, sustainable utilization, index system, Etooke front banner

Introduction Grassland resources is the most basic means of production, exploration and utilization of grassland resources have to understand it correctly. Etooke front banner is a half herding and half agriculture region, it is situated at the Southwest of Erdos city, between 37°38'–38°45' N, 105°31'–108°30' E. It is within the mid-temperate zone with semiarid and arid continental climate. Annual average precipitation is 291 mm, with significant amounts occurring in July to September, which accounts for 59–60% of the total annual. It is within desert grassland and typical grassland region. And the area of natural grassland is up to 58.3% of the total land, so livestock production has an important position for the whole national economy. In this paper, according to index system and methods of evaluation on sustainable utilization of grassland resources are constructed by Liuliming etc., from such five respects as production, stability, protection, economic feasibility, social acceptability to evaluate grassland resources in Etooke front banner.

Methods Through analysis hierarchy process (AHP), from index-evaluation indicators-specific goals-the goal layer (the objective of research), according to the final evaluation criteria of sustainable utilization is: Above 85 points is very good, 75–85 points is good, 65–75 points is intermediate, 55–65 points is elementary, below 55 points is poor, to determine the type of grassland resources sustainable utilization.

Results Contrast the status quo of utilization and correlative index of grassland resources in Etooke front banner with index system of evaluation on sustainable utilization of grassland resources in our country, the results are as follows, see Table 1.

Table 1 The scores of specific goals of evaluation on sustainable utilization of grassland resources.

Goals	Evaluation indicators	Weights	Scores	Final scores
Production	Basic productive forces	0.200	39.27	43.59
	Carrying capacity	0.400	31.34	
	Production level of reality	0.400	58.00	
Stability	The ability to resist disaster	0.400	46.97	43.65
	The fluctuation of production	0.400	40.00	
	The input of improvement	0.200	44.32	
Protection	The degree of degradation	0.400	55.00	64.28
	Grazing approach	0.200	51.38	
	Ecosystem protection policy	0.400	80.00	
Economical feasibility	Livestock production efficiency	0.667	56.89	71.25
	Yield potential of animal husbandry	0.333	100.00	
Social acceptability	The degree of Satisfying the demand	0.400	57.36	80.54
	Utilization system	0.200	88.00	
	Grazing management condition	0.400	100.00	

According to production (weight 0.286), stability (weight 0.285), protection (weight 0.143), economical feasibility (weight 0.143), social acceptability (weight 0.413), the synthetic score is 55.81, belongs to elementary sustainable utilization grassland resources. It shows there are many problems in utilizing grassland, while it has broad prospects, several years ecological construction has obtained certain improvement, but still need further perfection.

Discussion Production final score is 43.59, basically speaking, natural condition in Etooke front banner is inferior, and it is difficult to control by manpower. Stability is 43.65, although it has already started to enlarge input, but the disaster is very difficult to control. Protection is 64.28, degeneration and desertification are serious, they are being governed gradually, protection policy is good, soil erosion starts to be controlled, but because the area of grassland is broad, and have to be governed gradually. Economical feasibility is 71.25, which obtains the development through ecological construction of several years. Social acceptability is 80.54, which shows some policy measures are good to grassland construction.

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