

'Huaiyang 4'  
S-BV-MS-001-2020

50% 5-7 7 79%  
30-70 100-130 cm 4-7  
11479 kg/hm<sup>2</sup> 20.2%

1-2 cm 18.75 kg/hm<sup>2</sup> 15-30 cm  
5-6 cm

'Zhongtian 3'  
S-BV-MV-002-2020

90% 80 -135 cm 90%  
11947.6 kg/hm<sup>2</sup>-15232.2 kg/hm<sup>2</sup> 310.6 kg/hm<sup>2</sup>-713.8 kg/hm<sup>2</sup>  
18.86%



9134 kg/hm<sup>2</sup>  
300-650 mm

5660 kg/hm<sup>2</sup> -7188 kg/hm<sup>2</sup>  
0.4%

5-10 cm  
279 kg/hm<sup>2</sup>  
33%-59%

300 kg/hm<sup>2</sup>

225 kg/hm<sup>2</sup>

750 kg/hm<sup>2</sup>  
15-20 cm      1-3 cm  
7.5-30 kg/hm<sup>2</sup>

60-90 kg/hm<sup>2</sup>

‘Ganlv 1’  
S-BV-LCO-005-2020

pH 5.0-8.2  
9083 kg/hm<sup>2</sup>

17.1%

84-90 d

597.7 kg/hm<sup>2</sup>  
10 d

5-10 kg/hm<sup>2</sup>

1 cm  
30 d

3

8

15-30 cm

2-3



‘Zhonglinyu 1’  
S-BV-BD-006-2020





12 h  
10                      2-3 mm                      10 cm                      2-3



‘Kangnan’  
S-WDV-EN-013-2020

7-12 mm			125-148 cm	9-18 cm
			20-28 cm	3.3-3.8 g
	150-160 d		5000-8000 kg/hm <sup>2</sup>	1000-1600 kg/hm <sup>2</sup>

4				
	5			
	3-5 cm		37.5-45 kg/hm <sup>2</sup>	30-37.5 kg/hm <sup>2</sup>
		5-8 cm		20-30 cm

400 mm

‘ , ‘

‘Yanchi’  
S-WDV-AM-014-2020

				78-95 cm
95	1.68 mm	10-12 cm	2-3 mm	2.43 g
	70%	120 d	230 d	2
	6900 kg/hm <sup>2</sup>		694.1 kg/hm <sup>2</sup>	97.7%

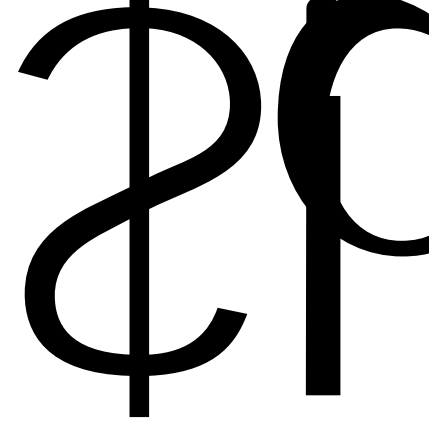
			375-450 kg/hm <sup>2</sup>	4-5
7-8 cm	22.5 kg/hm <sup>2</sup>	7	8	20-30
			30-40 cm	12-22.5 kg/hm <sup>2</sup>



22.5-30 kg/hm<sup>2</sup>

375-525 kg/hm<sup>2</sup>

200-400 mm Ü



'Qiannan'

SWADPV-LS-01152020

4-8 mm

6-51g

6

900 kg/hm<sup>2</sup>

7

50-70 cm

30-68 cm

56 d

0.50-1.0 1c

25 cm× 25 cm

1-3

3-4

7-10 cm

3-5

10-15

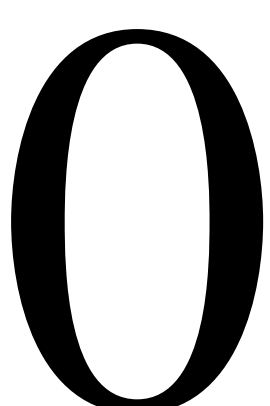
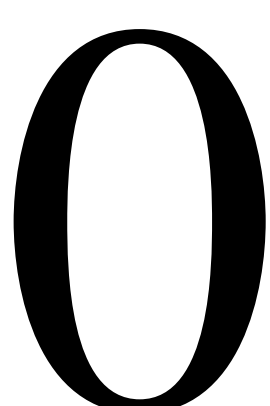
150-225 kg/hm<sup>2</sup>

1:100

1%

10d"

11





4-7 mm kg/hm <sup>2</sup>	1.9 g	3-5 20.7%	4-5	10500
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kg/hm <sup>2</sup>	9-10 1-2 cm 45-50 cm	10-15 5 cm	30 cm	15.0-22.5
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800-2500 m	800-1500 mm
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Alfalfa

‘Huaiyang 4’

Bred variety

Guo S-BV-MS-001-2020

Yangzhou University

Wei Zhenwu, Wu Zinian, Wang Yiming, Lv Linyou, Zhang Bing

It is multi-leaf alfalfa with 5-7 small leaves for each compound leaves. The population and individual multi-leaf rate of this cultivar is more than 50% and 79%, respectively. The plant type is erect with a thick stem, 30-70 branches and the natural height is 100-130 cm. This variety can be harvest 4-7 times per year in the Jiang-huai area. The average hay yield is 11479 kg/hm<sup>2</sup> with 20.2% crude protein content.

It can be used as forage and mowed.

Before sowing, we must shallow tillage and inoculation with rhizobia. Drill sowing by 18.75 kg/hm<sup>2</sup> in autumn with a row spacing of 15-30 cm and a planting depth of 1-2 cm in the Jiang-huai area. It can be combined with soil preparation to apply basal fertilizer or topdressing in the later period. Generally, phosphorus and potassium fertilizers are mainly used, with less or no nitrogen fertilizer. Field management should pay attention to the control of weeds during the seedling period and pests such as budworms during the growing period. This variety harvested at the budding or first flowering stage and left a stubble with 5-6 cm.

It is suitable for planting in the middle and lower of the Yangtze River.

‘Zhongtian 3’

Bred variety

Guo S-BV-MV-002-2020

Lanzhou Institute of Husbandry and Pharmaceutical Science, Chinese Academy of Agricultural Sciences

Yang Hongshan, Duan Huirong, Zhou Xuehui, Wang Chunmei, Zhu Xinqiang, Chang Genzhu, Lu Yuan, Zhang Qian, Cui Guangxin

‘Zhongtian 3’ is a perennial herb from Leguminous. ‘Zhongtian 3’ is well developed of root system, which shows an upright or semi-upright plant type and the plant height of which is about 115 cm. The flower color of ‘Zhongtian 3’ is mainly cream, the rate of cream color accounts for 90%, rarely purple, lavender and light yellow. In the northwest arid and semi-arid areas, the

...e can be used as  
repl... an... of... degraded grass... abandoned land and... an... also use... artifi...  
grassland planting

'Zhongtian 3' can be planted with other forage cultivars from Gramineae together in degraded grassland and abandoned land. Before planting, artificial grassland should be prepared carefully to maintain soil moisture. Spring or autumn sowing are suitable for 'Zhongtian 3'. When the field is used for harvesting grasses, the appropriate sowing method is drill sowing or sowing directly, the drill row spacing is in the range of 15-25 cm, accompanied with the seeding rate of 18-75 kg/hm<sup>2</sup>. When the field is used for harvesting seeds, the appropriate sowing method is drill sowing or hole sowing. The drill row spacing changes from 70-100 cm, while the seeding rate is from 4.5-15 kg/hm<sup>2</sup>. The hole sowing spacing changes from 70-100 cm, the planting distance is 15-30 cm with 6-10 seeds, and the sowing depth is 1-2 cm. For harvesting grasses, 'Zhongtian 3' can be harvested in the initial flowering stage. For harvesting seeds, 'Zhongtian 3' can be harvested with 75% seed opening stages.

LŃ Y@Đ

RR It is suitable for planting in the Loess Plateau, central and western Inner Mongolia, Shaanxi, Shanxi, Ningxia, Xinjiang and similar areas in the north regions.

'Zhongke 5'

Bred variety  
Guo S-BV-LC-003-2020

Institute of Botany, Chinese Academy of Sciences

Liu Gongshe, Qi Dongmei, Chen Shuangyan, Liu Hui, Li Xiaoxia, Cheng Liqin, Dong Xiaobing, Gao Lijun, Wang Yan, Zhao Qiang, Hou Shenglin

Gramineae

The artificial grassland needs deep ploughing before planting, and 750 kg/hm<sup>2</sup> organic fertilizer is applied along with the land preparation. For spring sowing, the sowing amount is 60-90 kg/hm<sup>2</sup> while it can be appropriately increased in saline-alkali soil. It can be drilling with 7.5-30 kg/hm<sup>2</sup> and row spacing 15-20 cm with 1-3 cm sowing depth. Ecological restoration can be mixed with other grass seeds and mostly no-tillage supplementary sowing, or sowing. Before the jointing period, this variety can be topdressed with 300 kg/hm<sup>2</sup> NPK compound fertilizer and 225 kg/hm<sup>2</sup> urea topdressing after mowing. The greening period, jointing period, before overwintering and fertilization can be combined with irrigation.

It is suitable for planting in Northeast, Northwest and North China and suitable areas on the Qinghai-Tibet Plateau.

‘Zhongke 7’

Bred variety

Guo S-BV-LC-004-2020

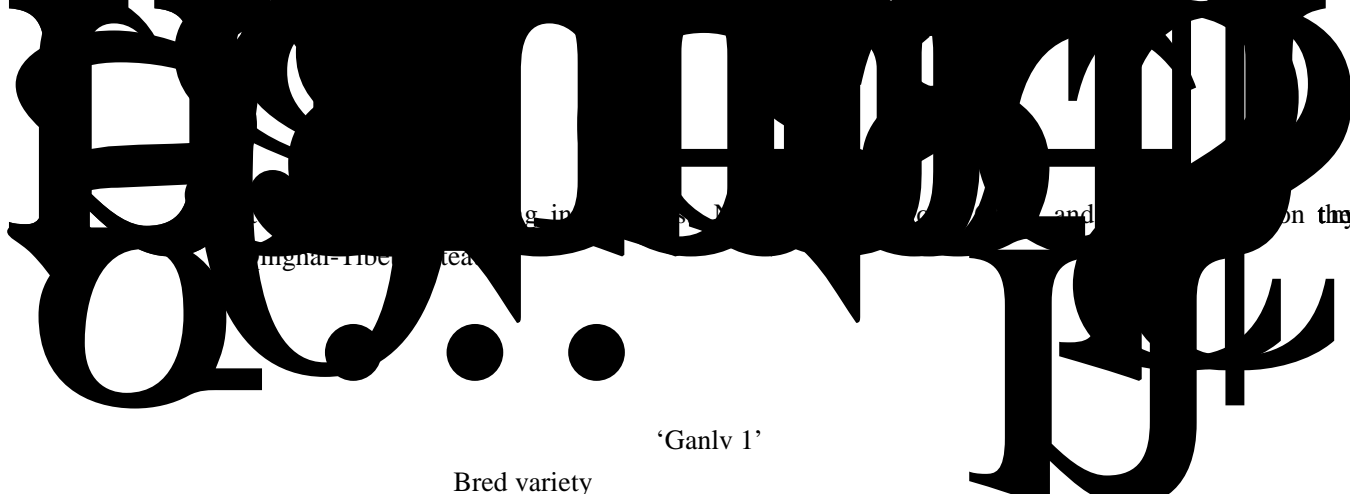
Institute of Botany, Chinese Academy of Sciences

Qi Dongmei, Liu Gongshe, Liu Hui, Chen Shuangyan, Cheng Liqin, Li Xiaoxia, Dong Xiaobing, Hou Shenglin, Gao Lijun, Wang Yan, Zhao Qiang, Yao Rong

Gramineae perennial herb. It has a well-developed underground transversal rhizome, which is mainly distributed 5-10 cm above the ground. The underground biomass is up to 9134 kg/hm<sup>2</sup>, the hay yield is 5660 kg/hm<sup>2</sup> to 7188 kg/hm<sup>2</sup> and the seed yield is 279 kg/hm<sup>2</sup>. It is suitable for growing in soil with annual precipitation of 300-650 mm and salt content below 0.4%, and the maximum coverage in the year of sowing is 33%-59%.

It is a both forage grass and ecological restoration grass, and mainly used for re-seeding and improvement of natural grassland in north of China, ecological restoration of degraded grassland, improvement of saline-alkali land, construction of artificial grassland, etc.

The artificial grassland needs deep plowing before planting, and 750 kg/hm<sup>2</sup> organic fertilizer is applied along with the land preparation. For spring sowing, the sowing amount is 60-90 kg/hm<sup>2</sup> while it can be appropriately increased in saline-alkali soil. It can be drilling with 7.5-30 kg/hm<sup>2</sup> and row spacing 15-20 cm with 1-3 cm sowing depth. Ecological restoration can be mixed with other grass seeds and mostly no-tillage supplementary sowing, or sowing. Before the jointing period, this variety can be topdressed with 300 kg/hm<sup>2</sup> NPK compound fertilizer and 225 kg/hm<sup>2</sup> urea topdressing after mowing. The greening period, jointing period, before overwintering and fertilization can be combined with irrigation.



g in ... and ... on the vicia sa  
mgnaI-1bc tea

‘Ganlv 1’

Bred variety

Guo S-BV-LCO-005-2020

Gansu Chuanglv Grassland Technology Co., Ltd.

Cao Zhizhong, Chai Hui, Yan Xiangzhong, Cui Yafei, Jiang Hua

As a ~~perennial~~ herb of Leguminosae. The variety ~~has~~ a well developed fibrous root system and many

the stolon diameter is 0.12 cm the average internode length is about 7.3 cm, the number of ramets formed on each node is 4-9 and. The leaves are dark green and hairy, with the length of 22.4-29.3 cm and the width of 2.6-3 mm. The coverage of grassland can reach 85% within 45-60 days after establishment, and the survival rate can reach 100% in North China.

It is mainly used for ecological restoration of degraded grassland, and establishment of parks lawn, etc.

Ecological restoration of degraded grassland: For seedling planting, hole and compaction planting before rainy season, row spacing of 1m×1m, with adequate irrigation, routine management after establishment. For no-tillage reseeding, it can be mixed with other grass seeds with buffalograss seed 7.5-15kg/hm<sup>2</sup>. Lawn planting: Remove the weeds firstly, hole and compaction planting with plant-row spacing of 30 cm×30 cm. Keep the soil moist within the first week after planting, and then management normally.

It is suitable for planting in low-maintenance and difficult sites in North China.

#### 'Lubin 1'

Bred variety

Guo S-BV-ZM-007-2020

Ludong University

Fu Jinmin, Xu Xiao, Fan Shugao, Wang Guangyang, Yin Yanling

'Lubin 1' is a rhizomatous perennial herb consisting of the stolon, short internodes and adventitious roots at nodes. For reproduction, the 'Lubin 1' variety is an outcrossing species that propagates vegetatively. Typically, the variety is dark-green with a leaf girth of 2.77 mm, 708/100 cm<sup>2</sup> dense with an annual greenness period of 242-259 days. After their cultivation in the coastal saline-alkali soil, the salt content of a 0-10 cm soil layer declined by 50%-60%, while the organic matter increased by 18%-47%.

Mainly used for ecological restoration of seashore saline-alkali soil and lawns.

commonly known as Manila grass variety 'Lubin 1' is a warm-season grass that is suitably cultivated from May to October, preferably in June to September. In the coastal saline-alkali land, the variety is vegetatively propagated and established via laying sods. The sod sections can be moved by cutting a 30 cm×30 cm rectangle of a layer with a thickness of approximately 1-2 cm. Irrigation of 'Lubin 1' should proceed immediately after establishment. Deep watering is strongly recommended during spring-greenness and before soil



freezing. A compound fertilizer (10-20-20) of 450 kg/hm<sup>2</sup> and urea of 105-120 kg/hm<sup>2</sup> are required before and after its establishment, respectively. For fertilization, late autumn is preferred for 'Lubin 1' grass.

'Lubin 1' is recommended to be used for coastal areas south of latitude 39°.

'Altay Gaubau'

Wild domesticated variety

Guo S-WDV-PP-008-2020

Altay Gaubau Tea Co., Ltd., Lanzhou University

Liu Qitang, Zhang Jiyu, Wang Li, He Wei, Wang Yanrong, Huang Jingfeng

It is a perennial herb belonging to *Apocynaceae* genus, Apocynaceae family, with horizontal and vertical roots. The stem is red or reddish brown, and the plant height is from 100 to 200 cm. The inflorescence is top-growing and corymb-like, the inner surface of the flower is rose red, and the back is light pink. The beginning-flower stage is in the end of May, and the blooming period is in the middle and late June, which the flowering period is two months. It can grow well in saline-alkali soil land with annual rainfall of about 130 mm and pH 8.7. The rate of hemp production is 16.3%, which can be used to process and produce high-quality hemp textiles.

Mainly used for ecological restoration, saline-alkali soil improvement, eco-tourism viewing.

The seeds need to be soaked in cold water for more than 12 hours before sowing to promote germination. Seedlings are cultivated in a greenhouse in spring. The germinated seeds are mixed with 2-3-fold fine sand and then sown in a nutrient bowl, which use about 10 grains, and covered with 2-3 mm of fine soil. Remove the greenhouse film when the seedlings are 10cm height and transplant them after 2 weeks. Transplanting in May or June of spring or the middle of October in autumn, according to the plant row spacing of 1.5 m×3 m hole seedling with soil, which the hole diameter of 40 cm and depth of 30 cm. And then, irrigating, weeding, fertilizing (organic fertilizer for 3-5 kg/hole) and spraying Bordeaux mixture to control rust disease.

It is suitable for planting in arid and semi-arid areas with an annual rainfall of 130-400 mm in northern China, desert and Gobi, and saline-alkali soil land.

'Altay Gaubau'

Wild domesticated variety

Guo S-WDV-AV-009-2020  
Altay Gaubau Tea Co., Ltd., Lanzhou University  
Liu Qitang, Zhang Jiyu, Wang Li, Huang Jingfeng, Wang Yanrong

The variety with horizontal and vertical roots, opposite leaves, 100-120cm plant height, is a perennial herb belonging to the Apocynaceae family. It has inflorescences of terminal monochaete and the flowers are purple-red. The beginning-flower stage is at the end of May and blooming stage at mid-to-late of June, which with two months' flowering period. It can grow well in saline-alkali soil with annual rainfall of about 130 mm and pH 8.7. The leaves of

'Altay Gaubau' are good material for tea production, which the flavonoid content is more than 2%.

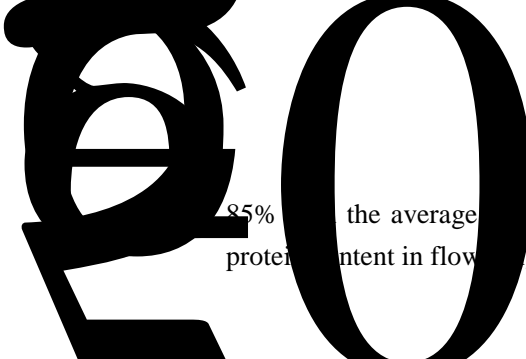
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It is suitable for planting in arid and semi-arid areas with rainfall of 130-400 mm in northern China, saline land, desert and Gobi.

'Xiwuzhumuqin'  
Wild domesticated variety  
Guo S- WDV-LC-010-2020  
Institute of Grassland Research, Chinese Academy of Agricultural Sciences  
Wu Zinian, Hou Xiangyang, Li Zhiyong, Chang Chun, Huang Fan

As a perennial herb belonging to Poaceae, The variety possesses a well-developed underground transverse rhizome with internode length of 3 to 5 cm, which are concentrated in the 10 to 15 cm soil layer. The stems erect with the main stem thick of 0.2 cm, plant and canopy height from 90 cm to 115 cm and from 60 cm to 75 cm, respectively. It's germination rate of soil culture is over



85% the average yield of 250.43 kg/hm<sup>2</sup>, the hay yield of 8174 kg/hm<sup>2</sup> and the crude protein content in flowering period was 14.97%.

Mainly used for reseeding improvement, ecological restoration and artificial grassland construction of degraded grassland.

After deep tillage, harrowing and flattening foundation in autumn with soil depth over 20 cm, The variety can be sowed in spring, summer or autumn (optimal in rainy season of June or July but no later than late August) after weeding thoroughly and applicable irrigation and base fertilizer application. It should be drill seeding with row spacing of 40 cm to 50 cm, sowing rate of 10 kg/hm<sup>2</sup> to 20 kg/hm<sup>2</sup>, sowing depth of 1.5 cm to 2 cm. Suppressing timely after sowing can facilitate the germination of seedlings. Conventional level of field management is suitable for cultivation of 'Xiwuzhumuqin'. Grazing is not suitable in sowing year.

It is suitable for planting in Inner Mongolia and its neighboring provinces.

#### 'Yajiang'

Wild domesticated variety

Guo S-WDV-ES-011-2020

Sichuan Agricultural University; Sichuan Academy of Grassland Sciences; Southwest Minzu University

Ma Xiao, Bai Shiqie, Gou Wenlong, Yan Lijun, Chen Shiyong, Liu Lin, Zhao Junming, Lei Xiong, Zhang Jianbo, Liu Wei

As a perennial herb of species of Gramineae, 'Yajiang' possesses the well-developed root system and strong tiller capability. The plant height and leaf width are ranging from 100 cm to 135 cm and from 7 mm to 15 mm, respectively. The thousand seed weight and growth period are ranging from 3.8 g to 4.2 g and 150-160 days, respectively. The over-wintering survival rate is about 97.4% in the western Sichuan Plateau. The average hay yield and seed yield are 8485.6 kg/hm<sup>2</sup> and 1346.4 kg/hm<sup>2</sup>, respectively, and the crude protein content is 9.3% at heading stage.

As a forage grass and ecological restoration grass, 'Yajiang' can be used for ecological restoration and artificial grassland construction of degraded grassland on the Qinghai-Tibet Plateau below 3,700 m above sea level.

The land with moderate fertility and deep soil layer should be prepared with applying the base fertilizer

ranced cattle and sheep manure. The variety of 'Yajiang' should be sowed from mid-April to mid-May with drill or broadcast sowing. T

‘Kangnan’  
Wild domesticated variety  
Guo S-WDV-EN-013-2020  
Southwest Minzu University; Sichuan Agricultural University  
Chen Shiyong, Zhang Xinquan ,Ma Xiao , Feng Guangyan, Chen Youjun

As a perennial herb of species of Gramineae, ‘Kangnan’ possesses the well developed root system and the plant height is ranging from 125 cm to 148 cm. The leave length and width are from 9 cm to 18 cm and 7 mm to 12 mm, respectively. Slightly purple spikelets are mostly on one side of spike-stalk with 20 cm to 28 cm in length, and the thousand seed weight is changing from 3.3 g to 3.8 g. The reproductive period reached 150 d to 160 d in western Sichuan Plateau. The hay yield and seed yield were 5000-8000 kg/hm<sup>2</sup> and 1000-1600 kg/hm<sup>2</sup>, respectively.

As a forage grass and ecological restoration grass,It can be used for ecological restoration and artificial grassland construction of degraded grassland in the east of Qinghai-Tibet Plateau.

The variety can be sown in spring on the Qinghai-Tibet Plateau region. In the warmer areas, however, the sowing time can be earlier or can be sown in summer. The most suitable sowing time is from mid-April to mid-May in the northwest of Sichuan Plateau. The drill seeding or broadcast sowing both can be carried out in the production of ‘Kangnan’. When adopting the drill seeding, the sowing rate is 30 kg/hm<sup>2</sup> to 37.5 kg/hm<sup>2</sup> with the row spacing of 20 cm to 30 cm and the sowing depth of 3 cm to 5 cm. When adopting the broadcast sowing, however, the sowing rate is 37.5 kg/hm<sup>2</sup> to 45 kg/hm<sup>2</sup>. Pay attention to the field management in seedling stage, timely harrowing and weeding. Cutting utilization should be applied at heading stage or flowering stage with the stubble height of 5 - 8 cm.

It is suitable for planting in the southeast edge of Qinghai-Tibet Plateau and the eastern Part of Inner Mongolia with annual rainfall of over 400 mm.

‘Yanchi’  
Wild domesticated variety  
Guo S-WDV-AM-014-2020  
Ningxia University  
Fu Bingzhe, Lan Jian, Gao Xueqin, Xie Yingzhong Xu Xing, Ma Hongbin, Peng  
Wendong, Yang Falin

As a perennial herb of                   genus, Gramineae, ‘Yanchi’ possesses the well-developed root system, whose fibrous root with rhizosheath. The stem was erect and the plant height was ranging from 78 cm to 95 cm. The tiller number of ‘Yanchi’ is 95 and the stem diameter is 1.68 mm. With the greyish-green leaves, the leaf length is 10 cm to 12 cm and the leaf width is 2 mm to 3 mm. The thousand seed weight is 2.43 g with the germination rate is 70%. The growth period was about 120 days and the growth period was more than 230 days in Yanchi area. It can be cut twice every year with the average hay yield and seed yield are 6900 kg/hm<sup>2</sup> and the 694.1kg/hm<sup>2</sup>, respectively. The coverage of heading stage can reach up to 97.7%.

It can be used for ecological restoration grass and forage grass, mainly used for reseeding and improvement of degraded grassland, ecological restoration, slope protection, water and soil conservation, artificial grassland planting and so on.

Fine land preparation and weed control combined with the application of the base fertilizer phosphate diamine of 375 kg/hm<sup>2</sup> to 450 kg/hm<sup>2</sup> should be applied before the sowing of the ‘Yanchi’. Artificial grassland is sown in April-May or July-August, while natural grassland is planted in early July-mid-August when the rainy season comes. Drill sowing can be applied for artificial grassland production with row spacing of 20 cm to 30 cm and seeding rate of 22.5 kg /hm<sup>2</sup>. Drill sowing can also be applied for seed fields with row spacing of 30 cm to 40 cm and sowing rate of 12 kg/hm<sup>2</sup> to 22.5 kg/hm<sup>2</sup>. When reseeded in natural grassland, drill seeding or broadcast sowing are both suitable with the sowing rate of 22.5 kg/hm<sup>2</sup> to 30 kg/hm<sup>2</sup>. Weeding should be carried out in time at the seedling stage. Fertilization is not required in the sowing year, and phosphate diamine of 375 kg/hm<sup>2</sup> to 525 kg/hm<sup>2</sup> was applied in spring after regreening or cutting according to soil fertility.

It is suitable for planting in arid and semi-arid temperate regions with an annual precipitation of 200 mm to 400 mm in Northwest China and North China.

#### ‘Qiannan’

Wild domesticated variety

Guo S-WDV-LS-015-2020

Guizhou Institute of prataculture; Sichuan Academy of Grassland Sciences

Fan Guohua , Xie Caiyun, Zuo Xiangbing, Zhang Wen, Zhang Jianbo

The ‘Qiannan’ possesses the underground stem and the plant height is ranging from 50 cm to 70 cm in flowering stage. The radical leaves are 30 cm to 68 cm in length and 4 mm to 8 mm in width. The thousand seed weight is 56.5 g and the seed yield is 900 kg/hm<sup>2</sup>. The variety prefers warm and humid climate, and growth well on fertile soil. The leaves of the ‘Qiannan’ appears with green all the time. Possessing many lavender flowers, the scape of the ‘Qiannan’ appears in early

... and in urban public area greening and garden greening.

Tilling is usually adopted for cultivation of the 'Qiannan', and are always planted in spring. Each plant is divided into 3 to 5 individuals with 10 to 15 leaves per individual. The row spacing is 25 cm×25 cm and planting depth is 7 cm to 10 cm. In the transplanting time or in autumn, nitrogen fertilizer of 150 kg/hm<sup>2</sup> to 225 kg/hm<sup>2</sup> should be applied, and weeding should be carried out once or twice before the formation of the community. In the rainy season of southern areas, pay attention to the prevention of black spot disease. Generally, at the initial stage of this disease, 1:1:100 Bordeaux mixture could be used for prevention and treatment with spraying once every 10 days and 3-4 times continuously.

2-3 times or grazing. The Mixture grassland of white clover is suitable for grazing or mowing, while stubble should be 3-5 cm after mowing. The recovery time is about at least 2-3 weeks.

It is suitable for planting in the area both has more than altitude of 600 m and annual rainfall is over 1000 mm with warm, cool and humid areas such as upper-middle reaches of Yangtze River or similar climatic zone.

White clover

‘Klondike’

Introduced variety

Guo S-IV-TR-017-2020

Sichuan Pratacultural Technology Research and Extension Center, Southwest Minzu University, Liangshan Yi Autonomous Prefecture Animal husbandry Station, Sichuan Agricultural University

Yao Mingjiu, Wang Tongjun, Chen Shiyong, Nie Gang, Cheng Mingjun, Gou Wenlong

Perennial herb in , Leguminosae. Stolons are long and well developed with grass heights of 30-60 cm. Capitulate raceme, containing 30-80 florets, 1000-seed weight 0.5-0.6 g, growth period about 298 days. The crude protein content is 21.4%, and the hay yield is 7400-8700 kg/hm<sup>2</sup>, Klondike can be harvested 4-5 times a year.

It can be used as both forage grass and ecological restoration grass. It is mainly used for mixed-planting, artificial grassland construction, ecological restoration and landscape green space construction.

Fine soil preparation before sowing, the first planting should be inoculated with rhizobia. Suitable for autumn sowing in southern China, with a sowing quantity of 8-10 kg/hm<sup>2</sup>, a row spacing of 30 cm, a sowing depth of 1 cm, and a mixed-sowing quantity of 2.5-4.5 kg/hm<sup>2</sup>. To meet the need of water and fertility, apply appropriate compound fertilizer after 2-3 cuttings or grazings. The mixed grassland is suitable for rotation grazing or mowing. The recovery time is at least 2-3 weeks after utilization, and suitable stubble height is 3-5 cm.

It is suitable for planting in the warm, cool and humid areas or similar climatic areas, such as upper and middle reaches of the Yangtze River where the altitude is above 600 m and the annual rainfall is above 1000 mm.

Perennial ryegrass



‘Barnauta’

Introduced variety

Guo S-IV-LP-018-2020

Sichuan Agricultural University, Bailv (Tianjin) International Grass Industry Co., Ltd.

Huang Linkai , Zhang Xinqun , Zhou Silong , Nie Gang, Yang Zhiyuan .

Perennial cold-season herb, fibrous root system, 80-100 cm in height. The leaf length is 10-18 cm, the panicle length is 15-25 cm, the seed length is 4-7 mm, and the 1000-seed weight is 1.9 g. The utilization time is as long as 3-5 years, and the hay can be cut 4-5 times per year. The average annual hay yield is 10500 kg/hm<sup>2</sup>, and the crude protein content of the first cut is 20.7%.

It can be used as forage, mainly used for mixed-sowing, artificial grassland construction, mowing or grazing.

Suitable for autumn sowing (September - October), the ground temperature should be stable at 10-15 . Generally used for drill sowing, row spacing is 30 cm, sowing quantity is 15-22.5 kg/hm<sup>2</sup>, sowing depth is 1-2 cm. After sowing, check the vacant seedlings, did weed control, fertilization, drainage and irrigation, and control diseases and insect pests. The first stubble was generally cut at plant height of 45-50 cm, leaving stubble of 5 cm.

It is suitable for planting in warm, cool and humid mountainous areas with an altitude of 800-2500 m and a rainfall of 800-1500 mm in the subtropical region of Southwest China.