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Effects of plant spacing and sowing time on seed yield and seed quality of *Paspalum atratum* in Thailand—by Chaisang Phaikaew, C. Khemsawat, Sayan Tudsri, Y. Ishii, H. Numaguchi and E. Tsuzuki, on pages 129–138.
Plants grown as different spacings (from 75 x75 cm to 100 x 100 cm) had similar high seed yields (averaging 820 kg/ha) and high quality (85% germination), but the widest spacings tended to give most good quality seed.
In another study, atratum was sown at different latitudes. The highest yields and quality in the establishment year came from early sowing in March, with no seed from July sowings. Only the high latitude site produced acceptable yields from June planting suggesting that atratum needs long days to induce flowering.

Juvenility and long–short day requirement in relation to flowering of *Paspalum atratum* in Thailand—by Michael Hare, K. Wongpichet, M. Saengkham, K. Thummasaeng and W. Suriyajantratong, on pages 139–143.
Paspalum atratum cv. Ubong was confirmed as a long–short day plant exhibiting a quantitative response to long days followed by a qualitative response to short days. Ubon paspalum must have long day-lengths to flower and needs at least 60 long days to flower completely. Seed crops must be planted very early in the we season to flower in the establishment year and older seed crops must not be cut late in the wet season. Ubon paspalum shows no juvenile stage.

Effect of cutting on yield and quality of *Paspalum atratum* in Thailand—by Michael hare, M. Saengkham, C. Kaewkunya, S. Tudsri, W. Suriyajantratong, K. Thummasaeng and K. Wongpichet, on pages 144–150.
In the wet season, cutting Ubon paspalum at 20–30 day intervals gave higher nutritive value (by increasing crude protein, P and K concentrations and lowering the fibre content) than cutting every 60 days. In the early part of the dry season, the cutting interval can be extended to 40 days.
The most appropriate cutting interval will depend on what the farmer is producing, but good dairy production will still need supplementation with legumes and concentrates.

Tiller dynamics in a bahia grass (*Paspalum notatum*) pasture under grazing—by M. Hirata and W. Pakiding, on pages 151–160.
Bahia grass forms a highly persistent sward that tolerates severe defoliation. Under grazing with cattle in Japan, the density of bahia grass tillers remains stable because they are long-lived—despite low rates of appearance. This low rate of appearance of new tillers is due to low rates of site filling. Although rates of appearance and death were modelled in relation to meteorological or sward factors, more study is needed to enhance prediction.

Forage yield and nutritive value of *Eragrostis curvula* and *Digitaria eriantha* in central-south semi-arid Argentina—by A.O. Gargano, M.A. Adúriz, H.M. Arelovich and M.I. Amela, on pages 161–167.
In a 4-year experiment, cv. Irene and *E.curvula* cv. Tanganyika were cut in spring and summer and in autumn when they reached 25–30 cm height. *D. eriantha* had slightly lower yield but had better nutritive value (Crude protein 12.1% (spring-summer) and 5% (autumn) v. 9.2% and 3.9%; digestibility (64% and 50.8% v. 51.6% and 40.4%).

Yield and nutritive value of tropical forage legumes grown in semi-arid parts of Zimbabwe—by R.M. Jingura, S. Sibanda and H. Hamudikuwanda, on pages 168–174.

Lablab produced the highest yield of forage with a high protein content. Yields of lablab, siratro, silverleaf desmodium and finestem stylo were 5.9, 3.1, 3.3 and 2.9 t/ha respectively, with protein contents of 16%, 17%, 13% and 16%. The legumes should be harvested soon after flowering for maximum yield of good quality forage for supplementing dairy cows.

The effect of harvesting at different growth stages on yield and quality of three late-maturing pearl millet accessions in northern Nigeria— J.T. Amodu, M.S. Kallah, O.S. Onifade, A.T. Omokanye and I.A. Adeyinka, on pages 175–179.
Forage yields were highest when harvested at the milk stage of grain formation. Crude protein declined from 8.2% at flowering to 5.3% at the dough stage while crude fibre increased. Pearl millet should be harvested at the milk or dough stage yields increased with advancing maturity while nutrient changes were small.

Yield and chemical composition responses of *Lablab purpureus* to nitrogen, phosphorus and potassium fertilisers—by Y. Shehu, W.S. Alhassan, U.R. Pal and C.J.C. Phillips, on pages 180–185.
In the savanna zone of west Africa, no fertiliser combination increased yield of lablab in the first year. Nitrogen with phosphorus increased the yield of shed leaves but adding potassium eliminated this while reducing fibre levels. There were no responses in the second year. In both years, the protein and phosphorus levels were generally increased with phosphorus fertilisers but there were no consistent benefits from applying N,P and K fertilisers.

Liveweight gains of steers at different stocking rates on mono-specific Gatton panic and Estrella grass pastures in the Chaco central region of Paraguay—by A.J.N. Cabera, D. Stosick, Albrecht Glatzle, Max Shelton and R. Schultze-Kraft, on pages 186–192.
Gatton panic produced greater liveweight gains per head than Estrella or African star grass (*Cynodon nlemfuensis*) at stocking rates below 1.4 AU/ha but was less sustainable at higher stocking rates. Gatton panic in the pasture declined from 80% to 30% over the 6 years of study whereas star grass remained over 90%.
There are over 1 million hectares of improved pastures of Gatton panic and African star grass in the Chaco Central region (edaphically and climatically similar to central Queensland, Australia), and it contributes 50% of milk produced in Paraguay and 20% of the beef. The area is increasing by land clearing at a rate of 50 000 ha/year. The results of this study are therefore important for understanding and preventing pasture degradation.