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166. Ley field management using satellite based digital tools - Peng J., Morel J., Oliveira J. and Parsons D.
167. Grass biomass assessment in Wallonia (Belgium) based on satellite imagery and a grass growth model - Lucau-Danila C., Curnel Y., Mertens A., Decruyenaere V., Mathy D., Boulet L., Mathieu S., Lambert R., Himdi H., Knoden D., Glesner N., Nicolas S., Reding E., Dawance A., Stilmant D. and Planchon V.
168. A preliminary examination of white clover variety performance influenced by leaf size and varying nitrogen levels in grass swards - Carroll C., Gilliland T., O'Donovan M. and Tubritt T.
169. Comparative grazing behaviour and dry matter intake of dairy-beef steers - O'Driscoll J., Purfield D. and Byrne N.

170. Evaluating the relationship between sheep grazing offtake and the nutritive value of perennial ryegrass varieties - Johnston L.S., Patterson J.D., Archer J., Mocarska M.M., Herron E.R., Beerepoot L.J. and Young G.K.
171. Satellite imagery to categorize botanical composition in an alpine pasture - Pornaro C., Basso E., Pinna D., Marinello F. and Macolino S.
172. Application of the repellent TRICO as a method to reduce mortality of fawns at grass harvest - Frandsen T.S., Nitschke T., Olesen C.R. and Rahbek J.
173. Examination of grazing sustainability of grasslands in southwest Hungary - Hoffmann R., Keszthelyi S., Pál-Fám F. and Halász A.
174. Investigating the effects of herbage mass and harvest date on perennial ryegrass nutritive value - Heffernan C., Egan M., Fleming C., O'Callaghan T.F. and Dineen M.
175. Simulating grassland winter survival in high latitude regions using the BASGRA model - Persson T., Ancin Murguzur F.J., Davids C., Höglind M. and Jørgensen M.
176. Does the Soil Index relate to differences in grassland and forage crop yields between farms? - Russchen M.A., Terwisscha Van Scheltinga R.A. and De Haas M.J.G.
177. Effect of pasture allocation frequency on the milk production of Holstein grazing dairy cows - Menegazzi G., Bailon F., Fernández L., Pessoa S., Fast O., Mattiauda D.A. and Chilibroste P.
178. Can a liquid nitrogen fertiliser produce similar herbage dry matter yields as granular fertilisers? - Bock M.H., McKay Z.C., Creighton P., Patton D. and McCarthy B.
179. Exploring the productivity puzzle: an examination of fast- and slow-growing forage grasses - Pittaro M.G., Duchini P.G., Guzatti G.C. and Sbrissia A.F.
180. Establishing grass-clover leys in winter cereals - El Khosht F.F., Hallin O., Öborn I. and Nilsdotter-Linde N.
181. Identification and assessment of the distribution of fungal diseases within the main grassland species in Norway - Muradagha K. and Jørgensen M.
182. The impact of warm-season pasture management on the following cool-season annual ryegrass growth - Comassetto D.S., Barreta D.A., Piran F., Gislón F.C.S., Pittaro G. and Sbrissia A.F.
183. Fresh grass diets supplemented with essential oils for dairy cows: effects on milk and urea - Burgers E.E.A., Klop A., Koning L., Holshof G. and Klootwijk C.W.
184. Monitoring the effect of grass production strategies within the 'Koe and Eiwit' project - Wind T.M., de Haan M.H.A., van Laar H. and Galama P.J.
185. Mattenkleef in mixed swards with timothy for sustainable organic forage production - Edin E., Omer Z. and Wallenhammar A.-C.
186. Development of rising plate meter calibration equations for mixed perennial ryegrass and ribwort plantain (*Plantago lanceolata* L.) swards - Holohan C., Chesney L., Rutherford N.H., Takahashi T., Gordon A. and Patterson J.D.
187. A survey analysis of permanent grassland management practices across six European biogeographical regions - Titterton F., Lively F., Mulvenna C., Klopčič M., Newell-Price P., Rankin J., Smith K. and Holohan C.
188. Investigating factors that affect cow throughput on farm roadways - Maher P.J., Murphy M.D., Egan M. and Tuohy P.
189. Evaluation of satellite data for estimation of legume proportion in clover-grass swards - Frandsen T.S., Malskaer L.M. and Torp M.T.

190. How to resurvey historic grassland records from the turn of the 19th century? - Riedel S. and Widmer S.
191. Landolt indicator values changes as result of fertilization in *Danthonia alpina* grassland - Zornić V., Petrović M., Babić S., Lazarević Đ., Tomić D., Racić N. and Radović J.
192. Impact of leaf area index on the grassland yield prediction - Goliński P., Golińska B., Czerwiński M., Paszkowski A. and Dąbrowska-Zielińska K.
193. How does seed production in southern part of Norway affect the winter hardiness of varieties adapted to Northern Norway? - Dalmannsdottir S., Jørgensen M., Amdahl H., Hellton K.H. and Rognli O.A.
194. Risk of nitrate leaching at grassland renovation in spring versus autumn in the Netherlands - Van Middelkoop J.C. and van Schooten H.

Theme 4. WHERE? Where should we focus on which ecosystem services?

195. Mapping wet grasslands to consider ecosystem services at the landscape scale - Lemauviel-Lavenant S., Chauvel L., Irien C. and Odoux J.F.
196. Effects of distance and orientation of hedgerows on grass production and quality in permanent grasslands - Thiery T., de Streel G., Czaplicki S., Hornick J.L. and DufRASNE I.
197. Animal health service provided by grassland diversity: farmers' perceptions and strategies in four French regions - Rose J., Michaud A., Biasotto M., Couvreur S. and Petit T.
198. Integrating arable and dairy farms through legume-based leys in the Netherlands - Alderkamp L.M., Taube F., van Middelaar C.E., van der Linden A. and Klootwijk C.W.
199. Adaptive responses of meadow melliferous plants to low soil pH and change in soil structure - Pradita F.A. and Janicka M.
200. Bite item diversity and bite item quality in an extensive grazing system with suckler cows - Siede C., Pohlmann W., Juch A., Hamidi D., Isselstein J. and Komainda M.
201. Climate impact and energy return of reed canary grass or tall fescue on marginal land for biogas - Palmborg C. and Cristescu C.
202. Where do we find permanent grasslands? Approaches and shortcomings of existing Europeanscale maps - Tonn B., Schils R.L.M. and Newell Price J.P.
203. Grassland and grazing: scrutiny of benefits and side-effects - Rolinski S., Lotze-Campen H., Heinke J., Hunecke C., Beier F., von Jeetze P., Wirth S.B., Steinhauser J. and Müller C.
204. Provision of biodiversity and ecosystem services from permanent grassland types - Schils R.L.M., Tonn B. and Newell Price J.P.
205. Yield potential and forage quality on free rangeland pastures in Northern Norway - Elverland E. and Haugen F.A.
206. Can perennial grain crops combine the soil ecosystem services of grassland with starch production on sandy soils? - van den Hout M., Sleiderink J. and van Eekeren N.
207. Changes of sward characteristics in cut meadow after introduction of intensive sheep grazing - Pavlů V., Titěra J., Pavlů L. and Bandak I.
208. Growth potential and yields of chicory and ribwort plantain - Holshof G., Zom R.L.G. and Cui Z.

- 209. Carbon sequestration practices in Eastern Netherlands: a grass and arable fields case study - Fabri F.B., Poot N., Spek E. van der, Jacobs A. and Eekelder J.
- 210. Balanced phosphorus fertilization in a mixed grazing and mowing system on grassland; results after 26 years - Van Middelkoop J.C. and Regelink I.
- 211. Inventory of the abundance of earthworm *Lumbricus terrestris* in grasslands on sandy soil - van de Logt R., van der Sluijs T. and van Eekeren N.

Theme 5. WHOM? For whom are grasslands important?

- 212. How German grazing dairy farmers perceive feed intake of cows on pasture and dietary effects - Oehlert L., Obermeyer K. and Kayser M.
- 213. Honey bees pollen collection in a grasslands bocage territory - Odoux J.F., Raulin A. and Lemauxiel-Lavenant S.
- 214. Bibliometric analysis of the literature focusing on ecosystem services provided by grasslands - Sénécal J., Lemauxiel-Lavenant S., Faure P. and Couvreur S.
- 215. Sharing grass related innovations to enhance the resilience of European dairy farms - Brocard V., Browne N. and Debevere S.
- 216. What policies are needed in Europe to protect grasslands and support their sustainable management? - Newell Price J.P., Hunter E., Arndt V., Gallardo-Cobos R., Miškolci S., Sánchez-Zamora P., Sari N., Smith K., Tindale S., Vicario-Modroño V. and Frewer L.J.
- 217. The perspectives of young European farmers and students on grazing - Van den Pol-van Dasselaar A., Ankersmit E., Dumitras D.E., Fracchetti L., af Geijjersstam L., Jitea I.M., Looney C., Nilsdotter-Linde N., Peratoner G., Ramos C., Schetelat S., Thielecke D. and Zanatti R.