

Keyword Index

Numbers following names refer to abstract numbers; a number alone indicates an oral presentation, an M prior to the number indicates a Monday poster, a T indicates a Tuesday poster, and a W indicates a Wednesday poster; LB indicates a late-breaking abstract. The keyword index is created directly and automatically from the submitted abstracts. Efforts have been made to make this index consistent; however, error from author entry contributes to inaccuracies.

A

- abattoir, 413
abortion, W286
absorption, M421
academia, 55, 56
academic journal, T534
accelerometer, T200
accuracy, W82, W89, 545
accuracy evaluation, M132
ACE-inhibitory activity, T107, T132
acetate, M394
acetate:propionate ratio, T500
acetohydroxamic acid (AHA), W411, W422
acetyl bromide, 268
acid gel, M107
acid whey, T143, 74
acidification, W147, W327
acidosis, T214, T349, T476, W29, W347,
 W374, 461, 870
acoustics, 63
ACTH test, T55, 30
activity, M301, M485, 356, 362
activity meter, M118
activity monitor, M134, M245
acute metritis, 20
acute phase response, 507
acute-phase reaction, 28
acylcarnitine, W366
ad libitum, W377
ad libitum feeding, T403
adaptation, M209, W264, W296, W308,
 W309, W452, W455, W457, 343, 344,
 869
adaptive capacity, 418
additive, M344, T489, T528, W191, W198,
 W205, W316, W417, W452, W453,
 W455, 65, 612
additivity, M191
ADG, M35, W472
adipocyte, LB3, 104, 110
adipocyte differentiation-related protein
 (ADRP), W484
adipogenesis, W221
adiponectin, W250
adiponutrin, M8
adipose, 293, 805
adipose tissue, M148, M462, 670
adipose tissue macrophages, W253
administration route, T501
admissibility, 541
advocacy, 720
aerial part, W209
aerobic composting, T17
aerobic stability, M111, W179, W194, 267
aflatoxin, T483, W364
aflatoxin B₁, T165, 272
aflatoxin M₁, T160, T165, T166
Africa, 212, 555
age, W100
age at calving, M280
age at first calving, T98
age-related mutation, M93
aggregation, 242
aging, M162
agonistic behavior, M29
agritourism, M295
agroecosystems, T168
AI, 445
air quality, M127
alert index, T24
alfalfa, M41, T210, W123, W159
alfalfa hay, T430, W289, W326
alfalfa silage, W174, W198, W417
algae, M427, T503, W458, 347, 348
alkali, 699
alkaloid, M47
allantoin, T406
allele frequency, 541
allergenic, 785
alleviation treatment, T307
allometry, W493
alpha-amylase, W318
alpha-linolenic acid, T241
alpha-lipoic acid, 585
alpha-solanine, W223
alpha-tocopherol, W20
alternative feed, T474
alternative foods, T475, W496, W497, W498
alternative forage, M373, T218
alternative ingredient, M182
alternative protein, T449, T451
alternative rumen modulator, M362
aluminum, 703
ambient, 629
ambient temperature, W292
amino acid, M55, M154, M194, M228,
 M364, M371, M506, T400, T424, T435,
 T466, T467, W230, W303, W353, W393,
 W481, 303, 308, 385, 387, 435, 621, 790
amino acid profile, 111, 860
amino acid requirement, M168, M173, 776
amino acid transporters, 44
ammonia, T361, T466, 333
ammoniated whey, T441
ammoniation, 609
AMP-activated protein kinase, 667
amylase, M358, W220, W294
anaerobic fungi, 164
anaphylactic model, 400
ancestor, T79
aNDfom, W334, W338
androstenone, W240
anestrous, M238, W486
anestrous goats, T501
Angus, M318
animal breeding, 38
animal feed, W95
animal growth, M505
animal health economics, 137
animal industry, 203
animal mapping, 691
animal nutrition, 552
animal production, M258
animal protein, W285, W287
animal science, T536, 203, 479, 484
animal science students, 480
animal use, 35
animal welfare, 32, 33, 36, 482, T73, W4
Animate, M428, W323
Anisakidae, T175
Annona muricata, M43
annotation, 649
annual ryegrass, M110
anovular, M134
anovulation, 328
anthelmintic, M56, T64, W62, 630, 816
antibiotic, W400, W404, 20, 148, 370
antibiotic resistance, M267, M268, T62,
 T344, 415
antibodies, 276, 514
anti-methanogenic properties, 292
antimicrobial, T489, W44, 78
antimicrobial activity, 662, T28
antimicrobial additive, W397
antimicrobial agent, W138
antimicrobial resistance, T168, T169
antimicrobial resistance (AR) genes, T168
anti-Müllerian hormone (AMH), W262
antinutritional factor, M179, M183, M184
antioxidant, 184, 334, 426, 791
antioxidant enzyme, T315
antioxidant indicator, 337
antioxidative status, T227
antiseptic, 241
antral follicle count, T317
apocrine, M155
apoptosis, T325, T326, W107, W115, W268

app, M242
 apparent N recovery, M122
 apparent total-tract digestibility, W311, 188
 appetite regulation, 46
 apple bagasse, W167
 application, T39
 approach, W16
 aquatic animals, 776
 Arabian horse, T236
 archaea, 167, 598, M370
 arginine, M166, T319, W133, W215, 796
 aromatase, T328
 aromatic plant, W506
 artificial incubation, M257
 artificial infestation, W50
 artificial insemination, M242, W242, W243
 artificial vaginal, 629
 aryl hydrocarbon receptor (AhR), M14
 ascorbic acid, M302
Aspergillus oryzae, W318
 assay, 564
 assessing teaching potential, 640
 assessment, T534
 astaxanthin, M200
 atomization, 655
Atriplex canescens, T182
Attalea speciosa Mart, W161
 automated calf feeder, M296, 86
 automated estrus detection, 80, M246
 automated feeder, 693, 696
 automated milking, M299
 automated milking system, T431
 automatic calf feeder, 224
 automatic milking, 510, M251, W5
 avalanche, T149
 average daily gain, M312, M465, T228, T364, T372, 144

B

B6 vitamin, M169
Bacillus, T141, T195, 78, 404
Bacillus pumilus, 701, 702, W392
 back fat thickness, M263
 back pain, T75
 backfat, M160
 backfat thickness, 96, W234
 backgrounding calves, 872
 bacon, 37
 bacteria, M59, M311, M382, T206, T522, W400, W404
 bacteria count, M292
 bacterial count, 86
 bacterial count, M278
 bacterial crude protein, M382
 bacterial diversity, 166
Bacteroides species, T22
 Bacteroidetes, T22
 balance, 709
 balansa, W180
 ball, W180
 bambermycin, M46, 742

banana flour, T121
 barley, M120, T349, W232
 barley silage, W172, W176, W194
 barley starch content, T373, T375
 barn design, M6
 barrier function, M330
 batch culture, W431, W444
 Bax, T274
 BayesB, 539
 Bayesian, 542
 Bayesian inference, 269
 Bcl-2, T274
 BCS, M390, 30, 633
 bed, T154
 bedding, M292, 686
 bedding bacteria, 275
 Bee Synch, 443
 beef, M39, M161, M313, M329, M444, T370, W458, 61, 103, 107, 288, 372, 410, 518, 523, 612, 690, 806, 834, 864, 865
 beef and dairy cattle, 327
 beef calves, M28, W20, W55, W64
 beef cattle, M33, M317, M320, M338, T69, T82, T83, T352, T356, T362, T367, T464, W14, W50, W52, W53, W69, W77, W280, W289, W292, W299, W300, W306, W407, 18, 66, 341, 368, 370, 371, 408, 524, 527, 530, 595, 646, 648, 729, 730, 743, 816, 862, 866, 867
 beef cattle performance, T363
 beef cattle production systems, 42
 beef color, M162
 beef cow, 132, 366, T347, W60
 beef heifer, 737, T375, 131, 135, 442, 444
 beef heifer development, 738
 beef production, 697
 beef quality, M426, T158
 beef steers, 833
 beef tallow, M193
 beef-cattle production, T340
 beet pulp, M120
 behavior, M18, M34, M35, M478, T58, T244, T303, T390, W5, W7, W8, W12, W14, 234, 392, 395, 398, 493, 494, 495, 722, 725, 728, 869
 behavioral development, 236
 behavior-handling, 724
 beige adipocyte, 669
 benzoic acid, M206
 6-benzylaminopurine, W162
 Berkshire, M517, W288
 bermudagrass, W163, 266
 bermudagrass pasture, T379
 bermudagrass silage, M383
 berseem, W180
 β-acid, W461
 β-defensins, T220
 β-glucuronidase, 53
 β-hexosaminidase, T131
 β-hydroxybutyrate, M213, M270, M366, W245
 β-lactoglobulin, 402
 β-mannanase, M335, 117
 beta-glucan, T481
 betaine, M284
 betaine homocysteine S-methyltransferase (BHMT), 457
 beverage, T194
 BHBA, T217
 bifidobacteria, W124
 bile acid signaling, 45, W119
 bile acids, W117
 binder, M329
 bioactive, 783
 bioactive peptides, T132
 bioactivity, 664
 bioavailability, M171, M172, M386, T386, T424, W351, 438, 709
 biochemical paramete, T35
 biodiesel, W406, W495
 biodigester, W283
 biodiversity, T99
 bioelectrical impedance technology (BIA), 107
 bioenergetics, 550
 bioethics, 33
 biofilm, T141
 biofluid, 322
 biofouling, W150
 biofuel, W291
 biohydrogenation, M415, T396, T397, 162, 286
 bioinformatics, 41, T453
 bio-oil processing co-product, M449
 biopsy, T273
 biosecurity, M272
 biotin, T381
 biotype, W308
 birth, 184
 birth weight, M72, M503
 bisphenol A, T131, 8
 bites, M393
 blood flow, 681, W248
 blood metabolite, T503, W323
 blood NEFA, 471
 blood perfusion, 447
 blood plasma, T294
 blood profile, M198, M199
 blood serum, M454
 blood variable, T6
 blood-derived protein, 101
 blood-milk barrier, T276, T277, 101
 boar, W241
 boar effect, M492
 boar reproduction, 587
 boars, 5
 body composition, M469, T68, T504, T506, W102, 521, 632
 body condition, T259, T508, T525, 466
 body condition score, M263, M277, M293, M305, W491, 683
 body energy reserves, T525
 body temperature, T306

- body weight, M280, M337, M345, M512, 763
 body weight gain, T58
 body weight loss, M245
 Boer buck, 629
 Boer goat, M488
 bolus, T422, T473
 bomb calorimetry, 547
 bone, 428
 bone density, 420
 bone development, W46
 bone mineral, T290, T291
 bone ossification, T342
Bos indicus, M91, M226, T81, T84, T85, T419, W66, W73, 454
Bos indicus-influenced, 443
 botanical composition, W171
 botanical extract, M495, W446
 bovine, M45, M47, M136, M155, M244, M327, T61, W224, W426, 26, 124, 125, 508, 817, 873
 bovine digital dermatitis, 509, T26
 bovine genotype, W37
 bovine leukemia virus, T35
 bovine mammary cell, T314
 bovine mammary cells, M154
 bovine mammary epithelial cells (BMEC), M151, M152, M153
 bovine mammary gland transcriptome, T279
 bovine mastitis, T276, 433
 bovine paratuberculosis, M89, 255
 bovine placenta, T458, W258
 bovine placental lactogen, W249
 bovine respiratory disease, M94, W35
 bovine respiratory disease complex, 504
 bovine somatotropin, 425
 bovine tuberculosis, 254, 256, 258
Brachiaria brizantha, W161, W438, W439, W440
Brachiaria decumbens, T358
Brachiaria, M124
 Brahman, W63, 745
 branched-chain amino acid, M174
 branched-chain fatty acids, T405
 brassicas, 872
 BRD, W24, 493
 breast milk, T108
 breed, W64
 breed effect, T77
 breeding goal, 259
 breeding program, T90
 breeding scheme, 260
 breeding soundness exam (BSE), 453
 breeding value, W83, 382
 breeding value estimation, 39
 brewer's yeast, T246, T247
 Brix, 142
 broiler, T58, T287, T348, 579, 760, 795, 797
 broiler chicken, M185
 bromatology, T183
 bronopol, W365
 broom sorghum, T514
 brown adipose tissue, 669
 brown midrib corn silage, T385, W278
 Brown Swiss, M141, 377
 brown-midrib corn silage, T388
Brucella, M50
Brucella ovis, M49
 BTA14, W74
 B-type CpG-oligodeoxynucleotide (ODN), 400
buchneri, W208
 buck, W480
 buckwheat, 400, 401
 budget analysis, W65
 buffalo, M142, 297, 651
 buffalo bulls, W432
 buffalo sperm, 585
 buffer, 858
 bulk milk, 146
 bulk tank milk, 145, 147
 bull, M31, T376, W18, W49, W268, 3, 411, 445, 723
 bull-calves, W275
 bullock, T332
 BUN, W388
 buttermilk, 79, W155
Buttiauxella phytase, M180
 butyrate, 240, W214
 BVD, 26
 B-vitamin, W97
 BW uniformity, W18
 bypass energy, M431, M432, T360
 bypass lysine, 459
 byproduct, M316, M341, M346, M450, M463, W306, W311, W315, W401, W405, W406, W505, W508, 853
- C**
- C57WL/6J, M93
 Ca, 309
 Ca ion activity, T113
 Ca salt, M405, M407
 caatinga, T504
 cactus, T502, T509
 calcified seaweed, W374
 calcium, M192, 281, 657
 calcium bio lactate, M193
 calcium montmorillonite, M489, T389
 calcium salts of fatty acid, W383
 calcium status, T205
 calcium supplementation, T204
 calf, M315, T226, T227, T403, T407, T446, T455, W21, W22, W25, W29, W31, W32, W33, W38, W326, W330, W352, W353, W356, W376, W380, W395, W409, 143, 150, 151, 153, 155, 158, 160, 222, 250, 290, 493, 494, 496, 518, 710, 711, 744, 808, 814
 calf diarrhea, M11, W327
 calf feeding, 431
 calf growth, M285
 calf health, 696, T225
 calf housing, 693
 calf management, 224, 693
 calf metabolite, 741
 calf milk replacer, M380, 336
 calf nutrition, M138, 696
 calf performance, M398, M399, T449, T451, 221
 calf starter, 156, M398
 calf-fed, 516
 California, M117
 calving, T39, W15
 calving date, 367
 calving detection, 229
 calving distribution, T148
 calving ease, T93
 calving interval, 694
 calving season, 367
 camel, W469
 Camelidae, M82
 camelina meal, T416, T426
Camellia sinensis, M260
Campylobacter, 145, M271
 canine, 395, 396
 cannulated buffalo bull, W427
 canola, W441
 canola meal, M176, M340, M441, T199, T212, W464
 canola oil, 575
 canola press-cake, 574
 canola seed, W259
 caprine, W283
 capsaicin, T392
 captive exotic, 389
 carbohydrase, M179, M184
 carbohydrate, M431, M432, T360
 carbohydrate composition, W423
 carbohydrates, W100
 carbon, 593
 carbon dioxide, M140, T127
 carbon emission, T444
 carbon footprint, T468
 carbon nitrogen retention, 864
 carbonates, T396
 carcass, M503, M506, T248, W51, W305, W313, W314, W418, 690, 747
 carcass characteristic, T494, W433, 521, 797
 carcass composition, T251, T252
 carcass dressing, T364
 carcass grading, 863
 carcass maturity, T342
 carcass quality, M498, T256, T257, 761, 788
 carcass tissue composition, T253, T254
 carcass trait, M170, T286, T377, W73
 cardiovascular disease, T529
 carinata meal, M368, T416, T459
 carinata seed, 332, M139
 Carpathian cheese, T146
 carryover, 343
 casein, M101, M102, M341, M342, T116, W149, 440, 782
 casein micelle, 71
 caseinate, W147

- cassava, W206
 castration, M27, M28, T307, 106, 288
 cat, 392, 398, 399
 cat nutrition, W102
 catalase, 78
 catch-up growth, 421
 catechol-O-methyltransferase, W260
 cathelicidin, W34
 cathelicidin-BF, 192
 cattle, M157, M164, M423, T59, T67, T99, T249, T309, W13, W49, W71, W220, W315, W350, W442, W445, W449, 28, 88, 169, 256, 264, 331, 333, 335, 348, 411, 505, 506, 507, 531, 533, 589, 590, 599, 614, 712, 736, 823
 cattle exercise, T308
 cattle subspecies, 828, 829, M328, T351
 causal inference, 92, 767, M81
 cavitation, 405, M107, T197
 cecum, 673
 cell cycle and proliferation, 195
 cell membrane, 403
 cell signaling, 385
 cell wall, T484
 cell-free system, 465
 cellulase, 609
 cellulolytic, M434
 cellulolytic bacteria, 613
 cellulose, W234
 centralized calving facility, M266
 Centritherm evaporator, W146
 cephalosporins, T163
 ceramide, M413, W363, 472
 cereal, W175, W412, 853
 CH_4 , W301, 831
 CH_4 emission, W278
 CH_4 production, T385
 chain length, 700
 channel geometry, 656
 characterization, T120
 cheatgrass, T369
 Cheddar, W127, W130
 cheese, T139, W128, W129, W140, W141, 556, 559, 562, 563, 564, 565
 cheese flavor, T191
 cheese late blowing, 561
 cheese powder, T191
 cheese ripening, W136
 chelated trace mineral, 310
 chemerin, 588
 chemical composition, W225
 chemical treatment, 787
 chemiluminescence, T10
 chevron quality, M456
 chewing behavior, W342
 chicken, M75, T346, W43, W46, W244
 chicken egg, T250
 chicken egg anti-F4 antibodies, M510
 China, T161, 213
 chitooligosaccharide, W113, 836
 chitosan, M62, 826
 chitosan microparticle, T21, T28
 chitosan oligosaccharide, M511
 chlorate nitroethane, T173
 chloride concentration, M397
 chocolate milk, 200
 choice, 34
 choice feeding, W376
 cholecalciferol, W122
 cholecystokinin, T59
 cholesterol, M355, M475
 cholesterol-reduced, W139
 choline, M217, M352, W418, LB4, 455, 456, 457
 chromatography, T435
 chromium, W470, W471, 321, 476
 chromium propionate, 866
 chronic pain, M28
 CIDR, M303, 841
 ciliates, M256
 circadian, 295, 296
 citric pulp, W229
 citrus, 161
 CLA, M394, M430, M515, T125, T405, T529
 classical swine fever, 849
 clay, W364, 858
 clean label, T127
 clean-in-place (CIP), T167
 climate, 554, 807
 climate adaptation, T67
 climate change, 259, 416, 418
 climate variability, 418
 climatic factor, W288
 clinical mastitis, T30, T31
 clock, 295
 cloned placenta, 125
 close-up cow ration, M294
Clostridium tertium, W43
 cloud data storage, 691
 clover, T186
 cluster, 350
 CNCPS, W393
 CNR1, T520
 coaggregation, M61
 coagulase-negative staphylococci, T30, T52
 Coastal bermudagrass, 67
 coated sodium butyrate, T298
 cobalt, W385
 cobalt-lactate, M361
 coccidiosis, M42
 coenzyme Q10, 582
 cohort study, T57
 cold filtration, 201
 cold stress, T56
 coliform mastitis vaccine, 407
 collagen, 110, 422
 colony-stimulating factor 2, T321
 color, M165, T191, 105
 colostrometer, T14
 colostrum, M130, T225, T266, T315, W23, W25, W32, W247, 101, 150, 152, 183, 221, 631
 colostrum alternative, 631
 colostrum IgG, 142
 colostrum management, M275
 colostrum quality, 141
 combining ability, M74
 commercial dairy, W385
 commercial electrolyte, M371
Commiphora myrrha, W138
 community support, 718
 companion animal nutrition, W101, 394
 comparative animal nutrition, 772
 comparative nutrition, 776
 comparative slaughter, M469, T504, T506
 competitive grants, 209
 complex trait, 767
 components, T394
 compost barn, 695
 compost bedded pack, W6
 compost bedded pack barn, M278, 275
 composting, W272
 comprehensive climate index, W279
 compression, 688
 computing, 535
 concentrate, W314
 concentrate allocation, T32, 618
 concentrate substitution, T255
 concentration, W349
 conception, 811, T56, T71
 conception rate, 134, W80
 conceptus, 323, 454, M133
 condensed tannin, T171, T181, W270, W448, W501, 815
 confinement, M34, W496, W498
 conjugate, T115
 conjugated linoleic acid, M137, T314, T397, 436
 conjugation, 77, 785
 conservation genetics, 634
 consumer, M65, W137, 34, 777, 780
 consumer characteristic, T158
 consumer demand, M63, M64, 35, 36
 consumer demographics, M295
 consumer education, 720
 consumer liking, 779
 consumption, M482, 214
 continuous culture, M418, T199, T369, T383, T384
 continuous milking, 127
 control quality, T130
 conventional milk production, 196
 co-occurrence, 164
 cooking loss, M165
 cooling, T192, W12
 cooling tank, T145
Copaeifera langsdorffii, W403
 coping style, 235
 copper, T443, 310
 copper availability, T434
 coproduct, 571, 869
 co-product, T296, T495, W463
 copy number variant, W84
 corn, M58, T343, T519, W196, 123, 215, 265, 278, 283

- corn DDGS, M178
 corn digestion, W360
 corn fermentation, M360
 corn germ meal, W315
 corn hybrid, 156, T202, W190
 corn mixing levels, W467
 corn replacement, W432
 corn residue, 872
 corn residue grazing, 833
 corn silage, M111, M112, M113, M114, M116, M117, M311, M350, M450, T157, T202, T366, T398, T447, T483, W182, W184, W202, W211, W291, W357, W362, W456, 215, 219, 227, 699
 corn silage processing score, M117, W202
 corn stalk, T530, W303
 corn stover, M373, T218, T280, W413
 corn wet feed, W432
 Cornell, T484
 Cornell carbohydrate equations, T492
 corpus luteum, M133, M227, M230, M249, M250, T312, 324, 447, 448, 679
 correlation, 377, M228, M499, T251
 correlation study, W390
 cortisol, M26, T307, T333, T350, W2, W22
 cost, T249, T341
 cost of days open, T207
 cost:benefit ratio, 813
 costs, W263, 845
 cottonseed cake, W241
 cow, M55, M269, M391, T10, T266, T268, T322, T421, W349, 98, 99, 477, 670, 744, 809
 cow BCS, M261
 cow comfort, M1, M6, W6
 cow cooling, 813
 cow milk, T108, T124
 cow production, 685
 cow-calf, T186, W3
 cow-calf performance, T347
 cow-calf production, T249
 cow-side instrument, 361, T216
 CpG island, M82
 creatine, M440
 creatinine, W426
 creep-feed, 191
 crescent, M142
 CRF, 54
 crimson clover, M110
 crossbred cow, M243, W459
 crossbred dairy cow, T433
 crossbred goat, T506
 crossbred performance, 764
 crossbreeding, M285, T77, 15, 373, 374, 375, 376
 cross-validation, 768
 CRT, W36
 crude glycerin, M197
 crude glycerol, 604
 crude lysosomes, 465
 crude protein, M229, M398, T182, W336, 314
Cryptosporidium, 143
Cryptosporidium parvum, W34
 crystal, W140, W141, 565
 crystallization, 566, W145
 C-sequestration, 417
 cull cow, W65
 cultivar, W188
 culture pH, 171
 cultured butter, T147
 cumulus-oocyte complex, 584
 curriculum, T531
 cutaneous microbiome, W96
 cyclic heat stress, W228
 cyclicity, M229, 277
 cystic, T320
 cytochrome c oxidase, 427
 cytochrome P450, M221, 449
 cytokine, M44, 284
 cytotoxicity, T166
- D**
- dairy, M12, M242, M253, M255, M287, M349, M353, T41, T86, T87, T100, T440, T448, W265, W276, W369, W443, W462, 15, 25, 197, 211, 249, 280, 316, 317, 362, 438, 496, 498, 592, 600, 602, 603, 617, 663, 719, 731, 733, 853
 dairy and beef farm, T468
 dairy breed, W262
 dairy calf, M4, M16, M267, M296, T206, T230, T344, W250, W325, 154, 157, 159, 223, 228, 495
 dairy cattle, M2, M86, M288, M289, M294, M304, M307, M308, M363, T4, T15, T35, T39, T43, T46, T47, T89, T97, T101, T104, T106, T216, T408, W79, W85, 19, 139, 217, 289, 315, 318, 361, 363, 381, 384, 462, 511, 525, 529, 537, 735, 749, 752, 759, 856, 860
 dairy course development, T262
 dairy cow, M87, M95, M118, M211, M233, M234, M241, M249, M262, M270, M274, M276, M281, M282, M284, M301, M343, M351, M364, M367, M377, M389, M405, M407, M411, M413, M448, T5, T6, T9, T19, T21, T26, T37, T40, T42, T48, T50, T51, T53, T54, T55, T152, T201, T217, T380, T385, T386, T388, T410, T417, T420, T422, T423, T427, T428, T430, T445, W4, W5, W9, W251, W252, W281, W328, W333, W355, W359, W363, W373, W384, W435, W437, 14, 21, 23, 30, 89, 90, 128, 138, 172, 233, 247, 248, 253, 279, 282, 287, 312, 322, 329, 352, 356, 358, 360, 446, 448, 472, 473, 474, 488, 492, 509, 616, 619, 622, 625, 680, 684, 698, 700, 704, 839
 dairy cow behavior, 510
 dairy cow behavioral monitoring, M132
 dairy cow performance, W341
- dairy culture, T136, T137, T138
 dairy ewe, M146
 dairy farm, M252, M298
 dairy goat, M143, M156, M472, T60, T401, T497, T499, W502, 627
 dairy heifer, M237, M272, M273, M303, T415, T426, W30, W329, 841
 dairy heifer calf, M275, 141, 144
 dairy herd, M96
 dairy industry, 212
 dairy management, T152
 Dairy Management Inc., 208
 dairy milk production, T389
 dairy personnel, 500
 dairy processing, W150, 660
 dairy producer, M251
 dairy product, T159, 213
 dairy production, 213
 dairy protein, 439
 dairy science, 203
 dairy slurry, 636
 dairy waste management, M254, T208, 601
 dairy wastewater, W273
 dairy water buffalo, 337
 DaisyII, T242
 dan-shen, T284
 data envelopment analysis, M141
 data processing, T368
 day-old chick, M258
 days open, T207, W85, 376
 daytime, T188
 DCAD, 704, M412, W323, 83
 D-DDGS, 180
 DDG, 67
 DDGS, M58, W499, 122, 340
 decision support tool, 407
 decision-aid tools, 59
 decision-making, T340
 decontamination, T172
 defensin, 83
 defoliation, W165
 degradability, M123, M125, M424, W186, W199, W451
 degradation kinetics, W507
 degradation profile, 859
 degradation rate, M479
 delay, M128
 delayed feedlot entry, 692
 delayed insemination, 442
 demographics, 485
 denaturation, 654
 densitometry, W46
 density, W320
 deoxycholic acid, W119
 depletion-repletion, M188
 detergent, W210
 development, M131, 5, 158, 517
 development of mammary, W215
 developmental programming, T362, 741
 developmental programming of fertility, 1
 dewormer, M48
 dexamethasone, 847

- dextran, 786
 dextrose solution, M371
 DFA III, T40
 DGAT1, 230, 751
 DHIA, 225, M297
 diabetes, 799
 diagnostic tools, M49
 diarrhea, W31, W236
 diet, M215, W106, 164
 diet composition, 269, 615
 diet formulation, M186
 diet type, T260
 dietary adaptation, 342
 dietary calcium, M189, M190
 dietary cation-anion difference, M339, W61, W391, 176, 309, 682
 dietary energy, M488
 dietary fat, 824
 dietary fiber, W117, 573, 861
 dietary protein, M437
 dietary protein level, M168
 dietary starch, W392, 701
 differentially expressed gene, M97, M98
 differentiation, 296, 802
 digesta viscosity, 114, 117
 digestibility, M175, M176, M177, M192, M328, M330, M401, M427, T187, T351, T358, T416, T417, T480, W166, W176, W183, W186, W233, W270, W330, W389, W425, W439, W450, W464, W483, W499, W508, 113, 174, 179, 268, 347, 396, 636, 792, 824
 digestible energy, M197
 digestion, M395, M417, M473, M482, T439, 437, 438, 439
 digestion and absorption, 708
 digestion kinetics, 266
 digestive efficiency, T417
 digestive enzyme, M400
 digital dermatitis, 848
 dilution, T391
 dipeptidyl peptidase-IV, 402
 direct-fed microbial, M400, T41, T286, W368, W433, 702, 793, 794
 disbud, 290
 discovery and delivery skills, 483
 disease, M21, M22, T24, T37, W244, W352
 disease recurrence, 358
 disease resistance marker, M75
 disease risk, W277
 disodium 5 guanylate, T299
 disodium 5 inosinate, T299
 displaced abomasum, 244
 displacement index, 503
 disposition, W243
 disposition kinetics, M282
 distillers, 607
 distillers grains, T415, W329
 diversity, M256, 598
 DMI, M19, T292, T395, T398, 182
 DNA damage, T165
 DNA methylation, M151
- docosahexaenoic acid, W153, 287, 857
 dog, W96
 dog nutrition, 391
 dog ownership, W96
 dominance, 502, 730
 dominance index, M29
 donkey milk, T108
 L-DOPA, 795
 doramectin, W30
 Dorper, T72
 dosing, W396
 dressing percent, M13
 dried citrus pulp, T496
 dried distillers grain (DDG), M334
 dried distillers grains with solubles, M348, T496
 drought, T67
 drought stress, 219
 dry ground corn, 171
 dry matter, M2, M292, M416
 dry matter intake, M428, M461, T365, T471, T502, T509, 360
 dry matter recovery, T283
 dry matter yield, W190
 dry period, T34, T219, W371, 276
 dry season, T378
 dry sow, T296
 drying-off, T268
 dry-off, T209, T222
 dry-off procedure, 148
 duck grease, 577
 dulce de leche, T130
 duration of mixing, 122
 DVE/OEB system, M139
 DXA, T290
 dynamic rheology, T116
 dysbiosis, 513
 dystocia, 749, W15
- E**
- E. coli*, M268, M281, 232
E. coli K88, 242
E. coli O157:H7, T171, 240, 530
 earlage, M314
 early disease indicator, T50, T51, T53
 early gestation, M166
 early lactation, M290, 701
 early maturing, T329
 early pregnancy, T316
 early weaning, M470, T313, 746, 747
 early-life environment, 236
 eating behavior, M30, M31
 eating efficiency, M466
 eating pattern, T376
 eco-efficiency, 660
 economic, 181
 economic dashboard, 407
 economic impact, T42
 economic performance, M252
 economic results, 694
 economics, T148
- education, M65, T536, 409, 478, 719
 effective fiber, M325
 effectiveness, T533
 efficiency, M345, W53, W358, 335, 349, 488, 523, 617, 868
 efficiency of use of metabolizable energy, T462
 EGFR, W224
 egg, 578
 egg layer, T336
 egg production, M198, T336
 egg quality, M199, M202
 egg storage, T330
 egg yolk, T285
 eggs, 580
 eggshell, M257
 eicosanoid, T29
 eicosapentaenoic and docosahexaenoic acids, M453, M454
 18S, M256
 electrical conductivity, T182
 electrical resistance, M247
 electromyography, M66
 electron microscopy, M103
 electronic feeder, M501
 electronic monitoring, M381
 electronic nose (ENose), T196
 element, T162
 ELISA, T159
 embryo, M14, M219, T321, 328, 450, 451
 embryo development, M258
 embryo survival, 133
 embryo transfer, M288, 220
 embryonic loss, T311
 emissions, 599, 820, 821
 emotional intelligence, 485, 487
 emotions, T118
 empty body, W56
 emulsion thermal stability, 76
 endocrine disruptor, 8
 endocrine-disrupting chemicals, 9
 endocrinology, 492, 743
 endogenous amino acids loss, W110
 endometrial cytology, M214
 endometrial immune cell, 124
 endometritis, M404, LB2, 21, 284
 endometrium, M38, M133, W350, 449, 679
 endophyte, W36
 endoplasmic reticulum stress, W115
 endospore, T197
 endotoxin, T10, W20
 endotoxins, 31
 energetic balance, T518
 energy, M395, M485, T442, W148, W232, W358, W406, W413, W416, W500, 178, 280, 308, 548, 665
 energy balance, M343, T272, T525, W331, 782
 energy density, M465
 energy expenditure, 736
 energy loss on methane, W282
 energy metabolism, T403, 865

- energy partitioning, M137
 energy source, T399, T400, W313, W382
 enhanced feeding, W380
 enhanced mineral block, W424
 enrichment analysis, 649
 ensiling, T459, W320, 607
 ensiling time, W202
 enteric methane, W430
 enteric nervous system, 49, 54
Enterococcus faecalis, W410
Enterococcus faecalis probiotic, M511
Enterococcus faecium, T211
 environment, M253, M346, 211, 807
 environmental, T62
 environmental contamination, 9
 environmental footprint, 818
 environmental impact, T153, W276, 592,
 819
 environmental interaction, T103
 environmental risk, M99
 environmental sustainability, 822
 enzoology, 254
 enzymatic cofactors, W181
 enzyme, M181, M182, M183, M313, M360,
 M383, T234, W398, 611
 enzyme fingerprinting, M436
 EPA/DHA, 578
 epidemic, 849
 epigenetic, 512
 epigenetic regulation, 195
 epigenetics, 365
 epigenome, W218
 epiphytic lactic acid bacteria, W174
 epithelium, T476
 eprinomectin, W30
 EPS, T195, 662
 equation, T436, W56, W280, 595
 equid, 775
 equine, M85, T62, T64, T237, T241, T245,
 T246, T247, 426
 equine cannulation, 673
 equine infectious anemia virus (EIAV), M60
 equine testis, T239
 equine-assisted therapy, T532
 ergonomic, M66
 ergot alkaloid, 264, 270
 ergot alkaloids, 68
 ergotamine d-tartrate, W160
 erythrocytes, W260
Escherichia coli, W200, 22
Escherichia coli K88, M500, W121, 52
 essential amino acids, 556
 essential oil, T392, T470, T477, W294,
 W385, W403, 161, 832
 estimated breeding value, 714
 estradiol, T223, 133, 419
 estrogen, 452
 estrous, T517, W478
 estrous behavior, M246, 80
 estrous synchronization, 131, 132
 estrus, M235, M245, M248, M293, W63,
 186, 586
- estrus expression, T69
 estrus intensity, 126
 estrus number, T198
 estrus synchronization, 442, 444
 ETEC K88, W47
 ETEC K88+, M510, M511
 etiology, 520
 euthanasia, M140
 evaporative cooling, M262
 ewe, W248, W468
 excretion, M401, W389
 exercise, 791
 exogenous enzyme blend, W114
 exopolysaccharide, M108, 664
 exopolysaccharides, 661, 663
 exotic animal, 399
 expectation maximization, 543
 experimental design, T465
 expression, 873
 extended lactation, 274
 extended lactations, T263
 extender, 843
 extension, T155, 57, 58, 59
 extension program, T150
 extract, M56, W109
 extracted rice bran, 838
 extraction, W258
 extruded linseed, M391
 extrusion, M109, W99, W103, 121, 393
- F**
- facemask, W381
 faculty, 58
 Fairlife, 201
 fall-grown oat, M122
 fat, M474, T238, T395, T439, W469, 230
 fat depot, W490
 fat digestibility, W117, 575
 fat milk, M459
 fat source, W101, W321, W322, 394
 fat supplement, 700
 fat supplementation, T246, T247, W335
 fat synthesis, M147
 fat thickness, M515
 fatality, T149
 fattening, M480
 fattening calf, W307
 fattening pig, 190
 fattening tropical lamb, T255
 fatty acid, M164, M215, M216, M341,
 M377, M405, M415, M444, W293,
 W456, 84, 103, 286, 311, 463, 603, 658,
 751
 fatty acid binding protein 4 (FABP4), M88
 fatty acid composition, W66, W72
 fatty acid digestibility, W340
 fatty acid oxidation, M372, 285
 fatty acid profile, M269, M455, T258, T461,
 W172, W259, W459
 fatty acid profile of goat, M457
 fatty acid receptor, T458
- fatty acid synthesis, T409, W485
 fatty acid transporter, T458
 fatty acids, 559
 fatty composition, M91
 fatty liver, M8
 fear, W16
 fecal, M494, 513
 fecal collection, T76
 fecal contamination, 232
 fecal egg count, M48, W62
 fecal microbiota, M409
 fecal nitrogen, W497
 fecal score, M283
 fecal starch, M350, T436
 feces, W43, W271
 fecundity gene, T513
 federal funding, 209
 feed, M357, T491
 feed access, T499
 feed additive, M424, T266, T431, W21,
 W301, 789
 feed allocation, 406
 feed and water deprivation, M516
 feed bunk, M5, T219
 feed composition, T368
 feed conversion, 737
 feed conversion efficiency, M13, M373
 feed delivery, M18
 feed efficiency, M24, M465, T414, W116,
 W198, W276, W340, W465, 11, 17, 185,
 334, 350, 522, 524, 525, 526, 527, 591,
 702, 736, 764, 863
 feed intake, M322, M442, M488, M501,
 T372, W9, 283, 431
 feed milk value, M368, T210
 feed presentation form, T370
 feed restriction, W234, 246, 461, 680
 feed safety, T172, 787
 feed sorting, M17
 feed spillage, T370
 feed supplementation, M226
 feed technology, M449
 feeder design, 739
 feeder space, M30, M497
 feeding, M387, W186, 170, 388, 497
 feeding behavior, T392, T454, T471, W10,
 85, 154, 391, 610, 769, 861
 feeding frequency, W342, 185, 851
 feeding management, M275
 feeding management software, M289, M294,
 M307, M308
 feeding rate, 48
 feeding space to animal ratio, M31
 feeding system, W181, W376
 feeding time consistency, M304
 feedlot, M94, M158, M444, T353, T367,
 T371, W13, W279, W302, W304, W452,
 W453, W455, W457, W463, W503, 516,
 519, 612, 745, 815, 870, 871
 feedlot performance, M323, M327, W275
 feedstuff, T483, W225
 feline, W104, 390, 397

female, M286
female goat, T505
fence, M478
fenugreek, M199
ferment milk, T126
fermentation, M111, M112, M419, M438, T374, T522, T524, W370, W408, 460, 661
fermentation and sperm characteristics, W241
fermentation indices, T470
fermentation product, M400
fermentation quality, W195
fermented milk, T125
fermented soybean meal, 303
fermented wheat, 837
Fermenten, 854
fermenter, M410, 855
fertile egg, T250
fertile sow, T57
fertility, M236, M239, M240, M244, M263, M277, M388, T101, T102, T106, T322, T515, W90, 13, 25, 129, 220, 324, 327, 351, 368, 384, 445, 538, 618, 675, 676, 677, 678, 679
fescue, T189
fescue toxicosis, 447
feta, W130
fetal, T232
fetal development, W378
fetal growth, M222, M507
fetal programing, T408, 2
fetal programming, M222, W57, W221, 8, 311, 318, 319, 320, 425, 738
fetus, M51
fetus cannulation, W249
fiber, M206, M395, T242, T359, W183, W210, W230, W297, W306, 121, 305, 391, 793, 794
fiber digestibility, M116, 389, 613
fiber digestion, M351
fiber level, 624
fibers, W154
fibrogenesis, W221
fibrolytic enzyme, T447, W166, W427, W434
fibrous diet, M491
fibrous feed, 611
field day, T155
field peas, 622
filching, W11
finishing lamb, T494, W473
finishing pasture supplementation, M338
finishing pig, T288
firmness, T123
first service, 128
fish, T174, T523
fish oil, M101, M414, T432, W473, 559
five-day CIDR-Cosynch, M241
fixed-days management, W187
fixed-time AI, 133
fixed-time artificial insemination, T148

flavor, M163, M208, T521, W127, 73, 191
flavor compound, W136
flavor preference, W9
flaxseed, M135, W383, W414
flight speed, M33
flight zone, 725
floating island, W273
flooring, 90
Flora Danica, T147
fluid milk, T192
fluoroquinolone, 412
flux, 820
FMD vaccine, M53
focused beam reflectance measurement (FBRM), W151
fodder bank, T183, W199
folates, T410
follicle, M227, M249, T320, 313, 314, 677, 842
follicle diameter, M250
follicle growth rate, M250
follicular dynamics, T329
follicular fluid, M216
food, 34, 197, 568
food allergy, 401
food aversion, T520
food preference, 394
food safety, T158, T170, 413
food security, T164, W265, 210, 262, 591
food supply, W284, W285, W287
forage, M447, T157, T463, W159, W210, W412, W431, 215, 218, 604, 822
forage allowance, T356, W313
forage conservation, T181
forage fragility, W207
forage harvester, W182
forage management, 417
forage production, 416
forage quality, 64, 216
forage source, T364, T365
forage system, 740
forage yield and composition, W197
forage-finished, 61
forage-to-concentrate ratio, 175, T382
fouling, W148
Foundation for Food and Agricultural Research (FFAR), 207
454-Roche, T488
FoxO1, 477
fraction, M102
fractional passage rate, 830
fractionated, 699
frame score, 692
freezing point depression, W373
fresh cheese, W137
fresh cow, T47, T209
fresh cow performance, M290
fresh-cow evaluation, T46
frothy bloat, M41
frozen storage, T129
fructans, 168
FTIR, 381, 471

fulvic acid, T450
functional oil, M438, 163
functionality, 437
funding, 208
fungal pretreatment, 606
fungicide, W357, W362
fusion protein, W34
future of agriculture, 202
FXR, 45

G

γ -aminobutyric acid, M198
gamete, M509
gas, 562
gas production, M360, T139, W158, W166, W168, W271, W419, W444, 611
gastrointestinal, M392, 517
gastrointestinal content, 860
gastrointestinal morphology, T455
gastrointestinal tract, T421, W123, W378
gastrointestinal VDR expression, 682
Gaussian, M103
GBLUP, 540, W89
GCG, T520
GC-MS, 292, W136
gelatin, 393, W99
gel-based phytonic feed supplement, M203
gender, T497, 484
gene, LB3, 755
gene bank, 531, 634
gene content, 647
gene drift, M99
gene expression, M4, M146, M148, M153, M217, M313, M326, M514, T223, T456, W27, W122, W222, W428, 102, 108, 282, 434
gene network, M77, 749
gene-based score test, M87
genetic, 349
genetic correlation, T82, T85, 754, 756
genetic defect, 533
genetic disorder, 378
genetic diversity, T507
genetic evaluation, 40, 714
genetic improvement, 14
genetic marker, M71
genetic markers, W66
genetic merit, 277
genetic modeling, 42
genetic parameter, M68, T93, 771
genetic predisposition to disease, W94
genetic relatedness, 380
genetic resource, 531
genetic selection, 236
genetic structure, W69
genetic susceptibility, 765
genetic trends, T97
genetic variability, M100
genetic variances, 648
genetic variation, 380, T81
genetics, M12, M85, 488

- genome, 748, M82
 genome association studies, M77
 genome selection, 536
 genome-wide association (GWA), T80, W83, 543
 genome-wide association study, M83, M87, W74, 750
 genomic, T87, T104, W71, W75, 522, 544
 genomic data, 38
 genomic evaluation, T88, 19, 537, 538
 genomic feature, 41
 genomic inbreeding, T236
 genomic information, T100
 genomic prediction, M67, 41
 genomic recursion, 534, 536
 genomic relationship matrix, 536
 genomic selection, M84, T83, T92, W82, 17, 40, 260, 534, 646, 766, 770
 genomics, M85, M89, W69, W79, W84, W90, W92, 15, 16, 18, 524, 529, 715, 769
 genotype, M72
 genotype × environment interaction, 770
 genotype imputation, W82
 genotyped female, 753
 genotyping, T170
 genotyping strategy, M67
 genotyping-by-sequencing, M78, W94
 geriatrics, 53
 germicide, T11, T33
 germination, T197
 gestation, M261, T294, T345, 183, 338
 gestation length, T48
 ghrelin, M51
Giardia, 143
 gilt, M25, 96, 186, 187, 762
 gilts, 5
 ginger, T284
 global warming, M370
 glucagon, T13
 glucagon-like peptide 2, 48
 glucagon-like peptide-1 (GLP-1), 47
 glucan, W236
 gluconeogenesis, T467, W255
 glucose, M138, M213, M421, M426, T13, T278, W482, 48, 316, 317, 435, 866
 glucose homeostasis, M40, W45
 glucose oxidase, T122
 glucose tolerance, M385
 glucose tolerance test, M138
 glucose uptake, M376
 glucosinolate, T459
 glutamate, W487, W488
 glutamic acid, M423, T59, 331
 glycerin, T361, W297, W311, W438, W439, W440
 glycerol, M320, M434, M446, T482, T495, T510, T519, T529, W405, W407, W507
 glycerol supplementation, W292
 glycogen, 168, W348
Gmelina, W209
 GMO, T164
 GnRF immunization of gilts, 724
 GnRH, 584, M231, W476
 goal structure, T334
 goat, M62, M140, M455, M461, M462, M464, M467, M471, M473, M476, M477, M478, M483, M484, M485, T68, T334, T496, T510, T511, T512, T526, T527, W476, W479, W486, W494, 91, 176, 180, 632, 689, 727
 goat buck, W238
 goat ice cream, T129
 goat mammary epithelial cell, W484, W485
 goat mastitis, M52
 goat meat, W489
 goat milk, M52, T124
 goat milk cheese, W139
 goat-ewe, T144
 gonadotropin-releasing hormone, M233, M234
 gorilla, M144
 Gouda cheese, 560
 G-protein coupled receptor (GPR), 463
 GPS, M476
 graduate education, 205, 486, 639
 graduate student, 204
 graduate training, 202
 graduation rate, T536
 grain, 123, 705, 810
 grain and oil, T380
 grain processing, T373
 gram-positive, M43
 granulosa cells, T328
 grape extract, W501
 grape seed extract, T445
 grape seed meal extract, T445
 grapes, W272
 grapeseed, T110
 graphical interface, 691
 grass, T177, W203, 69
 grass-clover silage, 623
 grass-finished, 61, 593
 grazing, M119, M121, M393, M484, T176, T190, W52, W428, 218, 340, 341
 grazing behavior, M118, M338, 63
 grazing cow, T16
 grazing dairy cow, T402
 grazing management, 685
 grazing pasture, W200
 grazing performance, 816
 grazing system, W203, 692
 Greek yogurt, 75
 Greek yogurt whey, W152
 GreenFeed, 597
 greenhouse gas, M347, M354, M370, T463, W269, 820
 greenhouse gas emissions, M334, 845
 GREML, 540
 grinding energy, W207
 ground corn, T331
 growing broiler chicken, M190
 growing calves, T379
 growing heifer, M335
 growing pig, M206, M207
 growing-finishing, M489
 growing-finishing pig, T286, 120, 577
 growth, M324, M517, T80, T187, T226, T232, T498, T527, W17, W31, W71, W73, W164, W290, W312, 159, 170, 187, 228, 251, 386, 423, 637, 814, 834
 growth curve, M80, W387
 growth hormone (GH), M90, T275, 89, 424
 growth performance, M174, M200, M201, M203, M204, M205, M487, M498, T301, T302, T354, T415, W226, W237, 115, 152, 573, 808
 growth promoter, W408, 109, 112
 growth rate, M11, M335, W474
 growth trait, M69
 growth-enhancing technologies, 371
 guanidinoacetic acid, M440
 Guernsey, T88
 guinea pig, T248, T251, T252, T253, T254, T256, T257, T260
 gut colonization, W124
 gut function, 46
 gut health, 115, 788
 gut health-enhancing feed additive, W112
 gut hormone, 50
 gut microbiome, W120
 gut permeability, W119
 gut-brain axis, 723
 GWAS, W68, W70, W77, W78, W80, W87, W88, 384, 757, 765
 Gyr cattle milk, T98
- ## H
- Haemonchus contortus*, M467
 hair and wood sheep, M452
 hair coat shedding, 135
 hair cortisol concentrations, 135
 hair shedding, 648
 hair sheep, T513
 hammer mill, T281
 handling, T387
 Hanwoo, W67, W76, W222, W223
 haplotype, M84, W86, 540
 haptoglobin, W35, W246
 harvest, M314
 harvest frequency, W197
 harvest interval, W177
 hatchability, T330
 hauling, W157
 hay, T185, W343, 181, 710
 hay quality, W177
 hay waste, 739
 hazard model, T57
 HCG, T501, W476, W478
 health, M259, M344, T1, T23, T48, T394, T446, W26, W38, W55, W106, W108, W409, 13, 25, 27, 153, 216, 249, 251, 253, 359, 370, 518, 687, 735, 766, 845
 health condition, 151
 heat, 498
 heat acclimation, T308

- heat detection, W7
 heat energy, M484
 heat increment, W227
 heat load, M477
 heat processing method, T478
 heat production, M347, M468, T444, W228, W381
 heat shock, 301
 heat stability, T113, W142
 heat stress, M1, M156, M262, M284, M300, M380, M403, M431, M514, M516, T25, T38, T103, T306, T412, T450, W81, W87, W110, W264, W267, W268, W274, W277, W286, W468, 129, 130, 163, 219, 238, 434, 770, 803, 804, 806, 808, 809, 810, 811, 812
 heat tolerance, T136, 809
 heat treatment, W394, W464
 heat-treated colostrum, 222
 heavy market weight, 724
 heavy metal, 414
 heifer, M121, M226, M381, T317, T337, T338, T391, T438, T442, T473, W7, W27, W49, W54, W90, 4, 149, 170, 330, 514, 626, 848
 heifer development, 408, 444, 737, 742
 heifer nutrition, 605
 height, T184
 hematology, W244
 hemicellulase, 609
 hemoglobin, M458
 hemp byproduct, M357
 hemp seed oil, 337
 hepatic gene expression, T49, W257
 hepatic glucose production, 477
 hepatocyte, W337
 herbage, T393
 herbage feeding, M212
 herbal, T240
 herbal additive, 788
 herbivore, 389
 Herd Navigator, 354
 heritability, T78, T85, T94, T101, T106, W262, W475, 532, 757, 762
 heterogeneity, 525
 heterosis, T77, 375
 high concentrate diet, 103
 high cow ration, M289, M304, M308
 high fiber diet, W16
 high moisture alfalfa hay, W191, W205
 high moisture corn, 171
 high oleic acid, T287
 high protein, T203
 high supplementation on pasture, W317
 high-concentrate, T519
 high-concentrate diet, W289
 high-density genotype, 538
 high-density SNP panel, T92
 high-fiber diet, W111
 high-forage, M310
 high-impact educational practices, T531
 high-linoleic safflower oil, W379
 high-moisture corn, 87
 high-pressure processing, 70
 high-producing dairy cow, T202
 high-protein sunflower meal digestibility, M181
 high-resolution melting, M75
 high-resolution respirometry, 427
 hindgut, 672
 hindgut fermentation, 573
 histidine, M150, 619, 620
 historic nutritional, W312
 HNF4A, 297
 hock lesions, 138
 Holstein, T102, W93, 359, 519, 521, 535
 Holstein cattle, T93
 Holstein cow, M305, M306
 Holstein cows, M403
 Holstein dairy cow, M447
 Holstein Friesian heifers, 421
 Holstein genotype, T20
 Holstein steers, 520
 homeorhetic adaptation, 346
 homocysteine, M170
 hoof, 411
 hoof biopsy, T3
 hoof health, 511
 hoof lesion, 759
 hoof trimmer, T54
 hops, M418, W461
 hormone, T345, W238
 hormone secretion, 47
 horse, T63, T75, T76, T234, T235, T242, T243, T244, T245, 428, 672, 674, 791
 horse nutrition, T238
 horse temperament, W1
 host defense, 240
 host genetics, 768
 host genomics, 255
 hot environment, T263
 housing, W264, 352, 496
 HSP90AA1, M86
 HSPA1A, M86
 HTST, T163
 Hubbard broiler, T330
 human health, T174, T175
 human-edible, W265
 humans, 773
 humoral, T337
 humoral immunity, T8
 hybrid, T157
 hybrid sterility, 653, W239
 hydrodynamic cavitation, 75, 654
 hydrogen, 825, 850
 hydrogen peroxide, M15
 hydrogen sulfide, W402
 hydrolysis, 785, W143, W336
 hydrolyzable tannin, W237
 hydrophilic film, T116
 hydroxy, W325
 2-hydroxy-4-(methylthio)butanoate (HMTBa), T472, 469
- 2-hydroxy-4-(methylthio)butanoic acid (HMB), T452, T453, W337
 hydroxymethylfurfural, M109
 hyperkeratosis, 226
 hyperketonemia, M270, 755
 hyperparameter, 542
 hypertrophy, T224, W218
 hypocalcemia, M3, M339, T16, T40, T204, 281
 hypothalamus, M220, 873
 hypovitaminosis D, T291
- I
- Iberian pig, 189
 ice cream, T128, 200
 ICP-MS, T162
 idle, M466
 IGF, W249
 IGF binding protein, T65
 IGF-1, T229, T325, T350, 425
 IgG, M130, W48, 150
 ileal digestibility, M194, 303
 ileal gene expression, 177
 ileum, 673
 Illinois, T156
 imaging, T221, 827
 IMI, T222
 immune, M44, T25, T231, T355, W42
 immune cell, M131, 84
 immune challenge, M40, W45
 immune function, T32
 immune response, T310, 511, 835
 immunity, M37, W368, W384, 239, 245, 250, 253, 491, 590, 614
 immunocastration, M161
 immunogenicity, 786
 immunoglobulin, T14, W32, 183
 immunoglobulin A, M144
 immunoglobulin G, 177
 immunohistochemistry, T265
 immunology, T41, 293, 508
 immunometabolism, 706
 immunosuppression, T235, T309
 imputation, W67, 545, 647
 imputation accuracy, W91
 in situ, W173, W183, W295
 in situ degradability, 826
 in situ digestibility, W191, W357
 in situ incubation order, M123
 in situ rumen digestion, T375
 in utero heat stress, 251
 in vitro, M365, M422, M424, M504, T211, T479, T481, W163, W410, W424, W451, 31, 169
 in vitro digestibility, 273, 571, 576
 in vitro digestion, T490, 548
 in vitro dry matter digestibility, T482
 in vitro fermentation, M178, T373, T477, W411, W419, 116, 161, 832
 in vitro incubation, 585
 in vivo digestibility, T437

- inbreeding, T79
 inbreeding depression, 750
 incidence rate, W286
 income over feed cost, M437
 index, 523
 Indian odd fruit oil, W420
 indigenous sheep, M458
 indigestible ADF, M473
 indirect calorimetry, M468
 individual differentiation, 235
 individual feeding strategy, 274
 induction, W478
 industry, 55, 56, 57, 205, 409
 industry residue, W425
 infant formula, 76
 inflammation, M149, M309, M414, T29, T63, T300, T310, T320, W214, 456, 491, 707
 influenza A virus, W41
 infrared, 12, 381, 658
 infrared thermography, M1
 ingestive behavior, T188, 68
 ingredient digestibility, W101
 inhibin, 383
 inhibitor in vitro, M441
 injury, T237
 innate immune response, 433
 innate immunity, T5, T9, T20, W37, 512
 innovation, 552
 inoculant, W169, W172, W178, W194, W208, 69, 265
 inorganic phosphate, M187
 insemination barn, T71
 Insig1, 436
 insoluble fiber, W235
 insulin, T13, 321, 336, 387, 421, 800, 801, 802, 803, 805
 insulin resistance, M385, W363, W366, 472, 473, 799
 insulin sensitivity, W250, 475, 476
 insulin-like growth factor (IGF-I), M90, M153, T275, 424
 intake, M22, M384, T177, T187, T433, W500, W505, 179, 464, 871
 Integrated Farm System Model (IFSM), T468, 602
 intensive farming, 149
 interaction, M29, T166, 705
 interdisciplinary research, 643, 644, 645
 interferon-tau, 449, 450
 interleukin-12 receptor β 2 (IL-12R β 2), M92
 interleukin-23 receptor (IL-23R), M92
 internal parasite, W475, 716
 internal parasitism, T511, T512
 interomone, 395
 intervention assessment, T340
 intestinal disease, W112
 intestinal inflammation, 192
 intestinal integrity, W247, 246
 intestine, W106, W107, W122, 43, 338, 490, 846
 intramammary antibiotic preparation, M282
 intramammary infection, T11, T52
 intramammary treatment, T43
 intramuscular fat, M157, 110
 intratesticular injection, 106
 intravaginal, 279
 intravenous infusion, M448
 intravenous lipopolysaccharide, T277
 intronic SNP, M88
 inulin, T111, T125, T126, W142
 involution, M38, T267
 Ion Torrent PGM, T488
 ion-exchange chromatography, M102
 ionized calcium, T216, 361
 ionophore, M328, T351, T500, W400, W404, 828, 829
 IPEC-J2, W214
 Iranian ghee, M106
 iron, 581, 703
 ISO, 33
 isocitrate, T278
 isoflavone, 270
 isolating, T142
 isothermal adsorption, W160
 IVF, T317, 582, 583
- J**
- Jersey, 375
 Jersey calves, W28
 Jersey cow, M428, W8
 Johne's disease, 513
 jointing, T248, T253, T254
 journal, T537
 just-about-right scale, T118
- K**
- Kaghani, 628
 Katahdin, T190, T517
 Kentucky, M10
 ketogenesis, 285, M372
 ketone bodies, T425
 ketosis, M355, M388, T6, T215, 231, 354, 357, 363, 846, 847
 Ki-67, T273
 kinetic, 790
 kinetics, M429
 kisspeptin, M220
 kitten, 398
 Korean black goats, W467
 Korean cattle, M88
 Korean cattle steer, T377, W293
- L**
- L-isomer amino acid, 306
 La-5, T147
 LAB, T146
 LAB bacteria, 22
 lactalbumin, 784
 lactate dehydrogenase, 432
 lactating, M393
 lactating cow, M123, M125, W6, W446, 615, 851
 lactating dairy cow, M340, T38, W361
 lactating ewes, T523
 lactating goat, M453, M454
 lactating Jersey cow, M265
 lactating sow, M495, T293
 lactation, T243, T269, T441, W251, W269, W386, 94, 97, 99, 423, 763
 lactation dairy diet, T383
 lactation performance, T412, T413
 lactic acid, T126
 lactic acid bacteria, W169, W204, 169, 272, 403, 661
Lactobacillus casei Zhang, W134
Lactobacillus curvatus, T134
Lactobacillus plantarum, T131
Lactococcus lactis, 401, 402
 lactoferrin, 784
 lactose, M109, W145, 199, 566, 568, 569, 570, 657
 lactose β -galactosidase galacto-oligosaccharide, 567
 lactose crystallization, W151
 lactose hydrolysis, 200
 lactose production, 569
 lactose standardization, 560
 lactosylation, M105
 lactulose, T135, 797
Lafoensia pacari, W397
 lagoon, W273, LB8
 lamb, M460, M470, M487, T72, T508, T516, T530, W418, W470, W471, W472, W498, W503, W504, 177, 181, 631, 633, 637
 lamb growth, M486
 lamb performance, T503
 lamb survival, M486
 lameness, T54, T66, T200, W13, 138, 499, 510
 laminitis, 31
 larvicide, 495
 lasalocid, T379
 late maturing, T329
 layer chicken, M70
 layer hen, T285
 L-carnitine, T318
 leaf, 271
 learning, T533, T534, 727
 learning and memory, 774
 legume, W171
 legume intercropping, W175
 length of ensiling, M113
 leptin, 28
 leptin mRNA, W473
Leucaena leucocephala, 292
 leucine, M150, 302, 465
 leukocyte, T322, W19
 LH secretion, 126
 life cycle assessment, 697
 lifetime efficiency, 684

- lifetime production, M73
 lifetime production trait, M68
 lifetime productivity, 2
 light, W185
 light interception, W187
 light oxidation, T196
 lignin, W159, 268
 lignin methods, T492
 lignin-related gene, T210
 lime-hydrolyzed feather meal, W504
 limit-fed, 868
 limiting flux, 656
 limpograss, T178
 linear carcass measurement, T257
 linear regression, 357
 linear type trait, T89
 liner, 688
 liniment, T75
 linkage disequilibrium, W91, W93
 linoleic acid, M377, W371
 linseed meal, M411
 linseed oil, M158, M408, M409, T279
 lipid, M163, M463, T396, T464, T471, 95,
 111, 162
 lipid composition, T84
 lipid extract algae, T383
 lipid metabolism, T456
 lipid mobilization, 84
 lipid peroxidation, T285
 lipid supplement, T378
 lipids, W282
 lipogenesis, M145, M426, T279
 lipogenic, 102
 lipolysis, W253
 lipopolysaccharide, M40, T20, T312, W37,
 W45, 246, 364, 836, 846
 lipopolysaccharide challenge, M25
 lipoprotein, M355, T432
 lipotoxicity, 801
 liquid chromatography-tandem mass spectrometry, M104
 liquid diet, 144
 liquid semen, 586
 liquid supplement, M446
Listeria, M281, 147
 lithium chloride, T521
 litter decomposition, T184
 litter size, T513
 litter weight, 633
 live yeast, T292, W341, 610
 liver, T65, W252, 681, 712
 liver abscess, 520
 liver functionality index, T2
 liver health, T12
 livestock, 818
 livestock efficiency, 259
 livestock production, 551, 552
 loading accuracy, W324
 loading deviations from target, M307
 local food, M63
 locomotion scoring, M276
 loin eye area, W305
 loin muscle area, M160
Lolium perenne L., W162
 long-day photoperiod, T454
 longevity, 748, 756
 longissimus dorsi, T241
 low birth weight, 774
 low phytate cultivar, M185
 low SCC, M9
 low sodium cheese, W133
 low-input, 717
 low-protein diet, 44
 low-quality forage, T413
 LPS, M23, M375, T311, W27, W36
 luteolysis, 678
 LX α , W485
 lying, 726
 lying behavior, M6, M17, M19, M20, M248,
 T152
 lying time, T200
 L-Lys·HCl, M172
 Lys sulfate, M172
 lysine, M167, M406, T424, T460, W351,
 108, 304, 333, 335, 620
- M**
- M cell targeting, M54
 macadamia nut cake, 576
 machine learning, 687
Macleaya cordata, M323
 macromineral, M469
 macrophage, M57
 magnetic treatment, W152
 maintenance, M324, T347, T419, W290,
 W377
 maize, W188
 maize silage, W179, 267
 major loci, W74
 male, M286
 male effect, T526, W488
 malnutrition, 210
 malodorous compounds in swine, M504
 maltodextrin, T115
Malva sylvestris, W192
 mammalian target of rapamycin (mTOR),
 M150
 mammary, M131, 295, 296, 430
 mammary alveolar cells (MACT), M376
 mammary biopsy, M147
 mammary cell, 434, 804
 mammary development, 96
 mammary epithelial cell, 99, 298, 300, 424,
 435
 mammary function, M149
 mammary gland, M148, T264, T265, T267,
 T271, T274, T277, T312, W378, 130, 419
 mammary immunity, T220
 mammary metabolism, T429
 mammary stem/progenitor cell, 297
 management, 839, M296
 management practices, 139, 689
 mandibular inferior, M83
 mannan, W236
 mannan oligosaccharide, 835
 mannanase, M207
 manure, W272, W278, 271
 marbling, 747
 Margin Protection Program, T151
 marker recovery, 830
 marker-assisted selection, 715
 markets, 214
 mash, T74
 mastitis, M10, M309, T23, T43, T61, T440,
 W88, 91, 226, 432, 514, 515, 627, 651,
 734
 mastitis detection, T31
 mastitis losses, 137
 mastitis management, 137
 mastitis management practices, M9
 maternal behavior, 729
 maternal composite, 717
 maternal nutrition, T65, W216, 294, 738
 maternal obesity, 422
 mathematical model, M429, W281
 mating regimen, W474
 matrix starch protein, M358
 maturity, W190
 maze, T313
Mbr. thaueri, 598
 meal pattern, M18
 mean particle size, M114
 measurement, M287, M345
 meat, T81, 412
 meat quality, M452, T84, T288, T516,
 W235, 111
 meat trait, W68
 mechanical properties, M188
 mechanical test, T291
 medicinal plant, 832
 medium-chain fatty acids, M204, T427, T428
 medium-chain triglyceride, 796
Megasphaera elsdenii, W396, 870
 melatonin, M302, T303, T327, 583
 membrane, W149
 membrane bound O-acyltransferase 4
 (Mboat4), M51
 membrane filtration, W147
 membrane processing, 74
 membrane transport, 385
 memory, 727
 menadione, T326
 mesenchymal stem cells, W212
 mesenteric vasoconstriction, 270
 MeSH, 649
 mesocarp, M24
 mesophilic bacteria, W167
 meta-analysis, M505, T44, T45, T433, T448,
 W331, 470, 616, 681, 851
 metabolic characteristics of protein, M139
 metabolic disease, M291, 754
 metabolic disorder, W435
 metabolic function, T32
 metabolic health, M301
 metabolic imprinting, 746

- metabolic load, M212
 metabolic network, T493
 metabolic plasticity, M209
 metabolic profile, M362, T497, T498, T518, W329
 metabolic programming, 336
 metabolic syndrome, T425
 metabolism, M475, T229, W40, W246, W380, 589, 619, 635, 680, 796, 817
 metabolism regulation, 46
 metabolism ruminant, T464
 metabolite, T313, W372, W499, 462, 740
 metabolizable energy, T280, T419, 454
 metabolizable energy intake, M318
 metabolizable protein, T231, T399, T400, 338, 623, 862
 metabolizable protein characteristics, M368
 metabolome, 671
 metabolomics, 322, 390
 metagenome, T493, 504
 metagenomic, W150, 509
 metagenomics, 527, 530
 metal-chelating activities, T132
 metalloproteinase, T34
 meta-regression, T289
 methane, M348, M353, M391, M430, M446, M468, T357, T482, T486, T490, T522, W266, W280, W283, W398, W462, 11, 167, 339, 593, 595, 597, 599, 821, 822, 850, 855, 857
 methane concentration, T514
 methane emission, M408, M409, M442, T366, 594, 625
 methane mitigation, M334
 methane production, W192, W394
 methanogen, 855
 methanogenic archaea, M438
 methionine, M217, M352, M363, M386, M404, M406, M440, T435, W337, LB4, 315, 455, 456, 457, 458, 459, 620
 DL-methionine, M171
 L-methionine, M171, 306
 methodology, M386
 methods comparison, M420
 methylation, W258
 methyl-donor, M352
 metritis, M247, T5, T21, T22, T47, T205, 22, 23, 362
 MFGM, 79
 micellar casein, T114, W146
 micro RNA, W215
 microalgae, M326, 578, 579, 580, 581
 microbe, W178, 265
 microbial, T144, T457
 microbial communities, W369
 microbial community, T17, T488
 microbial crude protein, 862
 microbial efficiency, M319
 microbial fermentation extract, W359
 microbial growth, T487
 microbial inoculant, W170
 microbial metabolite, W231
 microbial N yield, 175
 microbial nitrogen, W468
 microbial populations, T485
 microbial protein, 854, T452, W413
 microbial shedding, 838
 microbially treated, T418
 microbiology, T145, T169, T537, 198
 microbiome, M392, T26, W88, 397, 671, 672, 674
 microbiota, W100, 342
 microfiltration, T114, W149, 71, 656, 657
 microflora, M201, T64
 micro-heterogeneity, 563
 micronutrient, M490
 microorganisms, T142
 microRNA, W41, W57
 microRNA-221, 88
 microsatellite, M100
 microstructure, 663, W130
 mid infrared spectrum, 11
 mid-infrared spectrometry, 13
 mid-infrared spectroscopy, 752
 milk, M17, M135, M144, M269, M383, M390, M396, M443, M464, T109, T118, T142, T144, T160, T162, T177, T196, W157, W373, W459, W469, W502, 10, 97, 201, 216, 283, 603, 658, 659, 777, 779, 780
 milk analysis, W365, 471
 milk aroma flavor, T228
 milk coagulation properties, 650
 milk component, W358, W375
 milk composition, M278, T270, W321, 173, 196, 616, 812
 milk fat, M143, M453, T218, T411, T456, W335, W340, W379, W415, W456, 81, 466, 468, 469
 milk fat depression, M145, M146, M374, T380, T409, W331, W396, 345
 milk fat globule, M142, 752
 milk fat globule membrane (MFGM), W155
 milk fat metabolism, T60
 milk fat synthesis, M378, M394, M412
 milk fatty acid, M448, T110, T393, 12, 173, 470, 594
 milk fever, T15, T16
 milk filter, 145
 milk flavor, 781
 milk infrared spectra, T104
 milk intake, 221
 milk lipid droplet, W484
 milk mid-infrared, 14
 milk odd- and branched-chain fatty acid, 852
 milk performance, T401
 milk production, M300, M439, T150, T263, T271, T306, T450, T499, W83, W267, W332, W339, W423, W425, 89, 98, 172, 354, 363, 431, 459, 475, 694, 748, 848
 milk production and composition, T428
 milk production trait, T94
 milk protein, M363, M364, W153, 81, 199, 437, 557
 milk protein concentrate, 72, T113
 milk protein synthesis, T429
 milk protein-to-fat ratio, W131
 milk quality, M9, 136, 382, 686, 734
 milk replacer, M384, M387, M399, M470, M487, T203, T264, T449, T451, W345, W346, W395, 149, 151, 419, 420
 milk residue, M15
 milk response to supplementation, T402
 milk supply, M283
 milk synthesis, M145, T275, 802
 milk system, W345, W346
 milk urea nitrogen, T411, W365
 milk volatile and non-volatile metabolites, 594
 milk yield, M81, M461, T89, T90, T198, T222, T270, T399, W321, W355, W362, W364, 92, 93, 182, 217
 milk2006, W184
 milkers, T31
 milking, T145, T333
 milking equipment, 226
 milking frequency, 94
 milking practice, 136
 milking procedure, M10
 milking routine, M66
 mineral, T243, T440, T528, W319, W325, W370, W442, W481, W482, W483, 751
 mineral diagnosis, M403
 mineral requirement, W436
 mineral variation, T443
 minimaxity, 541
 Minpig, W48
 miR-181a, M152
 miR-194, M152
 miR-200b, M151
 miRNA, M154
 misbehavior, W1
 MiSeq, W367
 mitochondria, 665, 667, 668, 670
 mitochondrial membrane potential, T318
 mitosis, W107
 mixed grazing, T189
 mixed models, 40
 mixed silage, W195
 mixing stress, 307
 mixing time, T282
 mixing uniformity, T282
 mobile app, 59
 mobilization, M462
 model, M252, M365, W225, 357, 708
 modeling, M342, T463, W274, 819
 modeling simulation, 834
 modified distillers grains plus solubles, W433
 modified FRAP assay, M7
 modified Ovsynch, 840
 molar mass, M108
 molasses, T331, T369, T393, W307, 604
 molasses-urea, W466
 mold, T491
 molecular marker, M96, M100, W72

- molecular spectroscopy, T469
 molecularly imprinted polymer, W160
 monensin, M46, M317, M330, T357, T414,
 W17, W299, W333, W446, 163, 742
 monensin toxicity, M39
 monitoring, 353
 monogastric, 554
 Montbéliarde, 373
 moose, M460
 morbidity, 140, 610
 moringa, W238
Moringa oleifera, 173, 174
 morphology, T421, 843
 mortality, 140, 760
 motivation, W10
 mounting, T198
 movement, 256
 Mozzarella cheese, W131, W132
 mtDNA copy number, W251, W252
 mTOR, M342, W254, 387
 mucin1, 651
 mucosal immunity, M54
 Mukota pigs, M492
 mulberry forage supplementation, T255
 multibreed, T91
 multibreed dairy cattle, W91
 multicarbohydrase, M491, W111
 multidisciplinary, 233
 multiple analysis, T363
 multiple imputation, M501
 multi-scale straightness index (MSSI), M476
 multi-species, W274
 multitrait genetics, T95, T105
 multivariate analysis, T110
 multivitamin-mineral supplement, M380
 MUN, M297, M396, T212, W361, W388
 MUN/protein ratio, W361
Musa, T183, W199
 muscle, M474, T230, W57, W216, W217,
 W220, 108, 302, 428, 430
 muscle fiber, T224
 muscle fiber type, 104
 muscle food, 558
 muscle structure, M164
 mushroom degraded cassava peel, 273
 musk ox, T258
Mycobacterium avium ssp. *paratuberculosis*,
 W94
Mycobacterium, M57
Mycoplasma bovis, 433
 mycotoxin, T159, T245, T343, T346, 239
 myoblast, 800
 myocardium, 422
 myogenic, W222
 myogenic regulatory factor, W219
 myosin heavy chain isoform, 427
- N**
¹⁵N, T479, T487
 N uptake, M122
 2-NBDG, T213
- n-3 fatty acid, T405, W445, 263, 580
 nanofiltration, 74
 nanoparticle, T34, W153
 nanoscale, W154
 NANP, T465
 NaOH, W173
 NAPDH, T278
 narasin, M310
 National Science Foundation (NSF), 206
 native shrubs, W168
 natural anthelmintic, W501
 natural growth promoter, 193
 NDF, M351, M417, T398, T437, W173, 64
 NDF digestibility, M314, T395, T472, W193
 NDF digestion, W382
 NDF:starch ratio, W423
 near infrared, M2
 negative energy balance, M209, W253
 Nellore, M224, M225, M231, M310, M318,
 M321, M322, W296, W310, W314,
 W453
 Nellore cattle, M36, W56
 Nellore cow, M230
 nematode, M45, M47
 neonatal, W29, 29
 neonate, 302
 neophobia, T521
 nephrocarcinogenicity, T348
 net energy, W226, W227, W228, W448, 339
 net portal absorption, 189
 net portal flux, M491, W111
 net present value, 813
 network reconstruction, T215
 networking, 643, 644, 645
 neurobiology, 388
 neuroscience, 51
 neutral detergent fiber, W176, W336, W503,
 266
 neutrophil, M37, 247
 newborn calves, W124
 N-fixation, W171
 niacin, M130, M388, M390
 Nili-Ravi buffaloes, 134
 nitrate, 857
 nitrate leaching, M254, T208, 601
 nitrocompounds, W266
 nitrogen, W393, W407, W416, W448, 600,
 821
 nitrogen balance, 815, T358, T359, W270
 nitrogen compound, M482
 nitrogen efficiency, T203, W339, W443
 nitrogen excretion, W388, 625
 nitrogen loss, M346
 nitrogen metabolism, M356
 nitrogen recovery, W447
 nitrogen retention, M423, W353, W356
 nitrogen source, M447, W382
 nitrogen use efficiency, M297, W201
 nitrogen utilization, M439
 nitrogenous compound, W206
 3-nitrooxypropanol, T357, W429, 167, 850
 NMR, W143
- nonambulatory, 139
 nonammonia, T457
 non-carcass component, M463
 nonclassical MHC, 125
 nonconventional legume, M502
 nonesterified fatty acids, T51, W245
 nonfiber carbohydrate, W344
 nonlinear function, M80
 nonlinear phenomena, M433
 nonstarter lactic acid bacteria, 561, 562
 normalized difference vegetation index, 227
 North Africa, T97
 novel feed, W11
 novel phenotype, 18
 novel trait, 19
 novel traits, 10
 noxious gas emission, M200, 838
 Nrf2, 301
 NSAID, M149
 NSLAB, T134, T139
 nuclear magnetic resonance metabolomics,
 M471
 nucleotide, T297, T300, W384, 798
 nulliparous ewe, W488
 nursery, 186, 187, 572, 798
 nursery pig, M26, M516, T74, 118
 nutraceutical, W155
 nutrient, W319, 775
 nutrient cycling, 592
 nutrient digestibility, 117, 120, 194
 nutrient digestion, W98
 nutrient flow, M367
 nutrient intake, W440
 nutrient metabolite, M167
 nutrient partitioning, 490
 nutrient requirement, W104
 nutrient requirements of cattle, T462
 nutrient restriction, M221
 nutrient sensing, 47, 388
 nutrient-sparing, 190
 nutrigenomics, 298, 299, 319, 320, 458
 nutrition, M218, M279, M459, M506, T36,
 T68, T223, T289, W26, W38, W330,
 W352, W399, W401, W428, 3, 27, 51,
 157, 184, 318, 319, 320, 351, 366, 494,
 516, 519, 588, 591, 732
 nutrition and behavior, 723
 nutritional characteristics, M116, W201
 nutritional feeding, 350
 nutritional intake, W40
 nutritional plans, W317
 nutritional quality, W211
 nutritional strategy, M366
 nutritional supplementation, 2
 nutritional variation, 227
 nutritive value, W460
- O**
 oat, M121
 oat hay, W326
 obesity, 390, 397, 550, 773

- ochratoxin A, T348
 odd- and branched-chain fatty acids, M378
 off-flavor, 781
 off-site heifer rearing, M272
 offspring performance, M261
 oil, M320, T439
 oil source, T461
 oil supplementation, 861, W342
 oilseed, M214
 Old World bluestem, W447
 omasal sampling, M367
 omasum, 854
 omega fatty acid, W495
 omega-3, 104, 105, 468, M135, M411, W458
 omega-3 fatty acid, M326, T109, W103
 OmniGen-AF, M44, M259, M464, T25, T394
 oocysts per gram of feces, M42
 Optaflexx, 867
 Optigen, T401
 optimization, W356
 optimization modeling, 406
 oral calcium, T42
 oral vaccine, M54
 orchectomy, 635
 oregano essential oil, T295
 organ development, 294
 organ growth, 420
 organ mass, W449
 organic, M119, M273, M274, M285, T4, T109, 695, 731, 733, 734, 735
 organic acid, W108, W170, 193, 789
 organic and inorganic minerals, M508
 organic cultivation, W175
 organic dairy, 732
 organic feed, W394
 organic fertilization, W197
 organic matter, T154
 organic medicinal charcoal, M494
 organic milk production, 196
 organic mineral, W350
Origanum vulgare, M260
 orobiotic cheese, W134
 oscillating crude protein, M439
 oscillating protein, T367
 ostrich, M168
 outlier mining, T368
 outwintering, 695
 ovarian activity, T2
 ovarian function, M214, 284, 312
 ovary, T319, LB2, 313
 oven drying, 659
 overcrowding, M32, 165
 overview, 1
 oviduct, T310, 326
 ovine, M147, W492
Ovis aries, 634
 Ovsynch, M236, M239, 676
 ovulation, M212, M228, M243, 127, 314, 326, 675
 ovum pick-up, W322
 oxidation, W105
 oxidative stability, M106, W415
 oxidative stress, T295, T314, T326, 300, 334, 426, 491
 oxygen consumption, T444
 oxygen radical absorbance capacity (ORAC), T315, 557
 oxylipid, T29
- P**
- P4, 324
 packaging, 780
 pain, M27, 288, 728
 pain sensitivity, 499
 Pakistan, 689
 palatability, 372
 palm kernel expellers, T293, T301
 palm kernel meal, W460
 palm oil, M414, W379
 palm tree, M459
 palmitic acid, W335, 466, 475, 824
 pantothenic acid, T381
 papain, W193
 papillae, M321, W181, W310
 paraprobiotic, M59
 parasite, T174, T175, T527
 paratuberculosis, 258
 parenchyma, T264
 parlor, 136
 Parmigiano Reggiano, M259
 partial least squares regression, 650
 particle size, T281, T282, T447, W182, W207
 particle size analysis, 123
 particle size distribution, M402
 partitioning factor, W193
 partners, 205
 partnership, 55
 parturition, M458
 passage rate, W450
 passive immune transfer, M369
 passive immunity, T14, W23, 152
 passive transfer, 141
 pasteurization, T225, W144, W327, 405
 pasteurized milk balancer, M16
 pasteurized waste milk, M268, M399
 pasture, M36, M124, M434, T420, 376, 416
 pasture management, 62, T180, T184
 patatin-like phospholipase domain-containing protein 3, M8
 pathogen, T170, T172
 pathogen adhesion, 567
 pathogen control, M50
 pathogen load, T17
 pathogenic bacteria, M61
 pathway, W70
 Pax7, T224
 PCR diagnostic, M49
 PCR-RFLP, T146, 383
 pea protein isolate, M181
 pedigree inbreeding, T236
 pedometer, M293, 842
- PEDv, LB8
 peer mentor, 487
 pellet, M316, T74
 pellet size, M329
 pelleting, 121
 pelletized corn stover, T430
 pen shade, W275
 Penn State Customized Heifer Growth Chart, W387
 Penn State Particle Separator, W375
 Penn State particle sorter, M397
Pennisetum clandestinum, M430
 peppermint, M425
 perceptions, M295
 perceptions of agriculture, M65
 performance, M48, M136, M180, M185, M189, M190, M195, M202, M266, M287, M387, M497, T190, T293, T296, T353, T489, W18, W28, W109, W114, W279, W343, W377, W381, W405, W442, W463, 180, 348, 483, 574, 618, 688, 698, 732, 811, 835, 837
 periparturient, M247
 periparturient cow, T49, W257
 periparturient dairy cow, W366
 permeability, 461
 permeate, 566
 permethrin, 451, 453
 persistency, 274
 personnel, 409
 pet, 550
 pet food, W95, W99, W103, W105, 393, 547
 pet obesity, 546
 PGF_{2α}, M238
 pH, M3, M410, M445, T283, T457, W158, W170, 563
 phasing, W67
 PhD, 204
 PhD program, 209
 phenolic, W185
 phenotype, T95, 260
 phosphate, W143
 phosphatidylcholine and lysophosphatidyl-choline profiling, T38
 phospholipid, M101, T53
 phosphorus, M186, M192, M194, M210, M401, W389, W436, 119, 703, 708, 709
 phosphorus digestibility, M187, M191
 phosphorus excretion, W281
 phosphorus-calcium, M188
 photoperiod, M26, 705
 physical effective fiber, 605
 physical form, T407
 physical form of concentrate, T376
 physically effective fiber, M32, 165
 physically effective NDF, W375
 physicochemical functionality, 77
 physiology, 492
 phytase, M179, M184, 119, 581
 phytase level, 118
 phytochemical, M58, 193
 phytophenolic, M203, 814

- phytoprogenic feed additive, 190, 698
 phylogenetics, M202
 phytomolecule, T363
 pig, M27, M30, M69, M71, M73, M77, M160, M167, M177, M178, M180, M220, M503, M507, M514, T299, T303, T328, W108, W109, W110, W116, W120, W121, W212, W226, W230, W235, W237, 51, 109, 113, 114, 116, 119, 122, 185, 188, 238, 243, 304, 305, 307, 321, 548, 575, 761, 792, 793, 794
 pig breeding, 262, 764
 pig farms, 819
 pig growth performance, 310
 pig homogeneity, M497
 pig immunocastration, M498
 pig production, M505
 piglet, M174, M182, M183, M195, M196, M493, M496, M499, M502, T281, T297, T302, W48, W113, W118, W231, 50, 52, 191, 239, 241, 836
 pine bark, M455, M456, M457, W489
 pine bark extract, T384
 PIT1 gene, M69
 pituitary, M129
 placenta, 130
 placental development, 423
 plagiarism, 479
 plane of energy, W437
 plane of nutrition, T319
 plant cell wall, M436, 606
 plant density, W211
 plant oil, 312, 470
 plant-derived antimicrobial, T61
 plant-wax markers, 269
 plasma, T432
 plasma Ca, 176, 682
 plasma protein, 160
 plasma proteome, 248
 plasmids, T134
 plasmin, M104, M105
 plate-trapped antigen (PTA)-ELISA, T164
 plumage color, M74
 PlyC, 515
 PMN, M404
 PMNL, 464
 poison oak, W502
 polled, 647
 polyamine, W219
 polycystic ovary syndrome, 801
 polydispersity, M103
 polymerized whey protein, T111
 polymorphism, M96
 polymorphonuclear leukocyte, M55
 polyphenol, T193
 polysaccharide, W154
 PON1, M95
 porcine hepcidin, 242
 porcine LH, 584
 pork chops, 37
 pork quality, 106, 577
 postcervical insemination, M518
 postmilking teat dip, T33
 postmilking teat dipping, T11
 postmortem, W492
 postpartum, 476
 postpartum disease, 358, 360
 postpartum lactating cow, 840
 postpartum period, T517
 postpartum transport, M266
 postruminal AA, W465
 posture, 155
 postweaning stress, M169
 potassium carbonate, M412
 potential digestible fiber, W339
 poultry, T289, 16
 poultry breeding, 262
 poultry excreta, T173
 poultry production, M257, T73
 powder, 570
 powder X-ray diffraction (PXRD), W140
 powdered milk, 655
 PPAR, 299
 PPAR β/δ , M376
 Prdm9 gene, 653
 prebiotic, M136, T135, T302, W135, 508, 674
 precision dairy, 353
 precision dairy farming technology, M132, M291
 precision dairy technology, M246, 80, 229
 precision farming, M381, M384
 Precision Xtra, T217
 precision-feeding, 624
 prediction, M197, T252, T349, 12, 600, 687
 prediction bias, 753
 prediction of digestibility, 547
 predictor, 754
 pre-dip, M15
 preferences, M63, M64, T407, 35, 36
 pregnancy, M229, M288, W248, W260, LB2, 124, 291, 311, 317, 586, 740, 741, 842
 pregnancy diagnosis, 82
 pregnancy loss, T324
 pregnancy per AI, M300
 pregnancy per insemination, W242
 pregnancy rate, T156
 pregnancy-associated glycoprotein, T324, 82
 prenatal nutrition, M315, 713
 prepartum diet, W61
 preruminant, M392
 presynchronization, M235, M303, 841
 prevalence, M271, 26, 146, 254
 preweaned calves, W24
 preweaned dairy calf, W35, 140
 preweaning mortality, M72
 pre-wilting, 623
 primiparous, W392, W434
 primiparous cows, 277
 primiparous pregnancy, T294
 principal component analysis, T92, W87, 683, 852
 probiotic, M11, M59, M460, M483, M504, T135, T143, T226, W47, W135, 53, 198, 664
 probiotic cheese, W133
 probiotic fermented milk, T121
 probiotic yogurt, T122
 process optimization, 655
 processed cheese spread, W138
 processing, 570, 779
 processing method, M125
 processing score, M114
 production, M309, T27, T98, T390, 371
 production factors, 467
 production performance, M389
 productive life, 349, 377
 productive lifespan, 684
 productive performance, M502
 productivity, T341
 profit, T95
 profitability, W263
 profitability and environment, 406
 progeny, 652
 progeny milk yield, T408
 progesterone, M134, M236, M248, T2, T324, T515, W477, W486, 95, 127, 134, 323, 327, 328, 329, 451, 676, 677, 840
 progesterone receptor, 326
 programming, 4, M223
 prolactin, T267, T268, T271, T272, T350, 68, 95, 98
 prolificacy, M81, 92, 652
 promoter, W256
 propionate, T500
Propionibacterium acidipropionici (P169), M333
 propolis, W408
 propylene glycol, 231
 prostaglandin, T515, 279
 prostaglandin F_{2 α} , M239, 678
 protease, 194, M358, W294
 protected B vitamins, T352
 protected organic acid, M201, M205
 protected sodium heptanoate, M493
 protein, M443, M449, T195, T442, T479, W161, W231, W303, W332, W395, W430, 773
 protein bar, T193
 protein bar hardening, 440
 protein degradability, 624
 protein degradation rate, W454
 protein digested in the small intestine (PDI), W295
 protein feed, T474
 protein food, T475
 protein fractions, 332
 protein intake, W102
 protein levels, W454
 protein metabolic characteristics, W390
 protein molecular structure, T469, T478, W390, W414, W441
 protein needs, W104
 protein nutrition, 344

protein nutritive value, T469
protein quality, 65
protein requirement, 617, 871
protein source, W98
protein subfraction, T478, W414
protein substitution, T441
protein supplement, M312, T423
protein supplementation, W402
protein synthesis, 386, 430, 803
protein-carbohydrate conjugation, 76
protein-energy supplement, M312
proteins, 70
proteolysis, W131
proteomics, W239, 805
protozoa, M311, T221, W348, 823, 827
protozoa population, W192
PRRS, 790
Pterodon emarginatus, W403
puberty, M129, M224, M225, T338, 4, 502
public health, T169
puerperal, 245
PUFA, 263
purchase intention, W137
purine derivative, M356, 175
purple prairie clover, T171, T181, W200
PXRD, 565
pyrosequencing, T211, W410
pyruvate carboxylase, M372, 285

Q

qPCR, T487, W300
quail egg, T250
quality, T128, T130, T192, W129, W157, W489, 778, 781
quality beef cattle, W58, W59
quality grade, T377, W293
quality meat, M98
quantitative genetics, 532
quantity of inoculation, T283
quercetin, T12, T227
quinagolide, T272

R

ractopamine, M159, T332, T371
ram effect, W477
Rambouillet, 628
rams, W487
random regression, T103
random regression model, T94
rangeland, T356, T362, W449, 685, 743
rapeseed meal, 859
ration sorting, M397
raw meat diet, 399
raw milk, M7, T161
reactive oxygen species, T325, 557, 558
reactivity, M33, M34
ready-to-drink, T119
realized, 544
real-time PCR, T485

rearing system, T336
reasons for farming, T334
rebreeding, T78, W65
receiving, T352
receiving steers, M46
recombinant bovine somatotropin, T1, T49, W8, W28, W257
recombinant bST, T270
recombinant F4 antigens, M510
recombination, M70
recovery, 238, T290
recruitment, 58
redox, 665
reduced CP, 621
refractometer, M369
regression, M230
regulation, W44
rehydrated corn silage, M443
relationship, 544
reliability, M276, T100, 753
REM, 726
renal clearance, M359
rendered protein meals, W105
rennet coagulation, T114
rennet-induced coagulation, 79
repeat breeders, 126
repeatability, W50
replacement heifer, 502
replacer, W33
reports, 225
reproduction, M213, M218, M237, M255, M298, M509, T179, T259, W54, 287, 315, 316, 365, 366, 367, 733, 763, 839
reproduction management, T201
reproductive efficiency, W480
reproductive longevity, M492
reproductive management, T69, 369, 408
reproductive performance, M305, M508, T298, W288
reproductive success, T156
reproductive technology, 368
reproductive tissue, M215
reproductive tract, 452
requirement, 178
re-ranking, M76
research, 234
research and development, 551
research funding, 202, 206, 207
residual ADG, W51, W54
residual feed intake, M25, M337, W52, W53, 522, 526, 746, 771
residual heteroskedasticity, M76
residue, 412
resilience, M483, 261
resource utilization, W284
respiration chamber, M442
respiratory, W26, 27
respiratory symptomatology, M39
respirometric chamber, M354
resveratrol, 300, 831
resynchronization, M235, M241, 446, 448
retention, 762
rewarding teaching, 640
RFI, W51, W116, 668
RFLP, 761
rheology, M107, 70
rib eye area, W58
rider skill level, W1
rising plate meter, 62
risk assessment, 849
risk communication, 257
risk factor, T15, W3
risk management, T151
RNA interference (RNAi), M60
RNA sequencing, T269, T507
RNA stability, W492
RNAseq, M98, 532
RNA-sequencing, M156, T346, T409
robotic milking, M299
robust Bayesian regression, T80
role, 32
Romane female lamb, W474
rooster assay, W98
rooting, T70
roots, T180
ROS level, T318
rotational grazing, 62
roughage NDF, W302, W304
R-project, M433
rubber seed oil, W415, W420, W421
RumateL, M467
rumen, M4, M382, M418, M421, M432, T206, T221, T360, T452, T453, T476, T524, W369, W374, W461, W466, W481, 342, 823, 827
rumen bacteria, T213, T472
rumen bacteria diversity, W422
rumen content fraction, M451
rumen content treatment, T486
rumen degradability, T418
rumen degradation, 332, 606
rumen delivery system, T460
rumen development, 223
rumen digestion kinetics, T214
rumen environment, 289
rumen fermentation, T480, W412, W450, 168, 825
rumen fermentation parameter, T438, W421
rumen function, 182
rumen in vitro DMD, M420
rumen manipulation, M356, M359, M362
rumen measure, 621
rumen microbe, T461, T470, W348, W367
rumen microbial diversity, M451, W479
rumen microbial richness, M451
rumen microbiome, W429
rumen microbiota, M41, M333, M374, M408, T420
rumen microorganism, W300
rumen modification, M419, 460
rumen papillae, T404
rumen papillae gene expression, M379
rumen pH, 858
rumen retention time, 830

- rumen undegradable protein, W386
 rumen volatile fatty acid, 852
 rumenitis, M321, W309
 rumen-protected, W351
 rumen-protected amino acid, 622
 rumen-protected lysine, M389, M422, T386, T387
 rumen-undegraded protein, M441
 ruminal acidosis, W462
 ruminal adaptation, 346
 ruminal digestibility, M325
 ruminal digestion, W441
 ruminal fermentation, M120, M445, T382, 174
 ruminal metabolism, W506, 826
 ruminal microorganism, T438
 ruminal parameter, T365
 ruminal pH, M319, M325, 165
 ruminally protected, W60
 ruminant, M357, W209, W255, W266, W370, W399, W401, W445, W460, W495, 9, 344, 517, 554
 ruminant digestive tract, M429
 ruminant nutrition, T528
 ruminating time, M322
 rumination, M24, M306, M379, M479, T24, T37, T390, 63, 355, 356
 rumination efficiency, M466
 rumination time, M19
 run-of-homozygosity, 750
 RUP, T199, 313
 Rusitec, T374
 Rusitec fermenter, T485
Ruta graveolens, M43
 rye, M110
 ryegrass, T185, T186, 66
- S**
- SAA:Lys ratio, W121
 Saanen, W493
 saccharification, M436
Saccharomyces cerevisiae, M61, M512, M513, W204, W431
Saccharomyces cerevisiae fermentation product (SCFP), M375, T18, T19, T446, T455, 172, 856
 Sal CURB, 792
 sale price, W64
 salicylate, 460
Salix babylonica, 630
Salmonella, M271, W22, W42, W47, W95, 147, 787
Salmonella and *E. coli*, T173
Salmonella Dublin, 146
Salmonella spp., 237
 salt reduction, 556
 salt tolerance, T137, T138
 sand, T154
 sanguinarine, M323
 sanitation, 778
 Sanjabi sheep, M425
- SARA, T19, 248
 SAS software, M433
 satellite cell, T63, W219, W224
 saturated fatty acid, T44
 scale-free, 654
 scanning electron microscope, M361
 scan-sampling method, W14
 SCC, T209, 432, 686
 SCF, T316
 SCFA, W398
 science, 32
 science policy, 486
 scoring system, W24
 scours, W247
 scratch, 392
 sealing, M128
 season, W187
 seasonal heat stress, 587
 seasonal reproduction, T505
 seasonality, M298
 seasons of the year, T176, W165
 secretion, 97
 selection, M12, M71, T86, T90
 selection signature, T102
 selenium, 710, M227, T179
 selenium status, W132
 semen, M490
 semen characteristic, W494
 semimembranosus, M162, W223
 seminal trait, M53
 seminar, 777
 Senepol, 745
 senescence, W162, W164
 sensory, W128, 105
 sensory additive, T402
 sensory neurons, 49
 sepiolite, W152
 sequencing, W84, W86
 sequential grazing, T189
Sericea lespedeza, M456, M457
 serotonin, M155, 281
 serotonin receptor, T265, 264
 serum, M216
 serum cholesterol, 795
 serum IgG, 142
 serum metabolite, T7
 severity of stress, 812
 sex, T256, T321, W493
 sex ratio, M286
 sex-sorted semen, M265
 sexual development, 3
 shear force, T342, W58, W59, W70
 sheep, M23, M56, M83, M219, M427, M474, M477, M479, M480, M481, M486, T179, T232, T311, T345, T495, T511, T512, T514, W2, W217, W466, W475, W477, W496, W505, W507, W508, 112, 178, 291, 294, 347, 628, 650, 714, 716, 717, 810, 831
 sheep breed, T507
 sheep breeding, T474, T475
 sheep milk, T123, T124
- shoots, T180
 short-chain fatty acids, W282, W298
 shotgun metagenomic, T18
 shrink, T510
 shrub, W195
 sickness behavior, M21, M22
 signaling, 386
 silage, M128, M416, T149, W158, W208, W320, W427, 65, 69, 218, 272, 273, 415, 636
 silage inoculant, 267
 silage mixture, W206
 silage quality, M126
 silo, W178
 silo plastic, M115
 simulation, M279
 singed carcass, 414
 single cell protein, M175
 single crystal x-ray diffraction (SCXRD), W141
 single nucleotide polymorphism, M94, T88, W75, W85, W92, 537
 single-step, 542
 single-step genomic BLUP (ssGBLUP), 535, 539
 single-step method, 534
 sire, 652
 16S metagenomics, 23
 16S rRNA, W328, W430
 16S rRNA sequencing, M333, M374
 16S sequence, 504
 skeletal muscle, T229, W59, W218, W254, 667, 800
 skim milk powder, 73
 skin temperature, W267
 skin-on, 414
 slatted floor, M13
 slaughter, 410
 slaughter weight, M480
 sleep, 726
 slick-haired Holstein cow, T305
 slick-haired Jersey cow, T304
 slime, T141
 slow release urea, M481
 slow-release NPN, W359
 slow-release urea, T382, 87
 small intestinal starch digestion, 331
 small ruminant, T153, 715
 small ruminants, 630
 small-scale dairy farming, T150
 smoothie, T119
 SNP, M78, M84, M90, M92, M95, T91, T237, W68, W72, W81, 380, 383, 755, 768
 SNP marker, M143
 soap formation, M193
 social marketing of behavior, 257
 social media, 60, 720
 social rank, 503, 721
 sodium, 564
 sodium butyrate, M500, W212
 sodium butyrate protected, 237

- sodium caseinate, T115
 sodium chloride, 403
 sodium heptanoate, M496, M500
 sodium salicylate, M419
 soil contamination, T434
 solar radiation, T304
 solid/lipid/water emulsions, T460
 solids, 659
 solubility, 71, 72
 soluble carbohydrate, T524
 soluble fiber, T484, 439
 somatic cell, M52
 somatic cell count, T160, 275, 276
 somatic cell score, 93
 somatic measurement, W491
 somatotropin, T338
 sorting, T391, T454, W307
 sorting behavior, W10
 Southeast Quality Milk Initiative, 93
 sow, M508, M518, T280, T292, T295, T297, T298, W118, 309, 798
 sow litter size, M489
 sow performance, M166
 sown, W188
 soy hull, M452, W229, W490
 soy protein, 396
 soybean, M177, M359, T287, T378, W196, W383, 278
 soybean meal, M176, M207, T178, T212, T300, T523, 308, 859
 soybean oil, M106
 SoyPlus, T178
 specificity protein 1 (SP1), T60
 spectra, 10
 spectroscopy, 382
 sperm, 453
 sperm nuclear shape, 587
 sperm quality, W242
 spermatogonial stem cells, T239
 sphingolipid, 474
 sphingomyelin, 473, M413
 spice, T477
 split-time artificial insemination, 131, 132
 spoilage, M115
 spontaneous heating, W205
 spontaneous milk lipolysis, 467
 sporeformer, 778
 spot urine samples, T406
 spray drying, 73
 spring-calving cows, W62
 sprouted fodder, 64
 squeeze chute, T71
 SREBP1, 436
 ssGBLUP, W89
 stability, 607, T387
 stabilizer, 404
 stable isotope-labeled tracer, W255
 stage of lactation, M378
 stages of change, 257
 standardization, LB3
 standing behavior, M21
 star anise, T284
 starch, T397, T414, T437, W318, W332, W347, 162
 starch digestibility, M113, T436, W360, 330
 starch in feces, W360
 starch source, M340
 starter broiler chicken, M189
 starter intake, W343
 STAT3, 195
 STAT5, 94
 statistical inference, T462
 statistical modeling, 261
 statistical models, 38
 statistical process control, M349
 stayability, T78
 steam-flaked corn, W302, W304, 87
 steam-flaking, T372, W295
 steer, T231, T355, 868
 stem, 271
 stem cells, T239
 stereo microscopy, M361
 sterilization, M105, 635
 steroid, M221
 stillbirth, 500
 stochastic, M279
 stochastic model, T207
 stochastic modelling, T105
 stocker, 67
 stocker cattle, W447
 stocking density, M5, T219, 81
 stocking rate, T185, 739
 storage, T128, W129
 storage study, T119
 strain, W169
Streptococcus thermophilus, 561
 stress, M37, M495, T309, T333, W2, W19, 54, 249, 250, 498, 505
 stress reactivity, T55
 stress resilience, 774
 stride variable, T233
 strong ions, 289
 structural variant, W75, W79
 structural variation, W92
Stryphnodendron adstringens, W397
 stud bull, 378
 student, T533
 student engagement, 638
 student perceptions, 481
 student success, 485
 students, 57, 484
 stylo silage, M319
 subacute rumen acidosis, 85
 subacute ruminal acidosis, M365, T18, T411
 subclinical hypocalcemia, T422
 subclinical ketosis, M20, T427, 231, 355
 subclinical mastitis, T9, T30
 subcutaneous fat, T259
 subcutaneous fat thickness, W305
 subcutaneous injection, T205
 succinylation, M104
 Sucram, T431
 sugar, T188, T448
 sugar cane, M450, T366, W291
- sugarcane silage, W204, W298
 suid, 775
 sulfate, W402
 sulfate modification, 662
 sulfites, W97
 sulfur amino acid, M170
 sulfur hexafluoride, W269, 597
 summer, 806
 summer annual forage, 263
 sun exposure, 243
 sunflower cake, T508
 sunflower hulls, W472
 sunflower seed, W259
 superdosing, 118
 superovulatory response, 757
 supplementation, M218, M344, T331, W438, W454
 supplemental management, M224, M225
 supplementation, T238, W60, W61, W312, 66, 340, 341, 614, 711, 833
 supplementation frequency, T355
 supplemented, W504
 supplements, W316
 survey, T201, T343, T531
 survivability, LB8
 survival, M507, 756
 sustainability, T70, T341, W263, W284, W285, W287, 211, 551, 697
 sward height, T176, W203
 sweet whey, 558
 sweetener, M208
 swine, M68, M78, M175, M186, M187, M191, M494, M509, M515, W42, W233, 17, 306, 571, 572, 576, 582, 583, 668, 721, 765, 771
 swine breeding, 766
 swine delta coronavirus, 789
 synchronization, M240, M244, 220, 443
 synchrony, W416
 system, 690
 systems biology, T215, T465
 systems genetics, 767

T

- TAI, M238
 tail lesion, T66
 tall fescue, W163
 tamoxifen, 452
 Tamworth, M517
 tannin, M45, M327, W271, W443, W479
 tannin extracts, T374
 taste 1 receptor (T1R), 43
 tBHQ, 301
 teaching, 478, 480, 482, 638, 639, 642
 teaching technology, 481
 teat health, T33
 teat sanitation, M264
 teat sealant, 148
 teat skin bacterial count, M264
 technical challenge, 212
 technologies, W15

- technology, 353
 technology transfer, 56
 teff, M119
 temperament, M5, M36, W17, W63, W78, 729, 730
 temperature, T56, 155
 tenderness, M158, M161, M165, 372
 terminal deoxynucleotidyl transferase nick-end labeling (TUNEL), T273
 terpene, W185
terroir, W127, W128
 testicular measurement, W494
 testing, 225
 testis, W240
 testosterone, T505, T526, W480, W487
 textural property, T129
 texture, 75, M163, W139
 TGR5, 45
 theca cells, 88
 thermal comfort, W227
 thermal humidity index, T305
 thermal imaging, 526
 thermal index, 807
 thermal stability, T194
 thermal stress, M97
 thermoduric sporeformer, W144, 405
 thermodynamics, 825
 thermoregulation, T304, T305, W81
 2-4-thiazolidinedione, 91
 3D imaging, 683
 threonine, 305
 threshold model, 760
 THRSP, M157
 thyme, M425
 tibial strength, 579
 tick load, 744
 Tifton hay, W229
 tight junction, T276, 44
 tiller, W164
 tiller density population, W165
 time-course, 345
 timed AI, M231, M237, M243, LB2, 128, 329, 446, 675
 timing of insemination, M265
 tissue, W482
 TMR variability, M402
 toll-like receptor 9 (TLR9), 43
 toltrazuril, M42
 total antioxidant capacity, M7
 total dietary fiber, 188
 total mixed ration (TMR), W324, W467
 total protein, W33
 total serum protein, W23
 total standard plate count, W25
 total tract, M417
 total volatile fatty acid, W424
 total-tract neutral detergent fiber digestibility, W184
 toxic elements, T161
 trace mineral, M211, M315, T3, T434, T473, W372, W436, 282, 330, 506, 706, 707, 711, 712, 713
 trace minerals, T337
 traditional Mexican cheese, T107
 training, T244
 tranquilizer, T240
 transcription factor binding site, W256
 transcriptome, M38, M57, M129, M490, T27, W19, W217, W240
 transcriptomic, M91
 transcriptomics, M472, 109, 112
 transfection, 298, 299
 transgenic mouse, M99
 transition, M251, W277, 280, 359, 474
 transition cow, M20, M137, M210, M339, M385, T1, T3, T36, W347, W372, W391, 355, 455, 462, 463, 464, 503
 transition cow index, M290
 transition dairy cow, T7, T8, T12
 transition period, M277, M291, M366, T388, T425, W245, W246, W322, W328, W344, W368, 247, 458
 translation of protein, 804
 transmembrane pressure, W148
 transport, T213
 transport stress, T288
 treated corn stover, M316
 treatment, T23, 20, 21, 244, 515, 847
 trend, 214
 triacylglycerols, T50
 Triennial Reproduction Symposium, 1
 trimming, 499
 Trolox-C, T327
 trophectoderm, T316, 450
 tropic, M253
 tropical, 245
 tropics, M73, T86, T87, T91, W93
 trot, T233
 true protein, 626
 tryptophan, M169, 307, 722
 tryptophan:lysine, 52
 tryptophan-hydroxylase 1, T269
 TTdpdNDF, 605
 tuberculosis, T27
 turkey, M74, M80
 Twitter, 60
- U**
- ubiquitin-proteasome system, W254
 udder efficiency, M141
 UHT, T163
 ultrafiltration, M108, 199
 ultrafiltration cheese, W135
 ultrasonic flaw detector, T112, 72
 ultrasonication, W144
 ultrasonography, 369
 ultrasound, T230, W145, 291, 632
 umbilical cord, 241
 undergraduate education, 481, 482, 641
 undergraduate learning, 638
 undergraduate learning goals, 480
 undergraduate research, T537
 undergraduates, 483
- undernutrition, M219, M222, M471, M472
 uniformity, 261
 university farm, 718
 university-industry partnerships, T262
 unmanned aerial system (UAS), 725
 unsaturated fatty acid, T45, T494, W421
 unsaturated fatty acids, M407
 unwanted vegetation, T153
 upper respiratory disease, T235
 urea, M396, M475, W201, W422, W500, 626
 urea kinetics, T423
 urea metabolism, W411
 ureagenesis, T466, T467
 urinary nitrogen, W497
 urine, M3, W426
 US Holsteins, W80
 USDA, 207
 uterine disease, T4
 uterine size, 129
 uterus, 323
- V**
- vaccination, M50, 505, 589, 590, 627
 vaccine, T7, T8, 506, 507
 vaginal and fecal microbiota, W118
 vaginal temperature, 229
 valerian, T240
 validation, 529
 valine, 304
 variability, M499
 variance, 346
 variance components, 39
 variation, M349, 29
 variety, W177
 veal, 197
 velocity, T233
 vertebro-spinal dysplasia, 533
 veterinarian, T46
 veterinary, 478
 veterinary feed directive, W44
 VFA, M375, M410, W301, 828, 829
 VFA absorption, T214, T404
 video, 410
 vigna hay, M437
 Viking Red, 373
 virgin coconut oil, T384
 virginiamycin, M317, T353, W299, W333
 virome, T493
 virulence, W41
 visceral fat, W437, W491
 vitality, 843
 vitamin, T381, W319, W435
 vitamin B₆, T410
 vitamin C, M302
 vitamin D, T220, W55, 83, 157, 243, 704
 vitamin E, 722, W349
 VLDL, LB4
 vocalization, M35
 volatile compound, M127, T117
 volatile fatty acid, M126, M445, T361, T486, T490, W297, 166, 189, 856
 volatile organic compound, W179

volatiles, M416
voluntary waiting period, M211
volunteering, T532

W

warm season annual, 217
waste and by-product, T530
waste management, 413
waste milk, M16, M267, T344, 156
water, 228, 232, 497
water balance, 615
water-holding capacity, T123
water-to-feed ratio, 120
way of walking, T73
weaned pig, T301, W232, 574, 837
weaned swine feeding, W112
weaning, M283, T354, W123, 154, 158, 159, 588, 637, 713
weaning pig, M205, M208
weaning stress, W113, W115
weaning weight, M93, T82
weanling pig, M204, W114, 194
weanling piglet, 192
weight gain, M260, T502, T509
weight gain:starter consumption, T228
weighted SNP, 539
welfare, M23, M273, M274, T36, T66, T70, W11, 90, 234, 235, 290, 352, 497, 500, 721, 728
welfare assessment, W3, 233
well-being, W12, 731
wet pet food, W97
wet season, W316, W317
wheat, 602
wheat and wheat millrun, 116
wheat bran, W233
wheat forage, 339

wheat protein, 160
whey, T107, 572, 782, 783, 784
whey beverage, T120
whey dilution, 560
whey permeate, M481
whey protein, T193, T194, W142, 440
whey protein concentrate, T112, T117
whey protein hydrolysate, 77
whey protein isolate, T111, 786
white adipose tissue, W40, 669
white blood cells, T389
white-tailed deer, W168, W243
whole corn, W457
whole raw milk, T44, T45
whole raw soybean, W371
whole-genome analysis, T99
whole-genome prediction model, M76
whole-genome sequence, 545
whole-genome sequencing, W76
willingness to pay, 37
wilt condition, W174
wilting, W417
wool and hair sheep, W490
worms, 716
writing, 479

X

xylanase, W120, W434, 50, 113, 114, 115

Y

yak, 653, W239
yam (*Dioscorea opposita*), T480
Yanbian, W76
yeast, M62, M115, M353, M379, T234, T481, T491, W167, W298, W355, W367

yeast culture, 153, T412, T413, W409, 613, 817
yeast product, T260
yellow cattle, T354
yield, W196, 278
yogurt, T120, T127, 198, 404, 660
YouTube, 60
Yucca schidigera, W420
Yucca schidigera extract, W419

Z

Zebu, M280, M347, M354, T359
zilpaterol, M159, T332, W470, W471, 107, 863, 864, 865
zilpaterol supplementation, T516
zinc, T371, T443, 867
zinc oxide, M195
Zn status, M196
ZnO, M196
zoonotic potential, 258