

SUBJECT INDEX

| | PAGE | | PAGE |
|--|---------------|---|---------------|
| <i>Agave americana</i> , effect of night temperature on CO ₂ assimilation, transpiration, and water use efficiency in | 705 | Spermatozoa, frozen, fertility test .. | 291 |
| Aldrin metabolism in pea plants, pretreatment effects on the rates of .. | 341 | Spermatozoa, survival of, during deep freezing | 219, 231, 239 |
| Amino acids, urinary and serum, screening and identification of .. | 831 | <i>Boophilus microplus</i> , enzyme activity of the cytochrome system of the egg and larva of | 453 |
| <i>Ananas comosus</i> <i>See</i> pineapple | 539 | <i>Boophilus microplus</i> in Australia, inheritance of dimethoate resistance in the Mackay strain of | 445 |
| Apricot trees, pruned, studies on the microbial colonization of sapwood of | 379 | Bovine mammary gland, effect of feeding protected lipid on the uptake of precursors of milk fat by | 1201 |
| <i>Atriplex hastata</i> , photosynthesis by thin leaf slices of | 15 | Bull spermatozoa, effect of cold shock and freeze-thawing on release of phospholipids by | 1409 |
| <i>Atriplex spongiosa</i> , photosynthesis by thin leaf slices of | 15 | | |
| Bacteria, ruminal, nitrogen and sulphur composition of | 1429 | Calves: | |
| Bacterial spot of stone fruit in Queensland | 171 | Importance of lipolytic enzymes in milk-fed and ruminating | 1189 |
| Barley: | | Relative importance of pancreatic lipase and pregastric esterase on lipid absorption in 1-2 week old | 625 |
| Absciscic acid and nitrogen metabolism in | 319 | Cats, domestic, of Adelaide, gene frequencies in | 1215 |
| Changes in proline concentration in excised tissues of | 57 | Cattle: | |
| Cytokinins in etiolated leaves of .. | 1073 | Asian, African, and South American, sweat glands and hair follicles of .. | 259 |
| Effect of sulphur dioxide on the metabolism of glycollic acid by leaves of | 281 | Effect of cold shock and freeze-thawing on release of phospholipids by bull spermatozoa | 1409 |
| Growth inhibitors from etiolated leaves of | 527 | Effect of feeding protected lipid on the uptake of precursors of milk fat by the bovine mammary gland | 1201 |
| Nitrogen metabolism and growth in, during water stress | 45 | Effect of urea on the solubility of bovine β -lactoglobulins | 851 |
| Variations in response to water deficit in | 65 | Importance of lipolytic enzymes in milk-fed and ruminating calves .. | 1189 |
| Bean: | | Melanocyte system of skin. I, II | 973, 985 |
| Coagulant and non-coagulant fixation of root tip cells of | 1231 | Nature of products formed by the action of urea on bovine β -lactoglobulins | 859 |
| Development of photosynthetic induction transients in greening leaves of | 277 | Relative importance of pancreatic lipase and pregastric esterase on lipid absorption in calves 1-2 weeks of age | 625 |
| Bean, broad <i>See Vicia faba</i> | 309, 1035 | Cattle tick <i>See Boophilus microplus</i> | 445, 453 |
| Boar: | | Chloroplasts in detached leaves of <i>Elodea densa</i> , effect of light on the volume and ion relations of | 1251 |
| Semen, deep freezing of. I, II, III | 219, 231, 239 | | |
| Spermatozoa, effect of cold shock and freeze-thawing on release of phospholipids by | 1409 | | |

| | PAGE | | PAGE |
|--|----------------|--|--------------|
| <i>Clostridium acetobutylicum</i> , ultrastructure of | 547 | Gas chromatography-mass spectrometry, use of, for the diagnosis and study of metabolic disorder. I | 831 |
| <i>Clostridium kluyveri</i> , ultrastructure of .. | 547 | Genetics, population: | |
| <i>Commelina cyanea</i> , daily changes in stomatal aperture and in carbohydrates and malate within epidermis and mesophyll of leaves of | 1035 | A further paradox of the two-locus model | 1443 |
| Corrigenda .. 293, 516, 1013, 1444 | | Effect of epistasis in the standard two-locus model | 181 |
| Cotton: | | D-Glucuronolactone dehydrogenase, mammalian, substrate specificity of .. | 839 |
| Gas exchange in leaves of | 1045 | Glutaraldehyde as fixative for plant cells | 1231 |
| Photosynthesis by thin leaf slices of .. | 15, 25 | <i>Gossypium hirsutum</i> | |
| | | See cotton | 15, 25, 1045 |
| <i>Dromaius novae-hollandiae</i> , feather keratin from, complete amino acid sequence of | 415 | <i>Heracleum mantegazzianum</i> , coagulant and non-coagulant fixation of petiolar hair cells of | 1231 |
| <i>Drosophila melanogaster</i> : | | <i>Hordeum vulgare</i> | |
| Effects of genetic background on the competition between the <i>asc</i> and <i>FM6</i> chromosomes of | 1379 | See barley 45, 57, 65, 281, 319, 527, 1073 | |
| Phenogenetics of a supersuppressor in. II, III | 189, 903 | Housefly, development of, effects of five natural norditerpene dilactones on .. | 911 |
| Response to selection in synthetic lines of | 613 | Human chorionic gonadotrophin, effects of, in the reproductive tract of the rabbit doe | 937 |
| Echidna | | Insect-control chemicals from plants. II | 911 |
| See <i>Tachyglossus aculeatus</i> , <i>T. a. aculeatus</i> | 605, 877, 1327 | Kangaroos, grey, distribution of red cell lactate dehydrogenase types in .. | 1153 |
| <i>Elodea densa</i> , effect of light on the volume and ion relations of chloroplasts in detached leaves of .. | 1251 | Keratin, feather, fractionation and peptide mapping of proteins from .. | 401 |
| Emu | | Keratin, feather, from emu, complete amino acid sequence of | 415 |
| See <i>Dromaius novae-hollandiae</i> .. | 415 | <i>Kiefferulus intertinctus</i> , biometrical effects of the inversion polymorphism of .. | 1371 |
| Epistasis, effect of, in the standard two-locus model | 181 | β -Lactoglobulins, bovine: | |
| <i>Eutypa armeniaceae</i> , serological identification of | 389 | Effect of urea on the solubility of .. | 851 |
| Ewe, uterus of. II | 947 | Nature of products formed by the action of urea on | 859 |
| Fixatives, coagulant and non-coagulant, for plant cells | 1231 | Lambs, growing, utilization of a casein-safflower oil supplement treated with formaldehyde | 1179 |
| <i>Gaeumannomyces graminis</i> var. <i>tritici</i> : | | Leaf-scald disease of sugar cane, causal agent of, pathogenic variation in | 781 |
| Bioassay of undisturbed soil cores for the presence of | 1267 | Legumes, tropical, comparative efficiency of development under cold stress | 693 |
| Detection of, in wheat stubble .. | 1285 | <i>Lolium multiflorum</i> : | |
| Incidence of, and grain yield .. | 1289 | Photosynthesis and assimilate distribution in, following differential tiller defoliation | 517 |
| Incidence of, in consecutive wheat crops | 1301 | Studies on endosperm of, in tissue culture. I, II | 123, 135 |
| Incidence of, in field soil, effect of mixing and sieving on | 1277 | | |
| Survival of, in field soil stored in controlled environments | 1319 | | |
| Survival of, in the field | 1309 | | |

| | PAGE | | PAGE |
|---|-----------|---|-----------|
| <i>Lolium perenne</i> cv. Kangaroo Valley, <i>in vivo</i> digestibility of cell-wall polysaccharides of | 1225 | <i>Mycobacterium</i> isolated from soil, camphor degradation by strains of .. | 999 |
| <i>Lolium temulentum</i> , abscisic acid and nitrogen metabolism in.. .. . | 319 | <i>Neurospora crassa</i> : A new map of the <i>amination-1</i> locus of, and the effect of the <i>recombination-3</i> gene | 1355 |
| <i>Lotononis bainesii</i> : A study of the interaction of cold stress, age, and phosphorus nutrition on the development of | 87 | Action of <i>rec-3</i> on recombination near the <i>amination-1</i> locus of | 439 |
| Comparative efficiency of development under cold stress | 693 | Control of non-allelic recombination in | 1337 |
| Macromolecules, dehydration of. I, II | 591, 1435 | <i>Ocimum kilimandscharicum</i> , stimulation of growth in, by low-dose X-irradiation | 349 |
| <i>Macropus fuliginosus</i> <i>See</i> kangaroo, grey | 1153 | Oestradiol benzoate, effect of, on biliary phospholipids in the rat | 1009 |
| <i>Macropus giganteus</i> <i>See</i> kangaroo, grey | 1153 | Onion epidermis, plasmolysed, fixation of Hecht's threads in | 1231 |
| Maize: Chloride fluxes in cells of the isolated cortex | 757 | Organochlorine pesticide residues in wildlife of the Northern Territory .. | 1161 |
| Electron probe microanalysis of potassium and chloride in freeze- substituted leaf sections of | 1015 | Pancreatic lipase and pregastric esterase, relative importance of, on lipid absorption in calves 1-2 weeks of age | 625 |
| Methods for diploid callus culture and the subsequent differentiation of various plant structures | 505 | Pea: Flowering in; effect of cotyledon removal on genotypes <i>lf E Sn hr</i> and <i>lf e Sn hr</i> | 669 |
| Stomatal role in the variability of net CO ₂ exchange rates by two inbreds of | 35 | Flowering in; evidence that gene <i>Sn</i> controls a graft-transmissible inhibitor | 675 |
| Mammalian lipid metabolism, effects of a plant-growth retardant, Phosfon, on, <i>in vivo</i> | 113 | Peroxidase activity and lignification in the pod membrane of | 679 |
| Mass spectrometry-gas chromatography, use of, for the diagnosis and study of metabolic disorder. I | 831 | Pretreatment effects on the rates of aldrin metabolism in | 341 |
| Metabolic disorder, diagnosis and study of, use of gas chromatography-mass spectrometry | 831 | <i>Pennisetum typhoides</i> , mechanisms regulating photosynthesis in | 319 |
| Monotreme proteins, studies on. II, III | 877, 1327 | Pesticide residues, organochlorine, in wildlife of the Northern Territory .. | 1161 |
| Mouse: Acute effects of actinomycin D on the binding of tritiated oestradiol by the vagina | 689 | <i>Phaseolus vulgaris</i> <i>See</i> bean | 277, 1231 |
| Behaviour of mice housed in groups at 4, 21, and 33°C | 917 | Phosfon, plant-growth retardant, effects of, on mammalian lipid metabolism <i>in vivo</i> | 113 |
| Changes in the distribution of alkaline phosphatase during early implantation and development of | 209 | Photosynthesis and assimilate distribution in <i>Lolium multiflorum</i> following differential tiller defoliation | 517 |
| Effect of actinomycin D on the binding of tritiated oestradiol by the vagina of the ovariectomized | 201 | Photosynthesis by thin leaf slices in solution. I, II | 15, 25 |
| Incorporation of [¹⁴ C]glucose and [³ H]uridine into the major classes of RNA in, during preimplantation development of the embryo | 889 | Photosynthesis in <i>Pennisetum typhoides</i> , mechanisms regulating | 329 |
| | | <i>Phytophthora cinnamomi</i> , origin and distribution of, in Australian native plant communities | 559 |
| | | <i>Phytophthora drechsleri</i> , role of alternative hosts in survival of | 1109 |

- | | PAGE | | PAGE |
|---|--------------------|---|-----------|
| <i>Phytophthora drechsleri</i> , two ecotypes occurring in Australian native forests, separation of | 1095 | Monotreme proteins, studies on. II, III | 877, 1327 |
| <i>Phytophthora nicotianae</i> var. <i>nicotianae</i> , isolate from North Queensland, characterization of | 1087 | Tryptophyl residues in, application of enzymic hydrolysis and tritium labelling to a study of the modification of | 871 |
| <i>Phytophthora</i> spp. from pine plantations in South Australia | 163 | See also macromolecules | 591, 1435 |
| <i>Phytophthora</i> spp., recovery of potentially pathogenic, from native vegetation in Australia | 575 | <i>Pseudomonas</i> isolated from soil, camphor degradation by strains of | 999 |
| "Phytotrophin", isolation and mechanism of action of the active principle | 105 | <i>Pseudomonas tolaasii</i> , toxin production by | 509 |
| Pig: | | <i>Puccinia graminis tritici</i> : | |
| Deep freezing of boar semen. I, II, III | 219, 231, 239 | A mathematical approach to the prediction of differences in relative ability of races to survive when mixed | 1137 |
| Effect of cold shock and freeze-thawing on release of phospholipids by boar spermatozoa | 1409 | Linkage of genes for reaction to, in Selkirk wheat and related cultivars | 1145 |
| Fertility test of frozen boar spermatozoa | 291 | <i>Puccinia recondita</i> , linkage of genes for reaction to, in Selkirk wheat and related cultivars | 1145 |
| Pine plantations in South Australia, <i>Phytophthora</i> and <i>Pythium</i> spp. from | 163 | <i>Pythium</i> spp. from pine plantations in South Australia | 163 |
| See also <i>Pinus radiata</i> | 365 | <i>Pythium</i> spp., recovery of potentially pathogenic, from native vegetation in Australia | 575 |
| Pineapple plants, mature, effect of night temperature on the assimilation of carbon dioxide by | 539 | Rabbit: | |
| <i>Pinus radiata</i> , foliage of, physiological effects of mucus from the wood wasp, <i>Sirex noctilio</i> , on | 365 | Effect of storage of spermatozoa at -79°C on their subsequent transport and fertility in the rabbit doe | 645 |
| <i>Pisum</i> , <i>P. sativum</i> | | In vitro metabolism of [U- ¹⁴ C]glucose by preimplantation embryo | 653 |
| See pea | 341, 669, 675, 679 | Reproductive tract of doe, effects of human chorionic gonadotrophin on the incorporation of uridine into nucleotide pools and ribonucleic acid in | 937 |
| Plant cells, coagulant and non-coagulant fixation of | 1231 | Ram spermatozoa: | |
| Plant factor, endogenous gonadotrophin-like, isolation and mechanism of action of active principle | 105 | Effect of cold shock and freeze-thawing on release of phospholipids by | 1409 |
| Plant leaves having different transfer resistances through their two surfaces, gas exchange in | 1045 | Fertility of spermatozoa frozen in a Tris-based diluent | 513 |
| Potassium in guard cell, analysis of, by flame photometry | 309 | Response to preparations of egg yolk in semen diluents during storage at 5 or -196°C | 927 |
| Potato: | | Rat: | |
| Changes in the tricarboxylic acid cycle acids in, after anaerobiosis | 1081 | Effect of high ambient temperature in early and late lactation on litter growth and survival in | 1171 |
| Effect of temperature on the carbohydrate metabolism of tubers | 685 | Effect of hypophysectomy on testicular hydrolases, lactate dehydrogenase, and spermatogenesis in | 491 |
| Pregastric esterase and pancreatic lipase, relative importance of, on lipid absorption in calves 1-2 weeks of age | 625 | Effect of oestradiol benzoate on biliary phospholipids in | 1009 |
| Proteins: | | | |
| Effect of ultrasonic irradiation on | 583 | | |
| Fractionation and peptide mapping of proteins from feather keratins | 401 | | |

| | PAGE | | PAGE |
|---|------|--|------------|
| Effect of scrotal heating on testicular enzymes and spermatogenesis in .. | 1395 | Utilization by growing lambs of a casein-safflower oil supplement treated with formaldehyde | 1179 |
| Liver D-glucuronolactone dehydrogenase, substrate specificity of | 839 | <i>Sirex noctilio</i> , physiological effects of mucus from, on foliage of <i>Pinus radiata</i> | 365 |
| Ribulosediphosphate carboxylase subjected to low water potentials <i>in vitro</i> , protective effects of certain anions on | 1435 | Sorghum root system, young, growth analysis of | 1211 |
| Rice grains, ungerminated, ultrastructure of lipid deposits and other contents in freeze-etched coleoptile cells of .. | 357 | <i>Sorghum sudanense</i> , photosynthesis by thin leaf slices of | 15 |
| Rhinoceros horn, morphology of, a scanning electron microscope study .. | 395 | Soybean root nodules: Aeration pathways in | 729 |
| Ruminants, sulphur metabolism and excretion studies in. XII | 1429 | Cellular location and concentration of leghaemoglobin in | 741 |
| <i>Sarcina morrhuae</i> , extremely halophilic bacterium, phospholipid of | 787 | Spermatogenesis in the rat | 491, 1395 |
| <i>Setaria splendida</i> , <i>in vivo</i> digestibility of cell-wall polysaccharides of | 1225 | Stone fruit in Queensland, bacterial spot of | 171 |
| Sheep: Circulating cortisol levels in, response of, to various stresses and to reserpine administration | 477 | <i>Stylosanthes humilis</i> and <i>Lotononis bainesii</i> , comparative efficiency of development under cold stress | 693 |
| Concentration of ϵ -N-methyllysine in plasma | 1127 | Sugar cane, causal agent of leaf-scald disease of, pathogenic variation in .. | 781 |
| Effect of cold shock and freeze-thawing on release of phospholipids by ram spermatozoa | 1409 | <i>Tachyglossus aculeatus aculeatus</i> : Amino acid sequence of the α -chain in haemoglobin from | 877 |
| Erythrocyte glutathione level in relation to haemoglobin type in Rajasthan desert sheep | 1221 | Amino acid sequence of the α - and β -globin chains of the minor haemoglobin from | 1327 |
| Fertility of ram spermatozoa frozen in a Tris-based diluent | 513 | <i>Tachyglossus aculeatus</i> , haemoglobin polymorphisms in | 605 |
| Fertilized ova, storage at 5°C | 1421 | Tobacco plant, an exploration of the carbon economy of. I | 1057 |
| <i>In vivo</i> digestibility of cell-wall polysaccharides of <i>Setaria splendida</i> and <i>Lolium perenne</i> cv. Kangaroo Valley | 1225 | <i>Triticum</i> , <i>T. aestivum</i> , <i>T. durum</i> See wheat 1, 77, 277, 295, 715, 793, 813, | 1005, 1145 |
| Kidney function and net glucose production in normal and acidotic .. | 1389 | Tryptophan, effect of other amino acids on recovery of, following acid hydrolysis | 287 |
| Metabolism of cystine by Merino sheep genetically different in wool production. III | 465 | <i>Utricularia</i> sp., rapid movement of the bladder of | 1115 |
| Nitrogen and sulphur composition of ruminal bacteria from | 1429 | <i>Verticillium dahliae</i> colonizing plant roots, observations on the origin and nature of | 151 |
| Plasma amino acid patterns in sheep receiving abomasal infusions of methionine and cystine | 635 | <i>Vicia faba</i> : Daily changes in stomatal aperture and in carbohydrates and malate within epidermis and mesophyll of leaves of .. | 1035 |
| Response of ram spermatozoa to preparations of egg yolk in semen diluents during storage at 5 or -196°C .. | 927 | Preparation of rolled epidermis of, so that stomata are the only viable cells | 309 |
| Uterus of the ewe. II | 947 | | |

| | PAGE | | PAGE |
|--|----------------|--|--------------------|
| Wheat: | | Wildlife of the Northern Territory, | |
| A comparative study of the distribution | | some organochlorine pesticide | |
| and speed of movement of ^{14}C | | residues in | 1161 |
| assimilates and foliar-applied | | Wool fibres, incorporation of radioactivity | |
| ^{32}P -labelled phosphate in | 1 | into, during and after intravenous | |
| Development of photosynthetic | | infusions of L- ^{35}S cystine and its | |
| induction transients in greening leaves | | relationship to wool growth and | |
| of | 277 | efficiency of conversion of food into | |
| Factors controlling the release of | | wool | 465 |
| phosphorus from decomposing roots | 715 | Wool growth, influence of various | |
| Influence of (2-chloroethyl)trimethyl- | | formaldehyde treatments on the | |
| ammonium chloride and gibberellic | | nutritional value of casein for .. | 961 |
| acid on growth and proline | | Wool growth rate, influence of abomasal | |
| accumulation of, during water stress | 77 | and intravenous supplements of sulphur- | |
| Linkage of genes for reaction to | | containing amino acids on | 249 |
| <i>Puccinia graminis</i> f. sp. <i>tritici</i> and | | <i>Xanthomonas albilineans</i> , causal agent of | |
| <i>P. recondita</i> in Selkirk and related | | leaf-scald disease of sugar cane, | |
| cultivars | 1145 | pathogenic variation in | 781 |
| Photosynthetic characteristics of | | <i>Xanthomonas pruni</i> , bacterial spot of stone | |
| modern and primitive species | 295 | fruit in Queensland | 171 |
| Studies on wheat endosperm. I, II, | | <i>Zea mays</i> | |
| III | 793, 813, 1005 | See maize | 35, 505, 757, 1015 |