

# 愛知県農業総合試験場研究報告 第52号

## 目 次

### ( 原著論文 )

|   |    |
|---|----|
| かがり弁ギク・切り花のブランド化に向けた消費者及び流通関係者へのアンケート調査による評価 ……   | 1  |
| 田中雄一・早川優子・玉越文典・金原義浩   |    |
| トマト黄化病の簡易検定法の開発 ……  | 11 |
| 鈴木良地・田中はるか・恒川健太・内田祐太・坂紀邦  |    |
| 土壌、堆肥、化学肥料由来別窒素利用率と可給態窒素に基づいた秋冬キャベツおよびスイートコーンの<br>施肥指針 ……   | 17 |
| 日置雅之・中村嘉孝・山本 拓・大橋祥範・糟谷真宏・瀧勝俊  |    |
| 土壌炭素動態(RothC)モデルを用いた砂質露地畑における土壌炭素の変動解析と土壌化学性の<br>変動予測の可能性 ……                                      | 23 |
| 中村嘉孝・安藤 薫・瀧勝俊   |    |
| 高温登熟性を有する水稻早生系統「愛知135号」の育成 ……   | 31 |
| 濱頭 葵・井手康人・杉浦和彦・中村 充・津田健吾・加藤 満・池田彰弘・杉浦直樹・<br>伊藤 晃・松本祐保・水上優子・森賢一郎・渡邊靖治・安藤祐嗣・瀧川貴大・嶋田稔貴・<br>中嶋泰則・根津 崇 |    |
| リン酸が蓄積した圃場におけるリン酸減肥がトマトの半促成栽培及び促成長期栽培に及ぼす影響 ……  | 41 |
| 佐藤広幸・今枝宏幸・大藪哲也・番喜宏・恒川靖弘   |    |
| イチゴの葉面積を推定する回帰モデルの作成 ……   | 49 |
| 安藤(小島)寛子・小川理恵   |    |
| 新品種輪ギク「夢の煌めき」シリーズの鉢物冬期出荷技術の開発 ……  | 57 |
| 青木 献・佐久真ひろみ・新井和俊・二村幹雄   |    |
| 夏期における超微粒ミスト噴霧を伴う間欠冷房がファレノプシスの開花品質、電力使用量に<br>及ぼす影響 ……   | 63 |
| 服部裕美・熊崎 忠・大月裕介・南 明希・吉田龍博・新井和俊・二村幹雄  |    |
| カーネーションの突然変異育種に有効なシンクロトロン光の吸収線量及び波長 ……  | 73 |
| 松野純子・戸田浩子・山元俊輝・山口徳之・新井和俊  |    |
| ニホンナシ新品種「瑞月」の育成 ……  | 81 |
| 市川 啓・上林義幸・西本浩之・伊藤 茂・水谷浩孝・眞子伸生   |    |

|   |     |
|---|-----|
| 育成期の粗飼料の違いが黒毛和種肥育牛の発育、枝肉成績及び経済性に及ぼす影響           | 87  |
| 児嶋朋貴・青木直人・大川智章                                  |     |
| 全粒玄米の混合割合及び加工形態がウズラの産卵性及び経済性に及ぼす影響              | 93  |
| 長谷川恵実香・小島朋子・美濃口直和・木野勝敏・佐藤正美                     |     |
| ヤシ殻およびトマト培養土を乳牛ふん尿の堆肥化で副資材として利用した場合の発酵と臭気に対する特徴 | 99  |
| 星野佑太・瀧澤秀明・黒柳 悟・三輪恒介・堤 公生・豊島浩一・石代正義              |     |
| 夜間の短時間変温管理が輪ギクの到花日数及びエネルギー消費量に及ぼす影響             | 107 |
| 平松裕邦・植村真也・石原元浩・渡邊孝政・新井和俊・二村幹雄                   |     |

## ( 研究ノート )

|   |     |
|---|-----|
| 愛知県における水田土壌のカリウム含量の実態                                 | 113 |
| 糟谷真宏・日置雅之・橋本 創・都築宏明・加藤 保・瀧 勝俊                         |     |
| 愛知県内アブラナ科野菜栽培ほ場における土壌窒素肥沃度の実態                         | 117 |
| 日置雅之・都築宏明・瀧 勝俊  |     |
| 家畜ふん堆肥を連用した砂質畑土壌におけるカルシウムの施肥がリンの溶脱に及ぼす影響              | 121 |
| 中村嘉孝・安藤 薫・糟谷真宏・瀧 勝俊                                   |     |
| 食用ペンタスにおける農薬「フルフェノクスロン」の作物残留試験のための分析方法の確立             | 125 |
| 安井俊樹・吉村幸江・瀧 勝俊  |     |
| コムギの赤さび病抵抗性の検定法の開発                                    | 129 |
| 後藤紘志・荒川みずほ・伊藤 晃                                       |     |
| イチゴ品種「ゆめのか」における窒素施用時期及び施用量の違いが頂果房の先青果数と収量に与える影響       | 133 |
| 嶋本千晶・佐藤広幸・大藪哲也・番 喜宏・恒川靖弘                              |     |
| 着果数に応じた収穫果実重の変更管理が促成ナス栽培における生育・収量に及ぼす影響               | 137 |
| 伊藤 緑・小川理恵・恒川靖弘  |     |
| ケイトウ切り花の出荷前処理、輸送想定温度及び冷蔵貯蔵期間が日持ち性に及ぼす影響               | 141 |
| 戸田浩子・新井和俊・二村幹雄  |     |
| 飽差等環境制御下において収穫時期及びCO <sub>2</sub> 施用がバラ切り花の日持ち性に及ぼす影響 | 145 |
| 犬伏加恵・和田朋幸・新井和俊・二村幹雄                                   |     |
| 鉢物ファレノプシスへのベンジルアミノプリン処理が花の品質及び日持ち性に及ぼす影響              | 149 |
| 吉田龍博・南 明希・服部裕美・新井和俊・二村幹雄                              |     |
| グロリオサ切り花における保管温度・日数と糖による出荷前処理が日持ち性に及ぼす影響              | 153 |
| 山元俊輝・戸田浩子・新井和俊・二村幹雄                                   |     |

|   |     |
|---|-----|
| 乳牛における授精後の腔内留置型黄体ホルモン製剤(CIDR)の20日間留置と早期妊娠鑑定による再授精プログラムの開発 ..... | 157 |
| 福島宜彦・青木直人・大川智章  |     |
| 貯卵期間中の短時間ふ卵処理が名古屋種種卵のふ化率およびヒナ活力に及ぼす影響 .....                     | 161 |
| 宮川博充・赤尾美佳・玉田彩織・佐藤正美   |     |
| ウズラにおける個体別茶玉卵発生の経時的推移 .....                                     | 165 |
| 美濃口直和・佐藤正美・木野勝敏   |     |
| 酒粕の給与時期及び給与量が肉用名古屋種の生産性及び肉質に及ぼす影響 .....                         | 169 |
| 大口秀司・宮川博充・中村和久・佐藤正美   |     |
| ウズラの育成期における玄米の給与が発育並びに産卵初期成績に及ぼす影響 .....                        | 173 |
| 玉田彩織・美濃口直和・長谷川恵実香・佐藤正美・木野勝敏・栗田隆之                                |     |
| ソルガム後作キャベツにおけるカリ減肥技術の確立 .....                                   | 177 |
| 森下俊哉・大橋祥範・山本 拓・土井美佑季・中村哉志                                       |     |
| 強遮光短期被覆による濃緑で高品質な食品加工向け直がけ碾茶生産技術の開発 .....                       | 181 |
| 辻 浩孝・大水 洋・白井一則  |     |
| 碾茶の色と品質との関係 .....   | 185 |
| 辻 浩孝・大水 洋・白井一則  |     |
| 中山間地在来資源エゴマ「名倉種」との2作体系として利用可能な品目 .....                          | 189 |
| 田中哲司・渡邊靖洋・瀧 勝俊・大竹敏也   |     |
| ジネンジョの波板利用におけるムカゴの播種密度及び大きさが新生芋の収量及び品質に及ぼす影響 .....              | 193 |
| 田中哲司・中村嘉孝・瀧 勝俊・大竹敏也   |     |

**RESEARCH BULLETIN OF  
THE AICHI AGRICULTURAL RESEARCH CENTER    No.52  
CONTENTS**

**( ORIGINAL ARTICLES )**

- Consumer, Wholesaler, and Tradesman Evaluations of New Chrysanthemum Cultivars ‘Kagariben-giku’ with Lacinate Fringed Ray Florets in Cut Flowers for Their Brand Promotion ..... 1  
TANAKA Yuuichi, HAYAKAWA Yuko, TAMAKOSHI Fuminori, and KINBARA Yoshihiro
- Development of a Simple Detection Method for Tomato Chlorosis Disease ..... 11  
SUZUKI Ryoji, TANAKA Haruka, TSUNEKAWA Kenta, UCHIDA Yuta, and SAKA Norikuni
- Nitrogen Fertilizer Application Guideline for Autumn-winter Cabbage and Sweet Corn Based on the Nitrogen Utilization Rate of Soil, Compost, and Chemical Fertilizer and the Amount of Available Nitrogen ..... 17  
HIOKI Masayuki, NAKAMURA Yoshitaka, YAMAMOTO Taku, OHASHI Yoshinori, KASUYA Masahiro and TAKI Katsutoshi
- Analysis of Soil Organic Carbon Dynamics in Sandy Upland Fields under Different Management Regimes of Livestock Manure Application Using the Rothamsted Carbon Model and Prediction of Changes in Soil Chemical Properties ..... 23  
NAKAMURA Yoshitaka, ANODO Kaori and TAKI Katsutoshi
- Breeding of a New Rice Variety ‘Aichi 135’ with Tolerance to High Temperature During Maturation ..... 31  
HAMAGASHIRA Aoi, IDE Yasuto, SUGIURA Kazuhiko, NAKAMURA Mitsuru, TSUDA Kengo, KATO Mitsuru, IKEDA Akihiro, SUGIURA Naoki, ITO Akira, MATSUMOTO Yuho, MIZUKAMI Yuko, MORI Ken-ichiro, WATANABE Yasuharu, ANDO Yuji, TAKIKAWA Takahiro, SHIMADA Toshiki, NAKAJIMA Yasunori, and NEZU Takashi
- Effects of Phosphate Fertilizer Reduction in Semi-Forcing and Long-Term Forcing Culture of Tomato in a Greenhouse with Excessive Phosphate ..... 41  
SATOHI Hiroyuki, IMAEDA Hiroyuki, OYABU Tetsuya, BAN Yoshihiro and TSUNEKAWA Yasuhiro
- Construction of the Strawberry Leaf-Area Estimation Formula ..... 49  
KOJIMA-ANDO Hiroko and OGAWA Rie
- Development of Winter Shipping Technology for New Varieties of Ring Chrysanthemum ‘Yume no Kirameki’ Series ..... 57  
AOKI Ken, SAKUMA Hiromi, ARAI Kazutoshi and NIMURA Mikio
- Effects of Intermittent Cooling and Super-micro-fog Spraying in the Summer Season on the Flowering Quality and Power Consumption of *Phalaenopsis* ..... 63  
HATTORI Hiromi, KUMAZAKI Tadashi, OHTSUKI Yuusuke, YOSHIDA Tatsuhiko, MINAMI Aki, ARAI Kazutoshi and NIMURA Mikio
- Effective Absorption Dose and Wavelength of Synchrotron Light for Mutation Breeding in Carnation ... 73  
MATSUNO Junko, TODA Hiroko, YAMAMOTO Toshiki, YAMAGUCHI Noriyuki and ARAI Kazutoshi

|  |     |
|--|-----|
| Breeding of a New Japanese Pear Cultivar 'Zuigetsu' .....  | 81  |
| ICHIKAWA Kei, UEBAYASHI Yoshiyuki, NISHIMOTO Hiroyuki, ITOU Sigeru, MIZUTANI Hirotaka and<br>MANAGO Nobuo  |     |
| Effect of Feeding Cut Sudangrass Hay as a Replacement for Timothy Hay in the Early Fattening Period<br>on Growth, Carcass Characteristics and Profitability in Japanese Black Steers ..... | 87  |
| KOJIMA Tomoki, AOKI Naoto and OOKAWA Toshiyuki   |     |
| Effects of Feeding Diets Containing Different Amounts and Granularities of Brown Rice<br>on the Productivity and Profitability of Laying Japanese Quails .....                             | 93  |
| HASEGAWA Emika, KOJIMA Tomoko, MINOGUCHI Naokazu, KINO Katsutoshi and SATO Masami  |     |
| Characteristics of Fermentation and of Composting Odor with Coconut Husk or Culture Soils<br>for Tomato Plants and Cattle Manure .....   | 99  |
| HOSHINO Yuuta, TAKIZAWA Hideaki, KUROYANAGI Satoru, MIWA Kousuke, TSUTSUMI Kousei,<br>TOYOSHIMA Kouichi and ISHISHIRO Masayoshi  |     |
| Effects of Short-time Temperature Control at Night on the Number of Flowering Days and Energy<br>Consumption in Chrysanthemum .....  | 107 |
| HIRAMATSU Hirokuni, UEMURA Shinya, ISHIHARA Motohiro, WATANABE Takamasa, ARAI Kazutoshi and<br>NIMURA Mikio  |     |
| <b>( RESEARCH NOTE )</b>   |     |
| Potassium Fertility Status of Paddy Soil in Aichi Prefecture .....   | 113 |
| KASUYA Masahiro, HIOKI Masayuki, HASHIMOTO So, TSUZUKI Hiroaki, KATO Tamotsu<br>and TAKI Katsutoshi  |     |
| Actual Conditions of Soil Nitrogen Fertility in Cruciferous Vegetable Fields in Aichi Prefecture .....   | 117 |
| HIOKI Masayuki, TSUZUKI Hiroaki and TAKI Katsutoshi  |     |
| Effect of Calcium Fertilization on Leaching of Phosphorus in Sandy Upland Field with Continuous Use of<br>Livestock Manure .....   | 121 |
| NAKAMURA Yoshitaka, ANODO Kaori, KASUYA Masahiro and TAKI Katsutoshi   |     |
| Improving a Residue Analytical Method of "Flufenoxuron" in Edible Pentas for Pesticide Registration ...  | 125 |
| YASUI Toshiki, YOSHIMURA Yukie and TAKI Katsutoshi   |     |
| Development of a Test Method for Resistance to Red Rust of Wheat .....   | 129 |
| GOTO koji, ARAKAWA mizuho and ITO akira  |     |
| Effects of the Time and the Amount of Nitrogen Fertilizer Application on the Number of Top-Blued<br>Fruits and Yield of Terminal Inflorescence in Strawberry Cultivar 'Yumenoka' .....     | 133 |
| SHIMAMOTO Chiaki, SATO Hiroyuki, OYABU Tetsuya, BAN Yoshihiro<br>and TSUNEKAWA Yasuhiro  |     |
| Effect of Change Management of Weight of Fruits to Harvest According to the Number of Fruits Set<br>on Growth and Yield of Eggplant in Forcing Cultivation .....                           | 137 |
| ITO Midori, OGAWA Rie and TSUNEKAWA Yasuhiro   |     |
| The Pre-shipment Treatment, Estimated Transport Temperature and Cold Storage Period of<br>Cut Flowering Cockscomb Are Effect on Vase Life .....  | 141 |
| TODA Hiroko, ARAI Kazutoshi and NIMURA Mikio i   |     |

|  |     |
|--|-----|
| Effects of Harvest Time and CO <sub>2</sub> Enrichment on Vase Life of Cut Rose Under Saturation Deficit, Etc. Control of Greenhouse Environment .....                                     | 145 |
| INUBUSHI Kae, WADA Tomoyuki, ARAI Kazutoshi and NIMURA Mikio   |     |
| Effects of Benzylaminopurine Treatment on Flower Quality and Longevity of Potted Phalaenopsis in Cut Rose Cultivation .....  | 149 |
| YOSHIDA Tatsuhiro, MINAMI Aki, HATTORI Hiromi, ARAI Kazutoshi and NIMURA Mikio   |     |
| Effect of Temperature, Number of Days and Sucrose Prior to Shipment on the Vase Life of cut Gloriosa Flower .....  | 153 |
| Yamamoto toshiki, Toda hiroko, Arai toshikazu and Nimura mikio   |     |
| A Novel (20-day) Controlled Internal Drug Release (CIDR) Program After Artificial Insemination : an Approach for Promotion of Conception and Early Pregnancy Diagnosis in Dairy Cows ..... | 157 |
| FUKUSHIMA Yoshihiko, AOKI Naoto and OKAWA Toshiyuki  |     |
| Effect of Short Period of Incubation During Egg Storage on Hatchability and Chick Quality in Stored Nagoya Fertile Eggs .....  | 161 |
| MIYAKAWA Hiromitsu, AKAO Mika, TAMADA Saori and SATO Masami<br>and TOYOSHIMA koichi  |     |
| Changes Over Time for Each Individual Related to the Occurrence of Brown Eggs in Japanese Quail ...  | 165 |
| MINOGUCHI Naokazu, SATO Masami and KINO Katsutoshi   |     |
| Effect of Feeding Sake Lees on the Growth Performance and Meat Quality in Meat-Type Nagoya Breed Chickens .....  | 169 |
| OHGUCHI Hideshi, MIYAKAWA Hiromitsu, NAKAMURA Kazuhisa and SATO Masami   |     |
| Effects of Brown Rice Feeding in Growing Period on Raising and Laying Performance of Japanese Quail .....  | 173 |
| TAMADA Saori, MINOGUCHI Naokazu, HASEGAWA Emika, SATO Msami, KINO Katsutoshi<br>and KURITA Takayuki  |     |
| Establishment of Potassium Fertilizer Reduction Technology for Sorghum Succeeding Cabbage .....  | 177 |
| MORISHITA Toshiya, OHASHI Yoshinori, YAMAMOTO Taku, DOI Miyuki and NAKAMURA Chikashi   |     |
| Development of Tencha Production Method for Dark Green High-Quality Food Processing with Strong Shading Short-Term Direct Covering .....   | 181 |
| TSUJI Hirotaka, OMIZU Hiroshi and SHIRAI Kazunori  |     |
| Relationship Between Color and Quality of Tencha .....   | 185 |
| TSUJI Hirotaka, OMIZU Hiroshi and SHIRAI Kazunori  |     |
| Items That Can Be Planted Twice a Year with the Local Resource Perilla "Nagura Seed" in the Mountains Area .....   | 189 |
| TA NAKA Tetsushi, WATANABE Yasuhiro, TAKI Katsutoshi and OTAKE Toshiya   |     |
| Effect of Sowing Density and Size of Propagule on the Yield and Quality of New Yames in the Use of Waved Sheet of Japanese Yam .....   | 193 |
| TANAKA Tetsushi, NAKAMURA Yoshitaka, TAKI Katsutoshi and OTAKE Toshiya   |     |