

## Book Reviews

### John Innes Institute: Sixty Ninth Annual Report 1978.

1979, 151 pp., 41 figs., £ 3.-

The John Innes Institute, which devotes itself largely to genetics and applied genetics of plants, has once again presented an annual report which delivers a clear-cut picture of its activities. In addition to some peeks into the institute's internal life, the directors' report and its seeds list, it also contains fine, short research reports which are arranged not around the problems but according to the subject being investigated: peas, fruits, ornamental, vegetables, *Streptomyces*, *Rhizobium*, *Agrobacterium*, viruses and nucleic acids, as well as plants protoplasts, cell wall structure, micropropagation and pollen culture.

These well documented and illustrated reports reflect the high intellectual levels maintained at this very active institute. It seems that John Innes is able to bridge the gap between science and its applications in a way that many other institutes strive to do.

Most impressive is the breeding program for vegetables, which has a strong emphasis on peas. Furthermore, we see the increasing interest of the John Innes staff in genetic manipulation, which has resulted in the adaptation of new techniques into protoplast fusion, and of recombinant DNA manipulation. The bottleneck in the application of these in vitro techniques is the development of suitable vectors for the induction of foreign DNA into plants. The work at John Innes is concentrating on two possible vector systems: the tumor-inducing plasmids of *Agrobacterium tumefaciens* and the viruses of the cauliflower mosaic group. Such work is building a link between genetic and virus research groups.

It is always worthwhile to have a look in the John Innes year report: it gives an idea how pure science can assist applied science.

H.F. Linskens, Nijmegen

Gravert, H.O.; Wassmuth, R.; Weniger, J. (eds.): Einführung in die Züchtung, Fütterung und Haltung landwirtschaftlicher Nutztiere. Hamburg, Berlin. P. Parey 1979. 317 pp., 113 figs., 117 tabs. Soft bound DM 54,-

The title 'Introduction to breeding, feeding and management of livestock' is very promising, an impression reinforced by the names of the authors. The reader will certainly not be disappointed unless he is interested in poultry husbandry, that area of livestock husbandry is not mentioned.

The book gives a very clear insight into the most important aspects of livestock husbandry as far as it concerns cattle, swine, horses, sheep and goats. The authors succeed in their desire to give an introductory general picture of breeding, feeding and handling of these five mammals. Attention is also given to milk forming, milking of cows, slaughterquality of pigs, aspects of the performances of horses and wool quality.

Although it is written by German scientists attention was also given to breeds kept in other countries, however, the feeding and handling aspects give an almost purely German picture.

The book is very homogenous in its style and very well composed. It gives the scientific situation of the moment adapted to practical circumstances. If one wants to get a general picture of animal husbandry and he is acquainted already with some genetics, chemistry, animal physiology and nutrition he obtains in little more than 300 pages a good insight into a very important aspect of agriculture.

The well known authors have succeeded in all aspects: the book is easily readable and has clear language, schedules and tables. The

same can be said of the photos. There is only one drawback: the language. It would be worthwhile to translate this introductory general book about animal husbandry. The authors deserve that. To whoever reads German: the price of this book is less than its worth.

S. Boer Iwema, Wageningen

### L. Sachs: Statistische Methoden

Berlin-Heidelberg-New York: Springer 1979. XIII, 105 pp., 5 figs. 26 tabs. Soft bound \$ 6.-

For a review of the third edition of this book the reader is referred to TAG 51, page 46 (1977).

In this fourth edition minor additions have been inserted in the text, which generally turn out to be improvements and satisfy most of the criticisms made in the former review.

Two smaller mistakes, overlooked in the former review, are worth mentioning:

1. The maximum value of the coefficient of variation (p 22) is  $\sqrt{n}$  (instead of  $\sqrt{n-1}$ ) and hence  $\sqrt{n-1}$  in formula (8) should be replaced with  $\sqrt{n}$ . As a result in the numerical example  $V_r = 17\%$ .
2. The undermost  $c$  in the lowerband for  $\pi$  (formula (48), p 75) should be  $c + 1$ , and  $(n-c)$  in the upperbound should be  $(n-c + 1)$ .

The numbers of degrees of freedom should be:

$\nu_1 = 2(n-c)$ ,  $\nu_2 = 2(c + 1)$  for the lower and

$\nu_1 = 2c$ ,  $\nu_2 = 2(n-c + 1)$  for the upperbound.

As a result the 98% confidence limits for  $\pi$  in the numerical example turn out to be 0,046 and 0,374. Ph. van Elteren, Nijmegen

### Kranz, J.; Schmutterer, H.; Koch, W. (eds.): Krankheiten, Schädlinge und Unkräuter im tropischen Pflanzenbau.

Hamburg, Berlin: P. Parey 1979. 739 pp., 238, 253 7 tabs. Hard bound DM 118,-

This book is the result of exemplary team-work from numerous experts of tropical plant protection from many countries. The grouping of infesting organisms and weeds according to the natural system appears to be consistent and not at all unfavourable since their coordination with respective cultivated crops is ensured by voluminous host indices. By dividing the editorship into three areas: pathogenic agents (Kranz), pests (Schmutterer) and weeds (Koch), the risk of non-uniformity was averted which could be expected in such a comprehensive work in view of the large number of authors. As a result, the main infesting organisms have been described in a concise and very clearly arranged manner. We also must point out that ecological specialities, natural antagonists, prophylactic plant-protective measures as well as forms of resistance and the special possibilities of the biological and chemical plant protection likewise draw attention. Thus the book has managed to provide the chief elements of integrated plant protection studies practical for purposes. References are included for anyone making a more detailed study.

With this idea in mind, the editors far-reachingly realize their intention to impart, above all, advice and information in biology, ecology, and abatement of the pests, pathogenic agents, and weeds. Numerous very good illustrations facilitate the explanations and improve the clearness of the text. In a body, the title fulfils high demands. Hopefully it will gain with additional publication in other languages — wide distribution and general recognition.

Th. Wetzels, Halle/Saale