The Camellia Bulletin

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JAPONICA DAIKAGURA VARIEGATED

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The Camellia Bulletin, in keeping with the fundamental concept of the amateur organizations it serves, is a non-profit enterprise published quarterly (Jan., Apr., July and Oct.) by the Northern California Camellia Society, Inc. Its principal objects and purposes are furtherance of the enjoyment and benefits derived from the culture of camellias and the dissemination of knowledge related thereto. By special arrangement with, and through the co-operation of, the Pacific Camellia Society, The Camellia Society of Sacramento and The Camellia Society of Santa Clara County, this Bulletin is also available in conjunction with membership, which is open to the general public upon application to the Secretary of any of the societies mentioned, at the respective addresses shown above. For full membership in the Northern California Camellia Society, Inc., and with respect to all persons resident in the counties of Alameda, Contra Costa, Marin, San Francisco and San Mateo, the annual dues are $5.00—outside that area, limited membership privileges, including the right to all Society publications, are $3.00 per year. MEETINGS are held on the first Monday of each month November through May, at 8 p.m. in the Claremont Junior High School Auditorium, Oakland, and include an informal flower display and refreshments. All matter regarding the content of the Bulletin should be addressed to the Editor. CHANGE OF ADDRESS should be reported promptly to your Secretary, as the Post Office will not forward periodicals.

TO FERTILIZE OR NOT TO FERTILIZE?

The principle of fertilization is so old that it is idle to argue its case — under certain conditions it is indispensable in the culture of camellias. However, the fact remains that it is generally an artificial, rather than a natural process, and as such entails some risk. I say "generally artificial" because the use of mulches composed of vegetative matter also constitutes feeding, while fertilization, in our terms of reference, means the use of something other than the camellia's natural food. Using the same expression, "under certain conditions" fertilization is also unnecessary, for the writer has seen hundred-year-old camellias bearing thousands of blooms, many of which would be blue ribbon candidates which had never been fertilized, although annually mulched. Because of this contradiction and two other controlling factors which I shall mention later, the fertilization question has become without doubt the most controversial matter in the entire culture of camellias. It is the purpose of this specialized issue to try to unravel this tangle by presenting the divergent views of recognized authorities, in keeping with our purpose of endeavoring to resolve confusion where it may exist.

Although much has been written on this subject, a review of the literature is not a solution. For example, consider the bald statement by Halliday: "I never use guano or any other fertilizer for camellias", in relation to the occasional super-technical advice of the present day that one should make up his own compound of the trace as well as the essential elements and adhere to a strict program of plant feeding — or else! Unquestionably, for the average person, the truth lies somewhere in between these extremes.

It is our guess that this confusion and controversy arises largely by reason of the failure of the person offering advice to qualify it properly, for there are two matters that are absolutely controlling: one's growing conditions and one's objectives. Certainly we cannot prescribe the same technique for the person growing camellias in the ground as for him who grows his plants solely in containers, for in one case the environment is natural while in the other it is artificial. Nor can the same case be made for the private individual as for the commercial grower because their objectives are usually quite different and may even be diametrically opposite. A nurseryman's business being to produce a salable plant as quickly as possible, the emphasis naturally must be upon growth; however, the average person's usual concern is with florescence and he may actually prefer slow growth to avoid the necessity of frequent repotting or transplanting. (In fact, many regard the camellia's slow growth as one of its greatest attributes.) Now, if we make the extreme comparison of the professional growing his plants in containers versus the amateur growing camellias in the open ground we get a contradiction of both the objective and the environment. No wonder there are widely different techniques, resulting in bewilderment on the part of the uninitiated! It follows, therefore, that there can be no standard procedure that will fit all conditions. This is certainly an instance where circumstances alter cases and it is up to the individual to determine first, what his objectives are; then to apply such methods as are generally agreed upon as desirable, **under his particular type of growing conditions.**

The farther away we get from nature, the more necessary it is to employ artifices and substitutes. Thus, in the case of container culture, fertilization becomes absolutely indispensable. Whereas, in the open ground, the camellia has comparative freedom for the roots to seek out nourishment and moisture, when imprisoned between the walls of a container it rapidly consumes all the nutrients in the soil and, in fact, the roots will eventually supplant the soil itself

unless repotted. In the case of ground planting, there are also many conditions which necessitate fertilization if optimum performance is to be had. Where the soil is poor or lacking in any essential element, and even in good soil where there are strongly-competing roots from other vegetation, the use of an acid camellia-azalea type fertilizer will be found extremely beneficial. Aside from such ordinary needs of the plant for proper growth, fertilization at or slightly prior to the blooming period has been proven to increase the size and quality of the flowers.

However, in those exceptional cases where virgin soil and ideal environmental conditions generally are present, the camellia, which has the superior form of growth of a tree (which it is) soon acquires such vigor and strength as often to make unnecessary and even unwise the use of supplemental feeding devices. In this regard, we should never lose sight of the fact that, in Nature's wonderful scheme nothing is destroyed, it simply assumes another form. Let me quote the following from an excellent source on the subject of plant foods:* "In nature the decay of accumulated vegetable matter in the surface soil and the disintegration of mineral parts of the subsoil maintain a balanced supply of these (essential) substances, the elements continually being returned to the soil as plants die and decay where they grew". If, then, we regularly and svstematically add humus (compost, leaf mold, etc.) as a surface dressing, a well-grown camellia has everything it needs, **provided** it is growing naturally in good soil to begin with. But the question arises "Do you know you have such soil?" and, if the answer is "no", you had better fertilize.

Granted that fertilization is indicated, what to use, when and how? Here, again, there certainly is no unanimity of opinion — in fact, there are almost as many pet techniques as there are outstanding growers — and this opens up another battle: the organic vs. the inorganic fertilizer partisans. Boiling it all down, there seem to be at least three important principles that come to the surface: (1) the fertilizer used should have an organic source of nitrogen; (2) normally, feedings should preferably be frequent and light, not heavy feedings widely separated; (3) alternate in the type of fertilizer used, particularly as between the liquid and dry forms, to get the benefits of each. Finally, we would point out that the reputations of our contributors and the differences in their techniques constitutes sufficient evidence there is no one and only way to achieve outstanding success in this matter. The principles on which they generally concur must, of course, be given the greatest weight. But above all, let the reader first be sure that his conditions and objectives match those of whichever of these highly-qualified authorities he chooses to follow.

A parting admonition: Fertilizer in the hands of the novice can be a dangerous weapon in the garden, especially the chemical forms and particularly those having a high nitrogen content (over 5%). Being soluble in water, their stimulative effect is instantaneous, and easily fatal in a confined area. Animal manures have a relatively low nitrogen content and, like cottonseed meal, must decompose before becoming available to the camellia, thus are slow-acting and relatively safe. The more highly concentrated the fertilizer, the more experienced the user should be. As in the case with the people in this plentiful country, of whom far more die from over-stimulation and over-eating than from starvation, so it is with camellias — far more are killed by over-fertilizing than die from malnutrition.

—Editor.

*The New Garden Encyclopedia, Wm. H. Wise & Co., 1941 revised edition.

BREAKFAST, LUNCH AND DINNER

C. W. Lattin, Oakland, California

Volumes have been written and rewritten regarding the controversial subject of why, when and how of diets. In this article I am going to try to give the principles governing my idea of a good diet — but only as I know how it will affect a camellia. Fertilization is a diet.

We all know that most human diets are to reduce or increase weight — particularly to reduce the waist line. The human diet is supposed to be well balanced but, if not, and there are too many calories, we bulge here or there and get out of shape in general. We should not be our own doctor but should seek professional care in such matters. The camellia diet has also many professional and technical aspects which the amateur generally does not or cannot understand.

Like most people, I eat breakfast, lunch, the mid-afternoon "coffee break", dinner and sometimes a late "snack" out of the ice box before going to bed. Let's see how this program can be applied to a camellia. Do they need breakfast, lunch and dinner? You bet your boots they do! But whether it be ham and eggs, scrambled eggs, toast or just cereal for breakfast; a double-decker sandwich or a good salad for lunch; meat and potatoes, vegetables and the works for dinner, I believe is unimportant. What **is** important though, is why and when we give our camellias breakfast, lunch and dinner. A camellia diet is given in order to produce healthy, well-shaped and vigorous (not too lush) growth. Plants that produce blue ribbon flowers.

Before the **why** I fertilize and **when** I fertilize, there are many other important factors we should consider besides fertilizer that enter into a well grown camellia and good flowers. These are, as we all know, the location in which it is grown, planting mix, correct and adequate watering, uniformly cool temperatures in the winter and high temperatures of short duration in the summer, together with high humidity. In addition, adequate control of petal blight. All of the fertilizing techniques, varying component elements in the fertilizer, amounts and time schedules will not substitute for these fundamental essentials of growing top notch plants and "super-duper" flowers. To me fertilizer is just one of "the" essentials.

A few years ago, realizing the importance of good environment, my wife and I tried to locate a spot close to San Francisco that would be all-inclusive. After searching for a considerable time, we located such a place in the Santa Cruz Mountains. It is at an elevation of approximately 2,000 feet and the soil is an excellent sandy loam. A stand of red wood trees gives an abundance of excellent leaf mold. The rainfall is between 45 and 80 inches per year with an average of over 60. The summer temperatures range between 80 and 105 degrees and are generally accompanied with high humidity because of the close proximity to the Pacific Ocean. Still following the original premise that a camellia must be grown in the right location, we built a lath house of approximately 15,000 square feet and equipped it with automatic overhead watering. Because of this relatively small lath area, a problem arose as to how best to care for over 10,000 plants consisting of about 850 varieties without being "forced out" by a jungle of plant growth.

This was the first time that I had really become interested in fertilizing and in camellia diets. I went searching for answers from the expert "Camellia Doctors". From these, I was led to believe that the diet should be one containing a relatively small amount of nitrogen in order to restrict growth. This was one of the worst mistakes I ever made. Within two years my plants were visibly suffering. They were yellowish, they set poor growth and few flower buds. As

all of my plants are container grown (I do not have a single plant in the ground), the problem again was what to do and how. It was evident that I had to have a new diet for my camellias, so I became my own doctor. Some years ago, when I was considerably overweight, a doctor friend told me that the best way to reduce was to stop eating the things I liked to eat. The opposite being the case with my plants, I reversed this process and started feeding my camellias those things they like — nitrogen, phosphorous and potash.

Most of the so-called "professional amateurs" and professionals prepare their own fertilizer. This I tried and soon discarded. Although somewhat cheaper, it did not give me any better results than the fertilizer you or I can buy off the shelf. In addition, it was hard work to properly mix it in the quantities I needed. I am not technically inclined and know little of chemistry so I have come to rely on those who are specialists in the manufacture of fertilizer to give me a mixture which I consider well balanced and which will give my camellias the diet they need.

I realized that I liked various types of food. I like a variety of breakfast dishes as well as lunch and dinner dishes. We vary our food so why not vary the food for a camellia? We don't eat beans 3 times a day, 7 days a week, so don't give your camellias the same thing all the time. For breakfast I give my camellias a well balanced meal. This consists of a relatively small amount of dry fertilizer given early or even prior to the evidence of the growing season. For me and in my location, this is no later than April 15th.

For lunch, an application of a well balanced liquid fertilizer of different component parts, maybe a different manufacturer and certainly having a different ratio of nitrogen, phosphorus and potash. This fertilizer should also contain a little "dessert" such as trace elements. I give this lunch approximately June 1st. We humans generally like to take a short siesta after a heavy lunch. The camellia does too, so don't fertilize in July.

The camellia's "coffee break" should be in mid-August and it should be a liquid fertilizer and, again if possible, a different ratio and a different manufacturer.

The camellia's dinner should consist of still another well balanced fertilizer. Again, I vary the makeup and manufacturer and it contains the "dessert". This last meal should carry the camellia over until the following year.

I said before that I like the "before-bed snack" so, in order to get those extra over-size "show stopper" blooms, my camellias get one too. This additional food is for larger flowers and should be given about the middle of their development. Late in November I apply a light dressing of fertilizer which contains **no** nitrogen. This, I believe, was one of the reasons I was successful in obtaining extra good blooms this year. Any fertilizer applied at this time that stimulates growth is very undesirable. You take a chance on having the new growth knock off any buds that might be set and also frost damage to new tender growth. Late growth does not generally set flower buds.

I believe there is no need for the amateur to go into the component parts of a fertilizer except to assure himself that it contains a balanced ratio of the primary elements, whether it be 8-6-4, 4-7-5, 4-8-8 or 10-6-4 is immaterial. By varying the brands as you would vary your meals, you automatically give well balanced food. The only precaution that should be taken is that you must not try to fertilize your plants at one application for the entire year. Remember that they like to eat 3 or more times just as you have breakfast, lunch and dinner. Also, it is wise to use approximately one-half the concentration that the manufacturer recommends. You are less likely to have wayward growth (bulges) that makes an unsightly plant.

(Continued on Page 10)

SOME RANDOM THOUGHTS ON FERTILIZING CAMELLIAS

*John L. Cope, Savannah, Ga.

It is sometimes difficult to realize, after some twenty years of making the study of Camellias a hobby, how wide has interest spread, how many the problems (imagined or real) posed, and what a veritable avalanche of literature confronts us year after year. Indeed, each time I have the privilege of addressing a new (or old) garden club on the subject of Camellias, I am impressed with the fact that it is difficult for many who love these plants to sift the experiences of others, if they read of them, or their own thoughts and observations, if they do not, down to the relatively few fundamentals necessary to grow good plants and produce gratifying bloom.

Perhaps no sounder reason can be given for fertilizing Camellias than the statement of Dr. William A. Albrecht, of Missouri, that "It is no more possible to develop a race of plants that will exist on a starvation diet, than it is to maintain a race of bachelors beyond the first generation". And his admonition to "Feed the soil first, then the plant" is, I think, particularly apt.

I often wonder, then, on what basis of fact is the caution often handed out, sometimes by word of mouth, sometimes in the literature, that we should never fertilize a camellia at time of planting. I have never failed to fertilize, prior to planting, the soil in which I transplant camellias — in fact I would put the planting off if I did not have the fertilizer on hand — as that is the one time I can put the fertilizer down where it belongs. One has only to study the transplanting practices in other fields where fertilizer plow-down prior to planting, starter solutions at time of transplanting, and even the shipment of plants with roots packed in peatmoss soaked in nutrient solutions, are common, every-day procedures.

It is commonly accepted that phosphorus is probably the first element needed by a sprouted seedling, or a transplanted plant. One of its functions is the stimulation of the formation of root-hairs, through which the plants take up nutrients in solution from the soil. As these root-hairs are formed, the plants quickly begin to take up the other elements necessary to their life. So, by fertilizing the soil prior to planting, or transplanting as the case might be, we can be best assured that the plant food is down in the soil zone where needed.

To those who fear that burning might ensue, there is very little danger of this if the proper amount of fertilizer is used, and if it is thoroughly mixed with the soil. I make it a standard practice of using a pound coffee can of azalea and camellia mixture to a two-foot-diameter hole. Most fertilizer mixtures prepared for these plants are highly organic and contain very little, if any quickly acting nitrogen. Then, too, the amount of organic matter we usually incorporate in the soil mixture will buffer considerably larger amounts of minerals than we customarily use.

After planting, it is only necessary to set up a schedule of feeding that will maintain a level of fertility on which the plant can do what we want it to do. And here's the rub. What do we want our camellias to do? Do we want to see how fast we can make them grow? If so, we then become "experimenters" (and let's admit there's a little bit of "experimenter" in every gardener's make-up), so we tackle our fertilizing problems as an "experimenter", willing to take the losses when they occur, and learning from careful observation of what we do. As Mr. K. Sawada, who has no peer as a camellian, often says as he begins his presentation of a principle of camellia growing, "Think!" Or do we want our plants to go through their normal cycles of growth, bud-set, bud development, and bloom in a manner which will give us the greatest possible enjoyment and

*President, Reliance Fertilizer Co.

pride of ownership? This, I think, is the end toward which we all strive — and this is the end which is so easy to accomplish.

Fortunately, the camellia is a plant which has been properly described as one of definitely periodic growth habit. We know that, when conditions of light, temperature and moisture are right it will break into growth in the spring (flower bud differentation having already taken place by the time shoot development starts), make a rapid growth within a few weeks time, come to rest as to growth after buds are set, and settle down to develop them during the summer and fall. If then, we follow a fairly uniform schedule of feeding year after year, with the objective of maintaining a satisfactory level of fertility in the soil in which our camellias are planted, we should come up with consistently pleasing results. It has been my observation that those who are forever "doing something" to their camellias are those who have the most "problems".

I have pretty well resolved my schedule of feeding into a simple three times per year—early February, late March or early April, and any time after the fifteenth of October. The February feeding is to get the fertilizer down so as to be available to the plants ahead of the spring growth, and there has never been any indication whatsoever that early feeding has any effect on the breaking of dormancy. The late spring feeding is to act as a "backer-up", to carry the plants through the summer when they are developing buds. In the case of young plants, this often produces a second cycle of growth but should give out in time to allow the plants to harden off for fall. The fall feeding (and differences of opinion on this have been many) is a very important part of my program. Were it necessary for any reason to skip one feeding, it certainly would **not** be this one. I find the fall feeding provides the plant with nutrients necessary to the development of good bloom, and actually makes the plants less susceptible to cold damage during the winter.

If we follow Mr. Sawada's suggestion to "think", we will realize that a camellia's root system widens its circle of feeding area as it grows. And, since fertilizers tend to move downward and upward with the soil moisture, there being very little movement sidewise, we will see that we should endeavor to distribute our fertilizer evenly over the areas in which the roots extend. In other words, we should widen our fertilized area a little each year. In some plantings this will soon bring about a condition where we fertilize the areas **between** the plants — a much easier task than in spreading it under the plants.

There are a number of factors which might influence the amount of fertilizer to apply. My practice is pretty well governed by rule of thumb and a single feeding to a plant requiring coverage of a circular area six feet in diameter would be about six pounds. If this is worked out on a basis of square footage, it will amount to about three ounces per square foot. Thus a fairly even rate of application is maintained for plants of varying sizes.

Any camellia grower is indeed fortunate who has in his library a complete set of Yearbooks of the American Camellia Society. And of the many articles, both enjoyable and instructive, that bear reading and rereading, there comes to mind two that I commend highly to all: "Life" by Charles L. Gay, pages 124-128, and "Some Whys and Wherefores of Watering" by G. J. Stout, pages 141-147, both in the 1955 Edition.

EDITOR'S NOTE:

A close study of what has been written on the subject by men* to whom a thorough knowledge of fertilizer problems is vital, for that is their business, develops the following interesting information:

(1) They concur on a formula having a relatively low nitrogen content, Mr. Cope finding a 4% - 8% - 8% analysis most suitable, while Mr. Dean recommends 5% - 10% - 10% — actually an identical ratio of 1 - 2 - 2, although the latter is stronger.

(2) Both stress the value of organics, both in the fertilizer itself and as a supplement in the form of vegetable matter, Mr. Dean advocating a soil medium containing **50%** leaf mold, peat or

ON FERTILIZING

Dr. Arthur A. Maryott, Bethesda, Maryland

The problem of fertilizing camellias is not as simple as adding baking powder to a cake recipe. Camellia literature contains a diversity of opinion, often conflicting regarding the details of fertilizing. This is probably due in part to differences in environmental factors in various localities and in part to the fact that such details are not highly critical.

The presence of adequate amounts of the principle nutrient elements, nitrogen, phosphorus, and potash, and a number of other elements in varying amounts is required to maintain camellia plants in a healthy and vigorous condition. In addition the soil reaction should be slightly acidic to permit the ready assimilation of some of these elements. While the camellia's nutritional demands are quite modest in comparison with the more rapidly growing plants and food crops, these elements should be available on a year-round basis to insure proper growth and flowering.

The soils of the Washington (D. C.) area are naturally acid and, for the most part, comparatively heavy and not so readily leached out as the sandy soil of the coastal plain. Provided good practices are followed in planting and mulching, camellias can be expected to live without the benefit of additional fertilizer. Few camellia growers, however, would be content to leave such matters entirely to nature. Fertilizing, in addition to providing insurance against the chance of nutritional deficiency, may possibly have beneficial effects regarding vegetative growth, quantity and quality of bloom, and winter hardiness. Unfortunately, the particular advantages to be derived from more than minimal amounts of the various nutritional factors have not yet been determined by controlled scientific experimentation.

In this area, where the peak blooming for most varieties is in April, vegetative growth immediately follows or slightly overlaps the blooming period. A light application of fertilizer around or before the middle of April and a second about a month later can be recommended. If a commercial fertilizer such as 5-10-5 is used, it is advisable to apply this evenly on top of the mulch and then water in to avoid the danger of burning the tender surface roots. For a two or three foot plant a couple of handfuls should be adequate.* The inclusion of a

(over)

EDITOR'S NOTE: (Continued)

humus by volume, the reason evidently being that organic matter acts as a buffer, aids bacterial action, makes nutrients available by breaking down complex insoluble chemical combinations and balances moisture by tending to absorb any excess and holding it.

(3) A further indication of recommended quantities: with 5% - 10% - 10%, ⅛# per ft. of plant height following blooming period and 4 weeks thereafter — then 1/6# once in the fall, a total of three feedings.

(4) The foregoing recommendations apparently were designed for the Virginia to Texas Coastal Plain, in which the soil has a very low nitrogen and potash content. In climates where a good growth of grass is supported, organic matter and nitrogen are higher; thus in the Pacific Coastal region, the nitrogen content of the soils tends to rise from Southern California northward to Oregon, with the heavier vegetation. California soils contain approximately 6 times the amount of potash present in soils of the Virginia - Texas coastal area. It is of interest, therefore, to make comparison of the formula recommended by a well-regarded California grower** with the foregoing: Mr. Smyth's formula — Cottonseed Meal 10#, Superphosphate 4#, Potash 2# — which analyzes 4% - 7% - 7%, or very similar in all respects, the emphasis again being heavily on organic content. This grower, however, supplements with an occasional feeding of 10% - 10% - 5% liquid, organic fertilizer, a quick-acting, high-nitrogen type.

*See "Fertilizing Your Camellias and Mine", by John L. Cope, pp. 166-173, and "Camellia Fertilization", by W. P. Dean, of Swift & Co., pp. 174-175, 1951 YEARBOOK, American Camellia Society.

See Vol. 2, No. 2, Northern California Camellia Society **Bulletin, "Fertilization of Camellias", by W. B. Smyth, Ross, Calif., Dec. 1948.

slow acting, organic source of nitrogen such as cottonseed meal will tend to maintain the nitrogen balance over a more extended period of time. Special camellia-azalea fertilizers which have an acidic reaction and usually contain some of the trace elements are also available at a somewhat higher price.

An application of phosphate and potash early in the fall is often recommended as an aid in the hardening-up process and in the subsequent development of flower buds and blooms. It is usually suggested that nitrogen, except in slow-acting organic forms, be omitted at this time, on the assumption that it may initiate a second cycle of new growth which may not harden sufficiently before cold weather. However, as the various stages of plant development are governed primarily by climate and the period during which new growth can be initiated is decidedly shorter than in the more southern areas, there is little tendency for the development of a second growth cycle here.

Frequently, newly acquired plants, especially when located where they receive considerable morning sun in winter, do not resume normal growth or produce satisfactory flowers for several years. Although one is likely to attribute this lack of thriftiness to some nutritional deficiency, this is not ordinarily the case. In all probability these plants have suffered cold damage, even though this may not be obvious in severe leaf burn or split bark, and are unusually slow in becoming acclimated. There are, however, a number of varieties that have the inherent hardiness to adjust to these more severe exposures.

The extension of the camellia belt to the colder regions in recent years has emphasized the need for further experimentation on the influence of fertilizing and other cultural practices in promoting hardiness and facilitating acclimatization. In the last analysis, the individual grower should determine from his own experience the best fertilizing technique for his own particular situation.

(Reprinted from May, 1956 "Newsletter" issued by The Camellia Society of the Potomac Valley.)

*We would consider this extremely heavy feeding—excessive for container-grown plants.—Ed.

BREAKFAST, LUNCH AND DINNER

(Continued from Page 6)

In this article I have tried to tell you why "I done it", how "I done it" and when "I done it". After two years of religious adherence to this rule (it sure pays to follow the rule) you would not recognize my plants as the same ones which were once so yellow and so scrawny. The leaves are dark green and of good size. They have grown well, but not too well. Occasionally, I detect a bulge here or there of excessive or wayward growth, but that I correct with the pruning shears.

If we, the amateurs, would not be too mystified by the over-powering weight of laborious techniques, complicated mixtures, advice from "so-called experts" and follow a breakfast, lunch and dinner program we can have plants that respond and produce magnificently. Remember, a camellia **eats to live** and does not **live to eat.** Our plants in time will become too large and will be overcrowded but, for their sake, don't starve them, let 'em grow. When they get too big, give them away, or by that time you may be tired of them and want some new and "hotter" varieties — so graft them.

If you feel that my program is too generous and that part of it should be omitted — eliminate the "coffee break". Remember though — each feeding is one-half of that recommended and a camellia plant, even as you and I, needs Breakfast, Lunch and Dinner.

Editor's Note: Mr. Lattin is a past President of the Northern California Camellia Society and a camellia enthusiast of the first water. His exceptional accomplishments in the field of competitive bloom exhibition (Sweepstakes Winner at all three of the major California shows at which he exhibited this past season) lend considerable weight to his views, particularly in the case of plants that are grown in containers for exhibition-type blooms.

SHOULD GROUND GROWN CAMELLIAS BE FERTILIZED?

Roy T. Thompson, Glendale, California

The purpose of fertilizing camellias is sometimes forgotten and the process becomes a garden routine which is taken as a matter of course; the need for fertilizer is equated with the need for water. But fertilizer is a food and in some camellia situations, food — that is, extra food — is unnecessary and useless. Each camellia grower must become his own guide and judge the needs of his plants by their performance. So here are a few conclusions drawn from 29 years' experience in growing camellias in the ground under live-oak trees in Southern California. The ground is a talus slope composed of sandy loam and has been enriched by fallen oak leaves for perhaps a century. It is hard to imagine a better natural location for camellias. It is probably much like the best native situations in the orient where camellias first established their habits and characteristics.

My hundred-odd ground planted camellias have never been artificially fed; that is, with commercial fertilizer. They are as healthy and vigorous as any I have ever seen and I have quite an accumulation of (useless) blue ribbons from their blooms. During this period the thermometer has been down to 15 degrees and up to 115 (last September), with no serious results to the camellias. The largest of them is now 18-20 feet in height and some 15 feet in width and others (many of which have been cut down and grafted) thrived and grew into small trees. One thing I have observed is that the **rate of growth** of these camellias as been slower, quite a good deal slower, than many container grown camellias that I have observed, but it has been steady, healthy, and vigorous. In other words, they have never been forced.

It is difficult to see how these camellias could have been better fed than by the rotting ground-cover of oak leaves which I have carefully maintained throughout. One of my big problems every year is to hold down the supply of blooms by hours of disbudding.

I have, therefore, one very definite conclusion to offer: under conditions such as these the critical problem is not more food but water. Camellias are hardy plants and will stand a good deal of drought, but for their best health they should have (in this kind of situation) a plentiful supply of water. Water is the thing to watch, not food. The ideal water is rain and when rainfall is ample and well-spaced, these camellias planted in the ground without fertilizer can win the bluest of blue ribbons.

While this report on "fertilizing camellias" has been, essentially, negative, it nevertheless presents a part of the picture and should be told. It is not really negative for these camellias **have** been "naturally" fertilized, but not by my hand.

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A list of the newly-elected Officers of the Northern California Camellia Society and the Pacific Camellia Society for the year 1956-7 is shown on the roster page (2). To all of the new appointees, **The Camellia Bulletin** extends heartiest congratulations and best wishes for a successful year.

DAVE STROTHER ON FERTILIZATION

In order to get the opinion and technique of an outstanding amateur and authority in the South, we prevailed upon Mr. D. C. Strother, of Fort Valley, Georgia, possessor of one of the largest private camellia gardens in this country, to give us his views on fertilization. The following is the essence of Mr. Strother's advice:

The quantities used are so large that he makes up his own supply, the formula of which, for a 1-ton quantity, normally is as follows:

1000# Cottonseed Meal	(contains	65# Nit.,	30# Phos.,	20# Pot.)
800# 20% Superphosphate	"	0	160# "	0
200# 60% Muriate of Potash	"	0	0	120# "
Total 2000#		65#	190#	140#
Analysis:		3.25%	9.5%	7%

Every few years, Mr. Strother feels the need for a little higher nitrogen and then varies this formula to 600# Cottonseed Meal, 400# Fish Scrap or Dried Blood, 800# Superphosphate and 200# Muriate of Potash. If Fish Scrap is used (average analysis 9% nitrogen, 7% phosphorus) this "high nitrogen" formula analyzes 3.75%, 10.3%, 6.6% — if Dried Blood is used (average analysis 14%, 1%, .7%), then the revised formula analyzes 4.75% - 9.1% - 6.7%.

Mr. Strother's camellias are fed **once,** heavily and well-scattered, after the blooming season is over. A novel and very interesting part of his technique is that he starts applying fertilizer on the ground at the **outside** extremity of the growth (tips) and continues to fertilize outwardly, **not** toward the plant. Where his camellias are 8 to 10 feet apart, he fertilizes **between,** not around and under them. Mr. Strother uses organic nitrogen exclusively, does not like inorganic nitrogen which he feels necessitates more frequent feeding.

This eminent authority thinks that not only the soil (his soil is of the clay type) but what you use for fertilization has something to do with how frequently it is necessary to fertilize. His comments mainly refer to larger size camellias grown in the open ground.

. . . . .

While the available information is far too meagre and the amount of experimentation evidently extremely limited, it appears conclusive that some varieties and species of camellia are highly sensitive to fertilizer and extreme care should be exercised to avoid an excess — lesser quantities should be used — on the following:

C. japonica	DAIKAGURA (family) DEBUTANTE FINLANDIA (family) PRINCE EUGENE NAPOLEON (Pope Pius IX)
C. reticulata	(all cultivars, i.e., varieties)

Readers of this publication are referred to the comments and views of two outstanding California amateur growers, Dr. Fred E. Heitman and Mr. Barlow W.S. Hollingshead, on the subject of "Winter Fertilizing for Bloom Development", in Vol. 6, No. 2 of this **Bulletin,** Dec. 1952. In essence, the former recommends feeding at half the recommended strength the year-round, the latter advocates a 10% - 5% - 5% liquid organic fertilizer and for bloom development switches to a 4% - 10% - 4% analysis — both emphasize the desirability of lowering the nitrogen content and having a preponderant strength of phosphorus in the winter feeding.

FERTILIZING THE CONTAINER-GROWN PLANT

Dr. Cecil H. Eshelman, Sherman Oaks, California

The application of fertilizer to container-grown plants is a subject of some controversy among camellia growers. This is probably due to the special hazards involved when the wrong type or the wrong amount of fertilizer is applied. Due to the limited soil in the containers, this hazard is much greater than in the open ground where the roots are not confined and the chemical action of the fertilizer is less direct. I have tried most types of plant food including steer fertilizer and bovine blood plasma and have observed that most fertilizers, used in an amount short of root and foliage damage, provide a satisfactory degree of results. Our aim should be to provide the soil with the proper nutrients that will enable the plant to make normal growth, giving a satisfied plant with strong branches, green foliage and capable of producing blooms that are up to size for the variety.

The use of a commercial laboratory to analyze soil samples and determine deficiencies, followed by a fertilizer formula designed to restore the mineral balance is certainly the most desirable method. Most of the small collectors through experimentation should endeavor to learn their plant requirements, and as a result of such experience use the methods that they find best.

The physical structure of the soil mix should determine, to a great extent, the strength and frequency of application of fertilizer. My camellias are grown in containers, which range in size from one-gallon cans to twenty-four inch redwood boxes. Up until two years ago, I used the accepted soil mix of many wholesale growers, which was equal parts of sandy loam and peat moss. Lately, I have used two parts of partially decomposed pine wood shavings and three parts sandy loam. Both mixes provide a loose condition which enables the excess water to leach through the container in a matter of minutes. Because of this loose soil mix, the problem is to retain the minerals in the containers in normal amounts, and avoid, if possible, the fertilizer being flushed through the mixture each time the plant is watered.

I keep a generous pine wood shaving mulch on my plants the year around. This serves to retain moisture, to keep the roots cool and to provide a means of suspending the powdered organic fertilizer which is applied during the months of April and July. By applying the fertilizer on top of the mulch, the minerals release slowly and supply nearly constant nourishment. This plant food is derived from organic sources.[1] The nitrogen is supplied from blood and cottonseed meal rather than urea. There are various trace elements in this product which make the formula complete, safe, and entirely adequate to provide the plant with all of its requirements. I have observed that, watering twice a week, it will take two months for the fertilizer to be used up when placed on the mulch. This is a longer period than if it were applied directly to the soil.

The April and July applications constitute the greater part of my fertilizing program. During the month of June, I add a weak solution of liquid organic fertilizer.[2] This is given just preceding the second cycle of growth, because of the greatest demand by the plant at this time.

Each year following the heavy blooming time, I observe that my plants appear completely spent. The branches seem to lose their vigor, many leaves either drop or become mottled, and in general the plants appear to have deteriorated during the flowering period. I am aware that this is not the time to accelerate growth; however, I have found a mild application of liquid fertilizer, about January first, will go a long way toward reducing the spent appearance of the plants during the month of March and just prior to the spring growth period.

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CAMELLIA GROWING IN AUSTRALIA

Walter G. Hazlewood, Epping, New South Wales

Australia covers a large area, with many varied climates and soils. We have our mountain regions where there is snow for the most part of the year. Naturally these areas are not suitable for the growing of camellias. In the lower mountains, camellias grow very well but are subject to frost damage to the blooms at times. Being an island continent, we do not get the blizzards from the pole which affect parts of America, and so we do not get the plants killed out by the cold. Inland is hot and dry in the summer and in the center of the continent it is arid, with a very low rainfall. These regions are not suitable for the growing of camellias, but where protection from the sun is provided, reasonable results can be expected. In the far north it is tropical with plenty of humidity in the summer and very mild winters. Here, because of this mildness, they are not too successful owing to the lack of coolness in the flowering season.

The east coast of Australia, extending from Victoria to 100 miles north of Sydney, is, to my idea, one of the most perfect camellia climates in the world. A range of mountains, about 50 to 80 miles from the sea, extends along the entire area, keeping the hot winds of the interior away. The summer is warm and partly humid, and the winters are cool to cold but not cold enough to do any damage. The soil varies from volcanic to ironstone and sandy loam, with pure sand in some sections. In this area blooms first appear in early February and continue on until September and, in cool springs, into October. I have known of some at Christmas but this is not typical, being more or less freakish. First of all we have **C. sasanqua** with the plants in full bloom by end of March. In the japonica section I have had **Yohei-haku** out in mid-February. Hybrid **Cornish Snow** also shows up about then and species, **C. oleifera** about the same time. **Hassaku, Arejishi, Daikagura, Daitairin** and a few others also come into flower very early.

Before planting, the ground is dug over and brought into a fine state of tilth. Extra care is taken to see that drainage is ample, otherwise, many losses occur in wet seasons through root-rot. C. sasanqua will stand more wetness than C. japonica, but good drainage is essential for success. Planting is usually carried out from autumn to spring but as long as they are carefully watched to see that the roots do not get dry, it can be done any time in the year. Mostly, camellias are planted in full sunlight but I like partial shade for best results, particularly for the lighter colours. In the dry, hot areas some shelter from the heat is a must, and it is advisable to spray the foliage after a very hot day. After planting, in the average garden, most camellias do not get any more attention than any other shrub. Beyond seasonal waterings and keeping the weeds down, not much else is done to them. I very much doubt if five percent of our planted camellias get any manure, other than a mulch of lawn clippings or compost. Of course, these are not grown with the idea of showing the blooms, but just for the pleasure of the owner, to provide a lively looking shrub and flowers that can be picked. Poultry manure* or any other animal fertilizer is good especially when placed on the surface and allowed to wash down to the roots with rain or watering. Camellias do so well that even with utter neglect they still grow and produce blooms of fair quality. The outstanding example of this is in Rookwood Cemetery where they are never cultivated, watered or manured. The weeds are feet-high round them, the soil is pure ironstone and pipeclay, and sets like concrete, but still they keep growing. These plants are now about 80 years old and really need some attention or they will not last much longer. I am not putting this

*It is generally agreed that poultry manures must be used very sparingly to avoid burning.—Editor.

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CAMELLIA FERTILIZING

Harvey F. Short, of Coolidge Gardens, Pasadena, Calif.

June in Southern California brings us to the second lap on the fertilizer program for camellias. The April feeding has pushed plant expansion, along with very favorable weather conditions, to a record growth. Six to ten inch shoots are not uncommon.

The first feeding in our commercial growing here at Coolidge Gardens was of cottonseed meal only — an average of a teaspoonful to a gallon container plant and a heaping tablespoonful, or a small handful, to a five-gallon container plant. **The second feeding** will be a balanced plant food of the following analysis: 4% nitrogen, 8% phosphorus and 4% potash, applied with approximately the same proportions as indicated for the cottonseed meal. **The third feeding,** which will follow about Aug. 1st to 10th, will be of cottonseed meal again. Note, of course, that all fertilizers are watered in well at the time of application.

As commercial growers, we find that we cannot deviate too much from a regulated feeding program that has proven successful through the years. We cannot afford to risk fertilizer burn as it takes almost an entire season to clear damaged foliage on a plant, consequently the above plan, as presented, usually withstands any sharp variations in weather as may suddenly descend upon us during the summer and fall months.

Our experience through many years of this feeding program has proven plants of hardy growth are developed, that it maintains a substantial, rich green foliage throughout the year, and produces plants nicely budded to please the trade. Regardless of care, following this type of feeding, a plant sold to the trade and transplanted in a garden continues to thrive in normal fashion without any setbacks. Plants developed with fertilizers producing soft, lush growth do not fare as well sometimes in their adjustment.

Studying the present appearance of all species — Japonicas, Reticulatas and Sasanquas — we find all have responded equally well with **this same timing** at the first feeding.

Other factors, of course, enter the picture having a bearing on the reaction of the fertilizers applied. Adobe and poorly drained types of soil can make a plant resist any good results from fertilizing. Water high in alkalinity tends to check favorable results. Both problems require special treatment for correction.

The above outlined fertilizing program, based on my experience, is simple but effective.

SURVEY BY SOUTH CAROLINA CAMELLIA SOCIETY

ON FERTILIZATION: We wrote to thirty outstanding collectors and asked "When and with what do you fertilize?"

The answers convince us that much research is needed on the subject of fertilization. Nor can this research be done in any one type of soil or one type of climate. The amount of and the character of fertilizers must necessarily be adapted to sand, loam, clay, or whatever soil you may be blessed or cursed with. These answers came from all types of soil and climate, having been received from Louisiana, Georgia, Florida, South Carolina and North Carolina, which states cover a multitude of camellia mistakes. Having seen the gardens and flowers from all of our contributors to the following we know them to be outstanding. We believe also, as a result of this survey, that a good healthy camellia is indeed a hardy shrub!

We find fertilization starting as early as February and ending as late as December. The majority chose mid-March for their beginning. About half gave

a second lighter application in May. September found about sixty percent applying non-nitrogen content commercial fertilizer such as O-14-14 while several preferred a small amount of nitrogen such as is found in commercial 3-12-12. Forty-six percent used commercial fertilizer and were about equally divided between Hawkins Camellia and Azalea Fertilizer, Reliance's; or Magnolia's prepared for the same purpose. One very fine grower used Vigoro three times a year and as late as December. Some mixed their own similar to or identical with Dr. Hume's formula and a composite of these mixtures turned out about like this:

40% Cottonseed Meal — 35% Superphosphate
10% Sulphate of Ammonia — 15% Sulphate of Potash

(Ed. Note: Chemical analysis = 4.7%, 8.2%, 8.3%)

Your committee simply passes the above along to you as information and with no recommendations. Since practically all of our contributors recommended well rotted barnyard manure, we will go along with that, but where does one get it these days?

(Reprinted from Sept. 1953 Bulletin of South Carolina Camellia Society.)

FERTILIZING CONTAINER PLANTS

(Continued from Page 13)

I follow the usual precautions that apply to all container-grown camellias. A few of the most important are worth repeating: (1) Wait at least two years before feeding grafted plants. (2) Use one-half the recommended amount of any type of fertilizer, remembering always that with container culture the roots are in a small area. (3) Regard the container area as the determining factor for the amount of plant food to use — not the size of the camellia.

Editor's notes:

(1) In response to our inquiry, Dr. Eshelman advises that the amount of dry fertilizer he uses is ½ teacup to a 12" container, and he has supplied a copy of the manufacturer's directions and analysis, which we feel are worth repeating here:

"Set up a regular fertilizing program for Camellias. Feed three times per table below, during the growing season. Better still, apply smaller amounts each month from the time the bush finishes flowering through the growing season.

Camellias ranging from 1 ft. to 1½ ft.	¼ teacup
Camellias ranging from 1½ ft. to 2 ft.	½ teacup
Camellias ranging from 2 ft. to 3 ft.	1 teacup
Camellias ranging from 3 ft. to 4 ft.	2 teacups
Camellias ranging from 4 ft. to 5 ft.	3 teacups

For container camellias and young plants **use one-half** the above amounts. Distribute evenly and not too close to base of plant.

GUARANTEED ANALYSIS

Nitrogen (Organic)	4.00%
(derived from cottonseed meal, blood meal)	
Phosphoric Acid (available)	8.00%
(derived from C.S. Meal and Superphosphate)	
Potash (water soluble)	4.00%
Iron (expressed as metallic)	.60%
(derived from Iron Sulphate)	
*Iron (expressed as metallic)	4.20%
*Zinc (expressed as metallic)	.36%
*Sulphur (combined)	3.20%

*Derived from natural minerals containing a mixture of sulphides which gradually become soluble upon exposure to air and water."

(The foregoing from **Bandini Camellia Food**)

(2) The liquid fertilizer Dr. Eshelman uses is called 606 Special Liquid Sulphide Fertilizer, which is a fertilizer, soil conditioner and acidifier all in one. He uses at the rate of a tablespoon per gallon of water. This product has the following analysis:

Organic Nitrogen	6.0%
Potash (water soluble)	6.0%
Sulphide Sulphur	11.0%
Calcium (chemically combined)	3.0%

The Sulphide Sulphur and Chemically Combined Calcium are derived from Sulfadate, a brand of lime-sulphur solution.

CAMELLIA GROWING IN AUSTRALIA

(Continued from Page 14)

forward as a way of growing camellias but only to show what they will stand. At Camden Park, where the plants are 120 years old, they get better treatment but are beginning to show dead wood and need pruning.

Once a large, old plant develops dead wood there is only one treatment for it. This is to cut it well back, removing all but the thick trunks. Minor branches of an inch diameter should be taken away, as they do not draw enough sap to provide good growth. If this is done towards the end of winter, it is surprising how soon you have a healthy plant again. At the same time, give a good dressing of manure and water well until the new growth appears. Ordinary cutting away of the dead wood does not effect any improvement, as it keeps on coming. Apart from renewing the vigor of the plant, drastic pruning such as this is often the means of saving old plants, which would otherwise die out. I like to keep a mulch on my camellias and this can be lawn clippings, compost, or manure. In pure sand it is essential that something like this be done, if only to see that the soil keeps reasonably moist. It also provides the necessary nourishment which otherwise is lacking. When the plants attain a fair height, I like to give them a light pruning each winter after flowering. Cutting flowers with plenty of stem is another way of pruning. We have a few varieties, which under normal conditions, never give a good bloom. The outstanding example of this is an Australian camellia, Lady St. Clair, known in America as Pink Shell. To get good flowers on this variety, starve it, don't over-water or manure it. At Rookwood, previously mentioned, you will never see a bad bloom. Cincturing* the stems each winter, and root pruning will reduce the quantity of poor flowers.

As most people in Australia have a garden area, comparatively few are grown in containers. Concrete tubs are most favoured as they do not perish like wooden ones. Another reason for not growing them this way is that they need more looking-after in the way of watering and feeding. A plant once established in the ground can take care of itself, but one in a container has to be constantly attended to, particularly in summer. The soil for container-grown plants needs to be light in texture with plenty of fibre. Good drainage must not be neglected or the plants will not thrive. If the final receptacle is of large size, grow the plant in a smaller size pot, moving it to a larger one each year and finally into the large, permanent one. Camellias do not like to be over-potted as the roots cannot take up a lot of soil at once and it becomes too sour and the plant does not thrive. I like to remove an inch or two of top-soil each winter and replace with good fresh material. The John Innes fertilizer has been found a most effective manure, putting a good, dark-green color into the leaves and encouraging root growth. Container-grown plants do best in partial shade as they have greener foliage and make better growth than when in full sunlight.

*Girdling.

NOTES AND COMMENTS

Compatibility between scion and understock has been the subject of much comment among camellia people, but very little is known about it. Many have guessed from the behavior of certain scions when grafted that there was some sort of incompatibility — in some cases even repulsion — between scion and understock. Here is a scrap of information which might be significant: This spring I cut down a camellia seedling which was 2½ inches in diameter at the cutting point and since I had only one scion of the variety I wished to graft it to, I used two additional scions from the plant I had just cut down. I did this on the theory that the graft would do better if it had some additional leaves on during

the callus-forming period. The three scions were of about the same size and each had two leaves. The two scions which had been grafted on their own understock formed calluses almost immediately and were eight inches high before the other scion began to grow. After the glass was removed the two "homologous" scions made a record growth while the third one continued to progress very slowly. There is the chance, of course, that the scions on their own understock were better grafted than the other, or were fresher. Nevertheless, I think this fact is worth recording for we need to learn all we can about this subject.

* * *

One scion that started to put out leaves this spring before a callus was formed was saved by snipping the growth eye in two with scissors. This left only the lower half of the eye and administered quite a shock to the little graft because there were no other eyes. It stood still for a long time after the snipping, but finally unfolded two half-leaves. But during this enforced waiting period a good callus was formed.

* * *

Petal blight was still active in Glendale as late as May 26th. In previous years it has never been found later than April 15. Since the camellia blooming season itself was very much prolonged this year, the blight may have responded to the same influences which caused the camellias to bloom unusually late. However, the petal blight also started the season unusually early for it appeared here on Dec. 15th, 1955.

* * *

If you are interested in making small objects of polished wood, try camellia wood, if available. It is a hard wood and takes an excellent polish. The color is a light tan or cream and the texture very fine and smooth. There is an occasional blush of darker color in the wood which adds to its attractiveness. However, if saving the wood is your object when a small camellia tree is cut down, be careful to place it in a cool, shady place to dry out, for too rapid drying causes the wood to split. —R.T.T.

ABOUT NOMENCLATURE—A SUGGESTION

The average person probably regards anything appertaining to nomenclature as something of a technical nature that is a necessary evil and, at best, a pretty "dry subject." Nevertheless, the fact remains that it is a matter of first importance to everyone that we have some systematic method of identification, particularly in the case of a flower like the camellia, which is so often inconstant and so numerous in its kinds and forms. It is estimated that there are currently almost 2,000 named varieties and the list is growing all the time. Thus it is self-evident that, unless proper rules of order are observed, confusion is sure to prevail and many buyers of "new" camellias are going to be disappointed, if not actually deceived. An outstanding example of what can happen without regulation is the variety Prince Eugene Napoleon, which has been sold under at least six different names.

As a camellia collector of sorts and an avid grower of seedlings, your Editor has a keen interest in the matter of proper nomenclature. First, because in the process of acquiring a large collection one must buy some of them solely by name and description, for it is impossible for a collector to adhere unfailingly to the rule that it is best to purchase only blooming plants. Secondly, in the strictest sense the only absolutely new camellias are those obtained from seed, and the grower of seedlings, who is engaged in the deliberate effort to create something new, should be protected in the matter of name.

It is generally accepted that a "sport" or mutation of a named variety, which differs significantly from the parent, may also be regarded as a "new" variety provided it will remain fixed when propagated. This makes sense, as any sport which will revert to the original cannot be considered to be an established variety—hence it should not be given a different name. Neither should minor deviations from an existing variety, such as, for example, the amount of variegation in a normally variegated flower (which may result from climatic, soil or cultural differences), be regarded as justification for a separate name because of the independability involved. In short, the act of affixing a new name to a camellia or anything else implies something of particular individuality and permanence.

Variegation in a self-colored camellia resulting solely from grafting is, in my judgment, a matter in quite a different category than a true mutation occurring naturally. It has been pretty thoroughly established that variegation may be virus-induced through grafting and, in fact, the point has already been reached where it is almost impossible to duplicate some self-colored varieties by the grafting process because of this tendency. Inasmuch as the plant habit of growth, blooming season and, in brief, everything except the color scheme of the flower itself will be practically identical, there would seem to be no right nor reason to change the name in any manner other than that necessary to describe the point of differentiation. Consequently, the writer is of opinion that the only sensible rule, in order that some semblance of order may be kept, is to retain the original name and add the word "VARIEGATED" in such cases. If we do not adhere rigidly to some such policy, the number of "varieties" which are very closely related in everything except name will continue to grow to the extent that, taking into account the number of new seedlings being developed, cataloguing them all will become an almost insuperable task.

Looking back at what I have written, from a not altogether disinterested viewpoint, it does seem rather unfair that a person who may have devoted years to the development of an outstanding new variety, and given it what he feels is an appropriate name, should be completely disassociated from any credit for a variegated form which may result quite accidentally through simply making a graft. There is really no comparison from the standpoint of personal effort and simple justice would seem to dictate that the choice of name of the originator be respected and the identification preserved.

It has been said that about everything that can be done with C. japonica has already been done. With that statement I cannot agree, for it seems to me there is almost unlimited opportunity for **improvement.** However, I am completely in accord with the view that any new introduction should either constitute a distinct improvement over what we already have or else be different in some material respect, to be worthy of addition; that is to say, to justify adding another name to the list.

Finally, I should like to urge that we in this country adhere more strictly to the basic and universally accepted rules of nomenclature, whereby the valid name is that first published in a botanical work or horticultural periodical written in Roman characters and accompanied by a recognizable description or illustration, or which first appears in a dated catalogue. There would seem to be no good reason for laboriously working out on a world-wide basis fair and understandable rules of nomenclature unless those who are in a position to set the example do so. Certainly, if we do not, there can be no hope for order and the result will be unending confusion, unfairness and ultimate deception. Considerations of strictly local import or convenience must not be allowed to prevail, for this is exactly the sort of thing which has made necessary the establishment of sound universal rules in order to eliminate wholesale confusion. —D.L.F.

JAPONICA SHIRO-CHAN