

Discussion : The results show definitely that the quality of the produce harvested at full maturity is better than in the lot harvested ten days before maturity in the case of both varieties. The former treatment gives better shelling, higher natural test weight of both the pods and kernels with lower number of kernels per pound showing better development, as compared with the latter. In both the varieties best quality produce is obtained by stripping the pods immediately and drying them, while the produce from plants left to dry in the field is poorest. The drying in this case is not as efficient as when the pods are immediately stripped and dried. A small increase in the oil content is noticed in both the varieties in the cured produce from the stack and this is more evident in the lot harvested ten days prior to full maturity.

Summary and Conclusion : Harvesting the crop when fully mature and stripping the pods immediately and thoroughly drying them subsequently, yield the finest quality produce. Even if the crop has been harvested a week or ten days prior to maturity, stripping the pods immediately is preferable to the other two methods studied. The necessity to cure the crop arises only when there is acute labour shortage and possibly also when rainy weather prevails. Curing by stacking is recommended in such cases as the resulting produce is superior to allowing the plants to dry in the field. The latter method may result in loss or damage by birds and rodents. Besides a few pods in contact with the soil will get damaged especially if there is a heavy rain during the period. In the case of the bunch variety loss by field sprouting also occurs.

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Common Salt as Fertiliser

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As the very name indicates common salt is quite a common substance which is both cheap and abundant. Its use as an item of man's daily dietary is well-known and widespread, but what is not so widely known is its use as a manure in agriculture. Salt is mentioned as a manure in the Bible, and by Roman poets like Virgil and Cato. English farmers of the 16th, 17th and 18th centuries as well as German and Spanish farmers were also well aware of its use as manure, but still, at the present day it is difficult to find another fertiliser, the utility of which is so hotly disputed, as common salt. Even as early as 1805 salt was recognised as very useful manure, particularly for turnips, sugar beet and mangolds and also for wheat in potash-deficient soils. Subsequently the use of salt fell

away, due mainly to the vigorous development of other fertilisers like super-phosphate, ammonium sulphate, potash salts, kainit, Chilean nitrate etc. It is worth noting that even then, plenty of sodium and chlorides were being added to the soil, though in different compounds such as Chilean nitrate (i. e. nitrate of soda): Kainit was mostly potassium chloride and many other low-grade potash salts that were used as fertilisers, contained large proportions of sodium chloride. During the First World War (1914-18) there was a revival of interest in using common salt as a substitute for potash, but due to erratic results it earned more discredit than credit in this period.

Further work in recent years has enlarged our knowledge and the utility of common salt can now be assessed in its proper perspective. In light soils as well as in soils too rich in humus, the sodium content is likely to be low, and hence common salt is likely to prove more helpful in such soils, rather than in soils of normal texture and clay content. Certain crops too are very much more responsive to sodium than others; for example, mangolds, beets and turnips show large responses even when the potash supply is ample, crops like wheat, peas and cabbage show slight to medium responses when potash supply is ample, while barley oats and millets show slight to medium responses only when potash supply is deficient.

Sodium is now considered to have a dual function in plant nutrition to replace K in plant metabolism as such and to displace fixed K from soil complexes and thereby make more of potassium available for plant growth. When we consider the chlorine ion—it is now accepted that chlorine acts as a base-carrying vehicle in the nutrient solution; Sri John Russell has concluded that the *Chloride ion* helps in keeping the leaves and stems of plants more turgid and possibly by increasing the concentration of the cell sap reduces the rate of water loss by evaporation. Further, the chloride ion hastens maturity, thus supporting the common observation that common salt dressings will be advantageous when cereals are grown on thin, light soils. One of the usual handicaps in light soils is the risk of drought in hot spells in summer, here the chloride in common salt helps the plant to curtail water loss and maintain their metabolic functions with smaller quantities of water. Care is however necessary in using salt on clayey soils, owing to the risk of making them too sticky and unworkable. Another use of common salt is as a weedkiller. Any readily soluble substance can be toxic to plant life if used at sufficient concentration.

With regard to the optimum rates for common salt as a fertiliser, further work is needed to make specific recommendations though for sugar beet there is a general view that up to 5 cwt. per acre can be spread some weeks before sowing. A smaller dose is preferable for other crops and particularly for cereals the dose should not exceed 200 lb. per acre but a great deal of further study is still necessary to know all about the possibilities and limitations of common salt as a fertiliser.