Exceptionally rich soils

On almost all mineral soils found in Indonesia, the application of N and P is required. However, there are some special soils which are very rich in K and/or Mg, and in these soils the application of K and/or Mg fertilisers is not required, or only required in small quantities. There are no exceptionally rich peat soils.

If soil analysis has not been carried out, then the presence of exceptionally rich soils in the plantation needs to be deduced from other factors. The following steps can be followed:

**Step 1.** Discuss with the farmers in the plantation area about their manuring practices

**Step 2.** Visit a number of plantations in the area which have been manured poorly and check for the presence of deficiency symptoms in the lower leaves:
- *Potassium deficiencies are very commonly observed and indicate that sufficient application of K fertilisers is likely to be required on the soil type in the plantation area.*
- *Magnesium deficiencies are less commonly observed but can still be found regularly in poorly manured plantations or in palms planted on eroded slopes. Presence of Mg deficiency symptoms indicates that Mg fertiliser application is likely to be required on the soil type in the plantation area.*
- *Boron deficiencies are commonly observed and the application of B fertilisers is usually required.*

**Step 3.** In case of doubt, check the number of black bunches in the plantations, as well as the bunch size, and discuss the yields of the plantations with the farmers. The presence of leaf deficiency symptoms in combination with poor yields is a good indicator that application of sufficient fertiliser is required.

**Step 4.** The absence of deficiency symptoms combined with high productivity, even though certain nutrients were not applied or applied in small amounts during several years, may indicate that the soils are exceptionally rich in these particular nutrients. In such cases the application of these nutrients is not required. This can be temporary, as soils can get depleted after several years of high productivity.