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The intercropping maize - common bean increases the rhizobial efficiency and phosphorus uptake in calcareous phosphorus deficient soils

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This study aimed to assess the beneficial effect of the legume-cereal intercropping system in enhancing soil phosphorus (P) availability for plant growth and grain yield in calcareous P-deficient soils of northern Algeria. To address this question, field experiments, using common bean (*Phaseolus vulgaris* L. cv. El Djadida) and maize (*Zea mays* L. cv. Filou), either in pure stand or intercropping, were compared in two experimental sites; S1 (P-deficient) and S2 (P-sufficient) during two growing seasons (2011 and 2012). Growth, nodulation and grain yield were tested and correlated with the P availability in the rhizosphere soil. The results showed that P availability increased in the rhizosphere of both species, especially within the intercropping system under S1 P-deficient conditions. This increase was associated with high efficiency in use of the rhizobial symbiosis (EURS), high rate of N₂ fixation and plant growth. Moreover, the rhizosphere P-availability and nodule biomass were positively correlated for intercropped common bean grown in S1 during 2011 and 2012. The increase in P availability moderately improved biomass and grain yield when both species were intercropped, P uptake was enhanced intercropped maize only. It is concluded that, common bean-maize intercropping showed a positive interaction by which common bean increased P uptake, plant biomass and grain yield for intercropped maize by improving the efficiency in use of the rhizobial symbiosis in calcareous P-deficient soils.

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A rare case of dengue encephalopathy / Encephalitis complicating a term pregnancy

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Background: Dengue fever, an *Aedes aegypti* mosquito-borne infection, caused by a flavivirus has an expanded clinical spectrum ranging from an asymptomatic infection to life threatening dengue hemorrhagic fever and refractory shock. Dengue infection in pregnancy can be a diagnostic dilemma, particularly considering the physiological changes in pregnancy and the obstetric complications encountered in clinical practice. Hence the knowledge of its diagnosis and management in its atypical presentations is of paramount importance. Here we report the first case of uncomplicated dengue encephalopathy/encephalitis in a term mother. To the best of our knowledge we could not come across any case reports of dengue encephalopathy/encephalitis complicating pregnancy in literature search.

Conclusion: Dengue fever in pregnancy is increasingly being encountered due to its rising disease burden. Dengue encephalitis /encephalopathy must be suspected in the differential diagnosis of fever and altered sensorium, even in pregnancy, in the tropical countries where the infection is rampant. The other conditions in pregnancy that resemble dengue encephalopathy and need to be excluded include systemic lupus erythematosus, thrombotic thrombocytopenic purpura, sepsis and disseminated intravascular coagulation to name a few. Management of dengue infection in term pregnancy is a challenge for both the clinician and obstetrician. Further discussion and research are mandatory to decide on optimal management of these patients with regard to monitoring, fluid management, and the precise timing and mode of delivery in order to prevent fatal morbidity and mortality to both mother and fetus. Further studies are needed to evaluate the predisposition of dengue neurotropism in an immunosuppressed state such as in pregnancy.

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