

CONCLUSIONS

Without nitrogen applied to rice or soybean crop, nitrogen fixation was limited by nitrogen deficiency, which then depressed soybean growth. Small amount of combined nitrogen form either residual of rice fertilizer or starter nitrogen applied to soybean stimulated soybean growth, which reflected in increased nitrogen fixation. However, too much combined nitrogen, led to a decrease of nitrogen fixation.

There were small amounts of nitrogen contributed to soil nitrogen pool after soybean seeds harvested in moderate nitrogen levels. However, if straw was also removed, soil nitrogen declined after growing soybean in dry season.