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## TESTING NEW FERTILIZER FORMULAS IN SENEGAL: FIRST TRENDS

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### I. CONTEXT

As part of the implementation of the Feed the Future Senegal Dundël Suuf project activities, the International Fertilizer Development Center (IFDC) signed a contract with the Senegalese Institute of Agricultural Research (ISRA) that resulted in the development of soil fertility maps for Senegal and the development and testing of 16 new fertilizer formulas suitable for the different agroecological zones in the country. Thus, during the 2022/23 season, 190 plots were set up to test these new formulas on millet (58), rice (64), and groundnut (68) on station and in farmers' fields.



Figure 1. Location of test plots for new fertilizer formulas at ISRA stations and some farms



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## Result

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#### II. THE MAIN TRENDS OBSERVED ...

#### ...for groundnut

Compared to the 6-20-10 fertilizer, the new fertilizer formulas registered average yield gains of 12% for the haulms. For pods, the differences were not statistically significant. However, the new formulas combined with organic matter gave gains of up to 47%.









# Result



### ...for millet

Grain yield gains of 26% were achieved compared to NPK 15-10-10.



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## Result



### ...for rice

Yield gains of 23% for irrigated rice and 37-78.3% for upland rice were achieved.

However, in the Southern Groundnut Basin, no significant difference was noted in paddy grain yield.







## Result



Overall, satisfactory trends were observed during this first phase of testing. However, the results were affected by certain constraints: (i) late establishment of the trials; (ii) flooding of some plots; and (iii) attacks by rodents, insects, and granivorous birds.

These constraints will have to be mitigated during the next phase of testing to better assess the performance of the new formulas.

### SUBSIDIZED AND UNSUBSIDIZED FERTILIZER PRICES IN SENEGAL

Fertilizer	Туре	Unit	Average Price (F CFA)
	Unsubsidized	50kg	35,333
DAP	Subsidized	50kg	12,500
NDK 40 40 20	Unsubsidized	50kg	22,417
NPK 10 10 20	Subsidized	50kg	12,500
NDK 45 40 40	Unsubsidized	50kg	23,667
NPK 15 10 10	Subsidized	50kg	12,500
	Unsubsidized	50kg	25,417
NPK 15 15 15	Subsidized	50kg	12,500
NDK 6 20 40	Unsubsidized	50kg	21,750
NPK 0 20 10	Subsidized	50kg	12,500
Uroo	Unsubsidized	50kg	30,313
Ulea	Subsidized	50kg	16,875

#### Comment :

• Compared to the previous month, fertilizer prices decreased from 5.75% for NPK 6 20 10 to 14% for NPK 15 10 10, except for the price of DAP, which remained stable.



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