



# Albendazole efficacy against gastrointestinal nematodes of pigs in Nsukka Area of Enugu State, Nigeria



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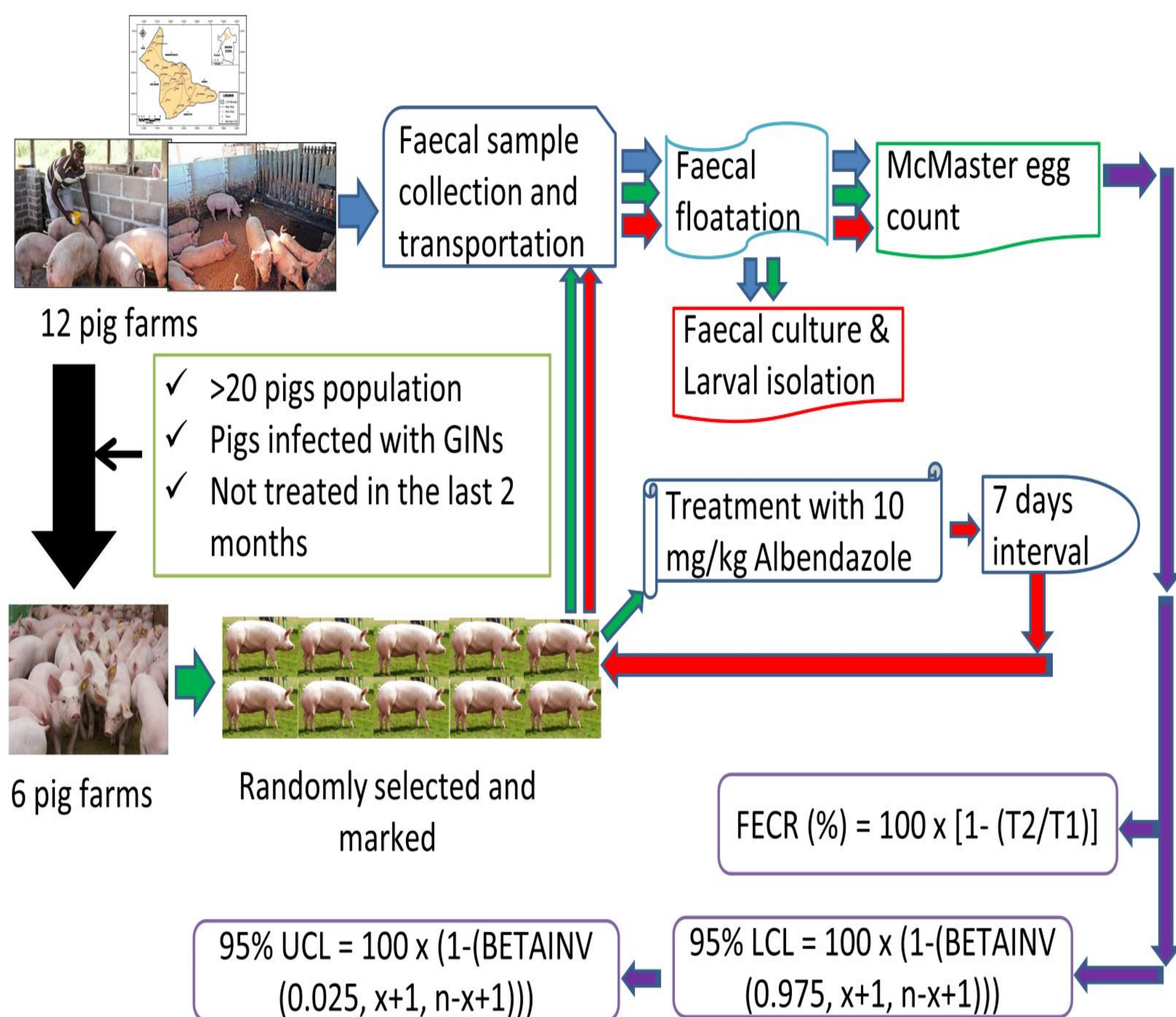
## Background

Gastrointestinal nematodes (GINs) are among the most commonly encountered disease-causing organisms in pigs worldwide and a major impediment to profitable swine production (Idika et al., 2017). GINs control relies heavily on the routine use of anthelmintics, especially albendazole, in the Nigerian pig industry; however, its continued efficacy is increasingly threatened by the emergence of drug-resistant GINs strains.

## Objectives

To determine the prevalence of GINs and efficacy of albendazole against GINs in pigs in Nsukka Area of Enugu State, Nigeria.

## Methodology



## Results

GIN prevalence rate of 63.1% was obtained (Table 1) with mixed infection having 74.6% prevalence rate (Table 2). Albendazole resistance to GINs and trichurids was established in one pig farm but was suspected in two farms (Table 3). Resistance of strongyle worms to albendazole was suspected in three farms but confirmed in one farm while albendazole resistance to ascarids was suspected in five farms.

Table 1: Prevalence of GINs of pigs in Nsukka

Number examined	Number Positive	Prevalence (%)
130	82	63.1

Table 2: Occurrence of different nematode egg types from pigs in Nsukka area

Egg type	Number Positive	Prevalence (%)
Strongyle	34	26.2
Trichurids	2	1.5
Ascarids	0	0
Ascarids + Strongyle	32	24.6
Ascarids + Trichurids	23	17.7
Ascarids + Trichurids + Strongyle	17	13.1
Strongyle + Trichurids	25	19.2

Table 3: Percentage Fecal egg count reduction of GINs in Pigs treated with albendazole in Nsukka.

Groups	Pre-T FEC	Post-T FEC	% FEC Reduction	95% Lower CL	95% Upper CL	Resistance Status
Farm A	81	11	86.42	77.26	92.20	Resistant
Farm B	88	2	97.73	92.12	99.30	Susceptible
Farm C	121	4	96.69	91.82	98.66	Susceptible
Farm D	64	4	93.75	84.99	97.46	Suspected
Farm E	56	2	96.43	87.89	98.90	Suspected
Farm F	38	0	100	90.97	99.94	Susceptible

KEY: Pre-T = Pre-Treatment, Post-T = Post Treatment, FEC = Fecal Egg Count, CL = Confidence Level

## Conclusion

This study revealed varying degrees of efficacy of albendazole against GINs and demonstrated possible presence of albendazole resistance against GIN populations in pigs reared in Nsukka area as well as low efficacy of albendazole against trichurids.

## References

Idika KI, Nwauzoije HC, Uju CN, Ugwuoke C, Ezeokonkwo RC (2017) Efficacy of ivermectin against gastrointestinal nematodes of pig in Nsukka area of Enugu State, Nigeria. *Veterinary Parasitology: Regional Studies and Reports* 10, 39-42. <https://doi.org/10.1016/j.vprsr.2017.07.006>

