Use of high-oleic oils in broiler diets and their influence on fatty acid profile of breast meat and abdominal fat pad

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INTRODUCTION & OBJECTIVES

In recent years, there has been an increased interest in reducing the content of saturated fatty acids of meat due to consumers' health concern. The aim of the present study was to introduce high-oleic oils in broiler diets and to evaluate the effect on modifying the fatty acid profile of breast meat and abdominal depot fat.

MATERIALS & METHODS

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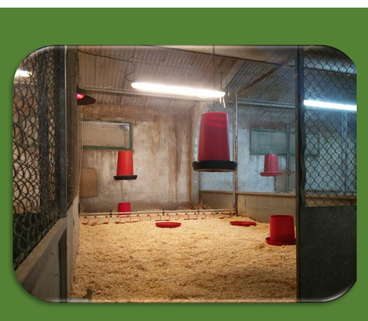


24 pens

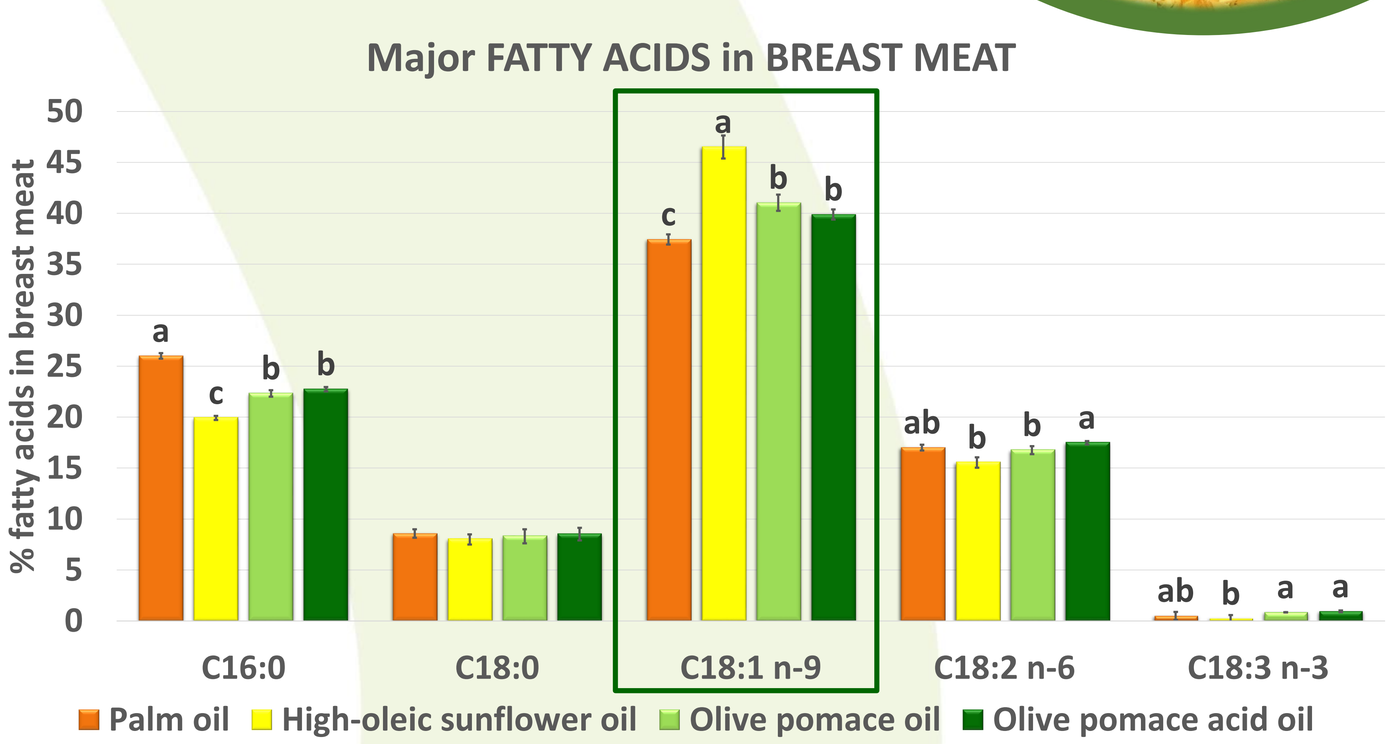
***Common phase**: 0 to 20 d*
***Experimental phase**: 21 to 39 d*

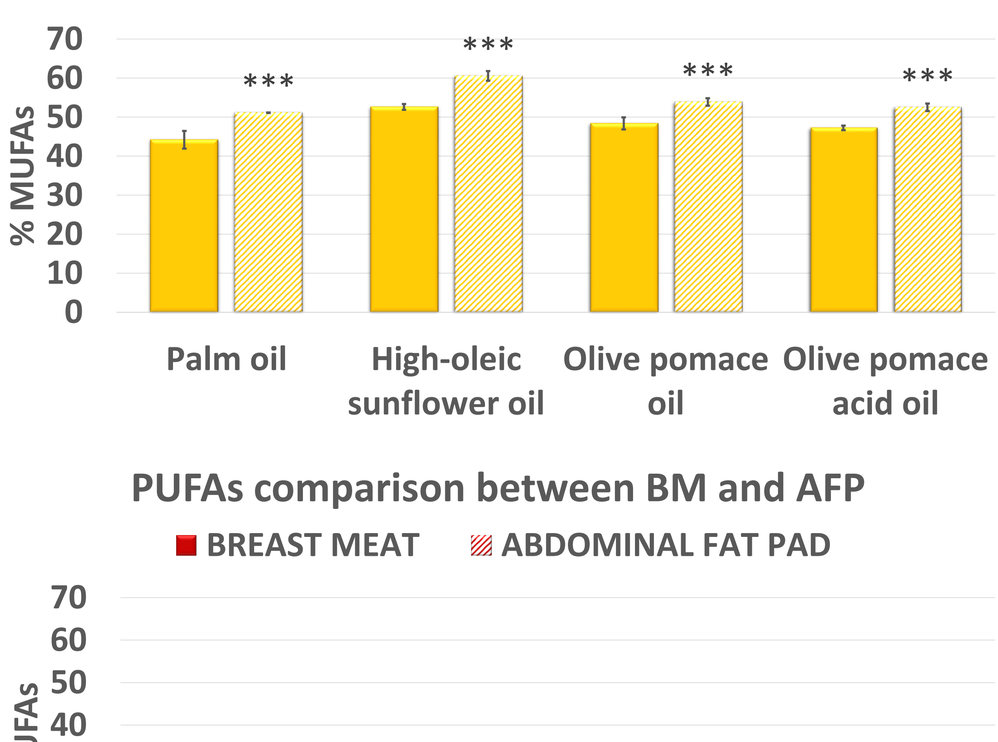
4 experimental dietary treatments
6% of added fat

- **P** Palm oil
- **HS** High-oleic sunflower oil
- **OP** Olive pomace oil
- **OPA** Olive pomace acid oil

Rich in free fatty acids

RESULTS





*BM: breast meat; AFP: abdominal fat pad; MUFAs: monounsaturated fatty acids; PUFAs: polyunsaturated fatty acids; ***: P < 0.001.*

Performance and AFP weight showed no differences (P > 0.05) among experimental groups.

Both OP and OPA achieved a level of C18:1 n-9 close to 40% in breast meat, independently of the dietary free fatty acid content, which was much higher in OPA diet.

CONCLUSION

High-oleic oils included at 6% in growing and finishing diets (from 21 d of age onwards) do not impair performance, and lead to a more unsaturated FA profile, in particular levels of **C18:1 n-9 above 40%**, in both breast meat and abdominal fat pad. Moreover, dietary **free fatty acid content** does not modify the tissue fatty acid profile.

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