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MEAL IN BROILERS

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the main protein source. As the
gy, America has developed a high
level of this high value soybean in
investigation has indicated that
and the feed capacity rate (FCR) in
energy (TME) in cocks. But the
olizable energy level has not been
metabolizable energy (ME) of high
e of high value soybean after it is
ay-old Arbor Acres broilers were
g to body weight with each of
pen. The result showed that the
to gain ratio. What's more, the
soybean after it is substituted for

THE VALUE AND DRY MATTER DEGRADABILITY OF DRIED TOMATO PULP

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Tomato pulp is an important industry in Khorasan province of Iran. The
of this process consists tomato seeds and peels. Wet tomato pulp was obtained in
and dried under sunlight. Physical and chemical composition and degradability of
product was determined using the standard lab. Procedures and 3 fistulated Baluchi
the utilized tomato pulp consisted 57.5% peels (P) and 42.5% seeds (S). Weight of
was 3.2 g. CP and EE content of P, S, and whole pulp (W) were, 17.1, 3.0; 31.4,
23.0, 9.7 percent respectively. Dry matter degradability of ground P, S and W
was 57.8, 74.8 and 63.4 percent respectively. The dry matter degradability of
fractions was much lower. This figure for ungrounded P, S and W samples was
22.9 and 41.7 percent respectively. The data indicated that application of physical
such as grinding can be highly effective in improving the nutritive value of this
product.

Tomato pulp, seeds, peels, degradability

USEFUL PIG FEED

Ninh and V. N. Trung
Ho Chi Minh City; Vietnam
Industries and Fisheries;
Australia;

nt of pig performance in South
high dependence on importation
tries is dependent on the ability
ource of non-conventional feeds.
mily is a substantial by-product
ding in Vietnam despite having
ponent of rubber seed, which is
g performance ameliorated then
g pigs either by small holder
l samples were harvested from
s using heat, pressure, washing
ts of treatments applied to both
fied a process which could be
r seed utilising spare capacity

PRODUCTION OF DIRECT FED MICROBIALS, ASPERGILLUS ORYZAE
FERMENTATION EXTRACT USING LYSINE FERMENTATION BY-PRODUCT

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mentation product of fungus *Aspergillus oryzae* (AO) has been used as a direct fed
microbial (DFM) to improve animal production. Solid fermentation system and liquid
fermentation system has been developed for AO production and two methods have both
advantages and disadvantages. The purpose of this study was to test the possible use of
lysine fermentation by-product (CMS) as a culture medium for AO production using liquid
fermentation system. *Aspergillus oryzae* was cultivated under different CMS concentrations
of 5, 10, 15 and 20% and normal AO medium was used as a control. Fungal biomass
and total RNA ITS1 gene were used as indicators for fungal growth during incubation
and fungal biomass was increased during incubation and the peak time was delayed with
increased CMS concentration. Maximum fungal biomass was acquired with 20% of CMS,
and maximum amount of ITS1 gene expression was acquired with 15% of CMS
concentration at 120 hr incubation.

Aspergillus oryzae, real time PCR, fermentation